

# CONSOLIDATED VERSION

# VERSION CONSOLIDÉE



**Framework for energy market communications –  
Part 451-3: Transmission capacity allocation business process (explicit or  
implicit auction) and contextual models for European market**

**Cadre pour les communications pour le marché de l'énergie –  
Partie 451-3: Processus métier d'attribution de la capacité de transport (vente  
aux enchères explicite ou implicite) et modèles contextuels pour le marché  
européen**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

#### Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

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**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

International Standard IEC 62325-451-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62325 series, published under the general title *Framework forenergy market communications*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

This standard is one of the IEC 62325 series which define protocols for deregulated energy market communications.

The principal objective of the IEC 62325 series of standards is to produce standards which facilitate the integration of market application software developed independently by different vendors into a market management system, between market management systems and market participant systems. This is accomplished by defining message exchanges to enable these applications or systems access to public data and exchange information independent of how such information is represented internally.

The common information model (CIM) specifies the basis for the semantics for this message exchange.

The European style market profile is based on different parts of the CIM IEC standard. The CIM is defined through a series of standards, i.e. IEC 62325-301, IEC 61970-301 and IEC 61968-11.

This document provides for the European style market profile the transmission capacity allocation business process based on either explicit or implicit auction that can be used throughout a European style market. This standard was originally based upon the work of the European Transmission System Operators (ETSO) Task Force EDI (Electronic Data Interchange) and then on the work of the European Network of Transmission System Operators (ENTSO-E) Working Group EDI.

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## FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

### Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

#### 1 Scope

This part of IEC 62325 specifies a package for the transmission capacity allocation business process through explicit or implicit auctions and the associated document contextual models, assembly models and XML schema for use within European style markets.

This International standard is based on the European style market contextual model (IEC 62325-351). The scheduling business process covered by this International Standard is described in Clause 5.

The relevant aggregate core components (ACCs) defined in IEC 62325-351 have been contextualised into aggregated business information entities (ABIEs) to satisfy the requirements of these business processes.

The contextualised ABIEs have been assembled into the relevant document contextual models.

Related assembly models and XML schema for the exchange of transmission capacity allocation information between market participants are automatically generated from the assembled document contextual models.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62325-351, *Framework for energy market communications – Part 351: CIM European market model exchange profile*

IEC 62325-450:2013, *Framework for energy market communications – Part 450: Profile and context modeling rules*

IEC 62325-451-1, *Framework for energy market communications – Part 451-1: Acknowledgement business process and contextual model for CIM European market*

IEC 62325-451-2, *Framework for energy market communications – Part 451-2: Scheduling business process and contextual model for CIM European market*

IEC 62361-100, *Power systems management and associated information exchange – Interoperability in the long term – Part 100: Naming and design rules for CIM profiles to XML schema mapping*<sup>1</sup>

---

<sup>1</sup> Under consideration.

### 3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 61970-2 apply, as well as the following.

NOTE Refer to International Electrotechnical Vocabulary, IEC 60050, for general glossary definitions.

#### 3.1

##### **already allocated capacity**

##### **AAC**

total amount of allocated transmission capacity rights, whether they are capacity or exchange programmes depending on the allocation method

#### 3.2

##### **aggregate business information entity**

##### **ABIE**

aggregate business information entity is a re-use of an aggregate core component (ACC) in a specified business

[SOURCE: ISO/TS 15000-5:2005, Clause 9, modified – modification of the definition]

#### 3.3

##### **aggregate core component**

##### **ACC**

collection of related pieces of business information that together convey a distinct business meaning, independent of any specific business context

Note 1 to entry: Expressed in modelling terms, this is the representation of an object class, independent of any specific business context.

[SOURCE: ISO/TS 15000-5:2005, Clause 9, modified – modification of the definition]

#### 3.4

##### **application program interface**

##### **API**

set of public functions provided by an executable application component for use by other executable application components

#### 3.5

##### **assembly model**

assembly model is a model that prepares information in a business context for assembly into electronic documents for data interchange

#### 3.6

##### **available transmission capacity**

##### **ATC**

part of NTC that remains available, after each phase of the allocation procedure, for further commercial activity

Note 1 to entry: ATC is given by the following equation:  $ATC = NTC - AAC$ .

#### 3.7

##### **based on**

##### **IsBasedOn**

use of an artefact that has been restricted according to the requirements of a specific business context

[SOURCE: IEC 62325-450:2013, 3.4]

**3.8**  
**bid**

request for a given capacity at a given price made by a capacity trader and corresponding to a single time series within a bid document

**3.9**  
**business context**

formal description of a specific business circumstance as identified by the values of a set of context categories, allowing different business circumstances to be uniquely distinguished

[SOURCE: UN/Cefact, Unified Context Methodology Technical Specification]

**3.10**  
**explicit auctioning**

congestion management method in which only the energy transmission capacity rights are auctioned

**3.11**  
**European style market profile**  
**ESMP**

the European style market profile, the object of this International Standard

**3.12**  
**implicit auctioning**

congestion management method in which the transmission capacity is included implicitly in the trading of energy in the market

**3.13**  
**information model**

representation of concepts, relationships, constraints, rules, and operations to specify data semantics for a chosen domain of discourse

Note 1 to entry: It can provide shareable, stable, and organized structure of information requirements for the domain context.

[SOURCE: IEC 62325-450:2013, 3.6]

**3.14**  
**market management system**  
**MMS**

computer system comprised of a software platform providing basic support services and a set of applications providing the functionality needed for the effective management of the electricity market

Note 1 to entry: These software systems in an electricity market may include support for capacity allocation, scheduling energy, ancillary or other services, real-time operations and settlements.

**3.15**  
**message business information entity**  
**MBIE**

aggregation of a set of ABIEs that respects a define set of assembly rules

**3.16**  
**net transfer capacity**  
**NTC**

maximum exchange between two areas compatible with security standards applicable in both areas and taking into account the technical uncertainties on future network conditions

Note 1 to entry:  $NTC = TTC - TRM$ .

### 3.17

#### **nomination**

firm declaration of the transmission capacity rights to be used

### 3.18

#### **profile**

basic outline of all the information that is required to satisfy a specific environment

[SOURCE: IEC 62325-450:2013, 3.7]

### 3.19

#### **transmission capacity rights**

rights of usage of a certain amount of transmission capacity in a potentially congested border between market areas

### 3.20

#### **transmission reliability margin**

##### **TRM**

security margin that copes with uncertainties on the computed TTC values arising from either unintended deviations of physical flows during operation due to the physical functioning of load-frequency regulation, or emergency exchanges between system operators to cope with unexpected unbalanced situation in real time

### 3.21

#### **total transfer capacity**

##### **TTC**

maximum exchange program between two areas compatible with operational security standards applicable at each system if future network conditions, generation and load patterns were perfectly known in advance

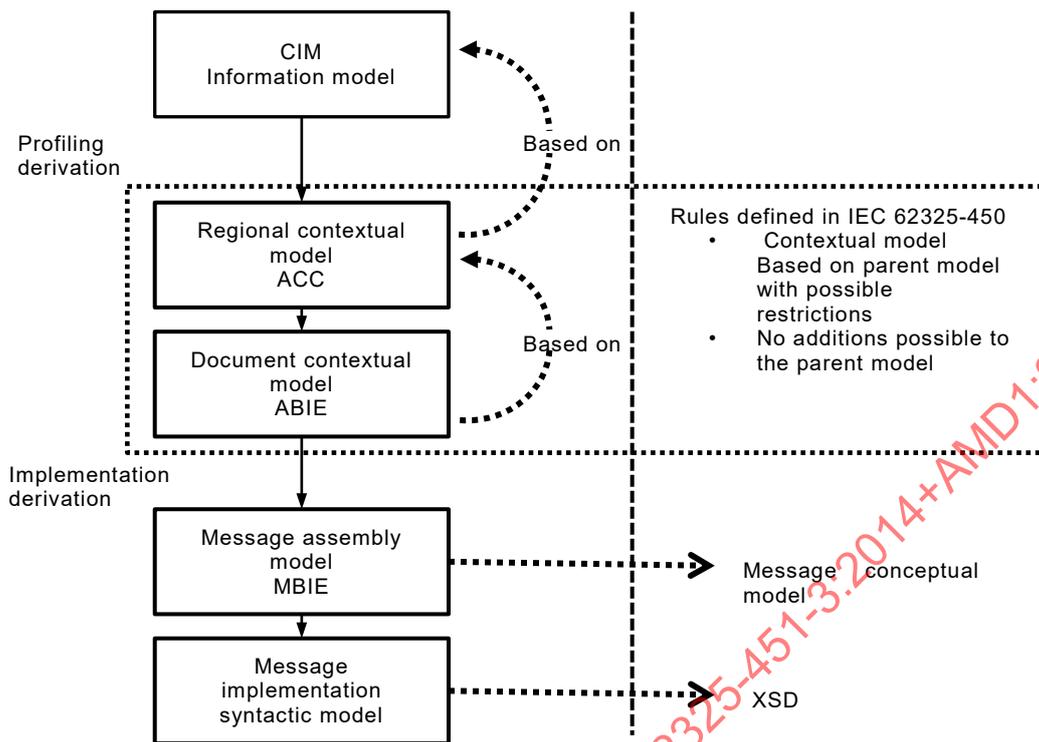
## **4 Document contextual model and message assembly model basic concepts**

### **4.1 Overview**

IEC 62325-450 defines a set of CIM profiles that follows a layered modelling framework as outlined in Figure 1 going from the common information model (CIM), to different regional contextual models and their subsequent contextualized documents for information exchange; the final step being the message specifications for information interchange.

The regional contextual models are the basic core components that are necessary to build electronic documents for information interchange. This is defined in the European style market contextual model (IEC 62325-351). These core components are also termed aggregate core components (ACCs).

A document contextual model is based upon a specific business requirements specification and is constructed from the contextualisation of the ACCs that can be found in the European style market contextual model. The contextualised ACCs at this stage are termed aggregate business information entities (ABIEs) These ABIEs are the constructs that are assembled together into a specific electronic document to satisfy the information requirements outlined in the business requirements specification. The transformation from an ACC to an ABIE shall respect the rules defined in IEC 62325-450.



IEC 2134/14

**Figure 1 – IEC 62325-450 modelling framework**

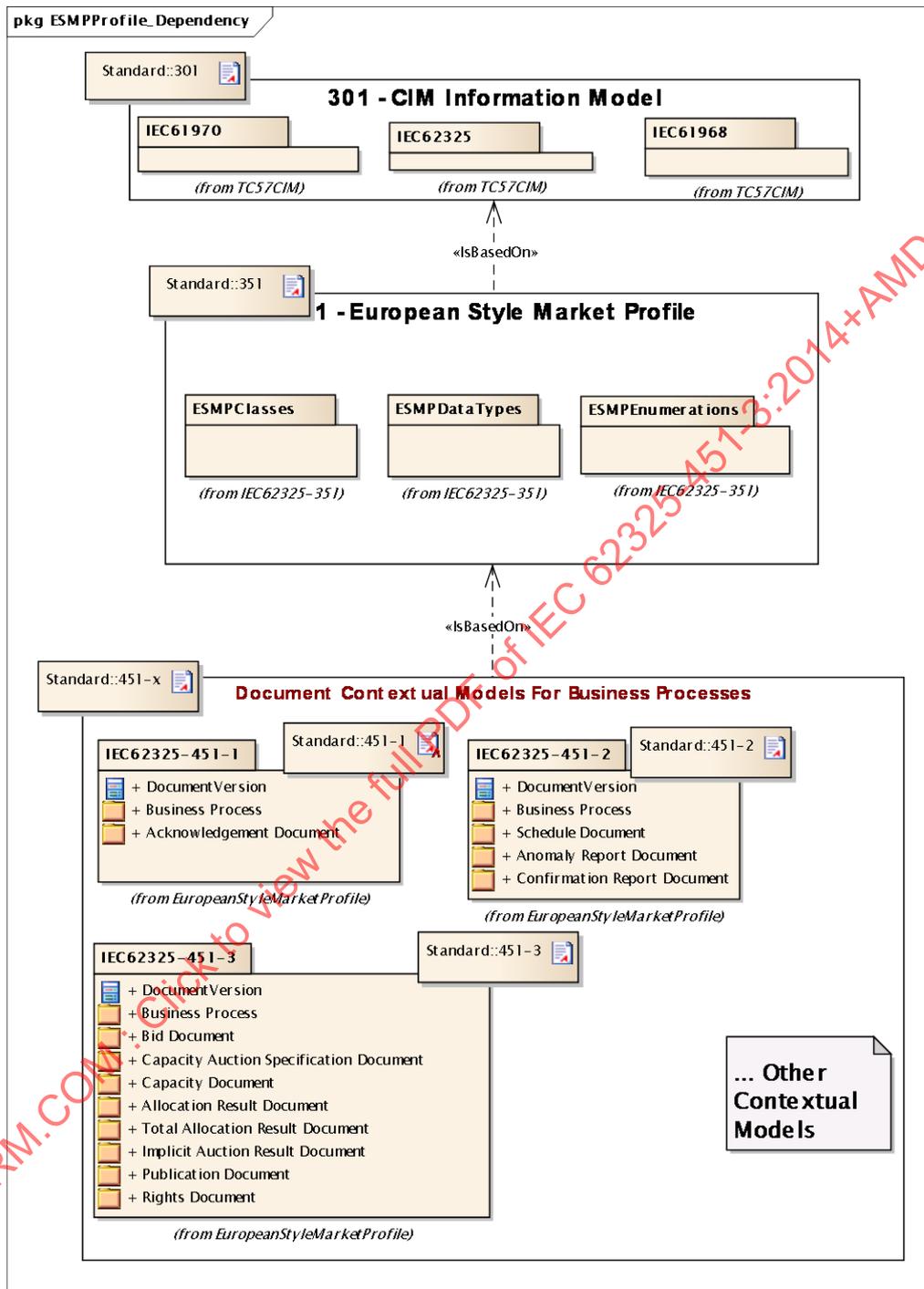
Once a document contextual model has been built that satisfactorily meets the business requirements, a message assembly model can be automatically generated from it. The automatic generation respects the rules defined in IEC 62325-450.

XML schema then may be automatically generated from the message assembly model. If necessary specific mapping can take place at this stage to transform the CIM class and attribute names into more market legacy names.

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#### 4.2 European style market package (ESMP) structure

The main package structure described in the European style market profile is provided in Figure 2.



IEC 2135/14

Figure 2 – Overview of European style market profile dependency

For each business process, a business process package is described in an IEC 62325-451-x (x from 1 to n) standard. A business process package contains:

- The document contextual model (ABIE) and the automatically generated message assembly model (MBIE) for each electronic document required to enable the completion of

the business process. Each document is a sub contextual model derived by restriction from the European style market profile.

- The XML schema of the business document that is automatically generated from the message assembly model.

The European style market profile (ESMP), as defined in the IEC 62325-351, provides the core components permitted for use in an IEC 62325-451-x standard as all ABIEs must be “based on” the IEC 62325-351 core components:

- ESMPClasses: Defining all the semi-contextual classes of the European style market profile derived by restriction from the CIM model.
- ESMPDataTypes: Defining all the core datatypes used within the ESMP classes.

All the core components that are used in every electronic document structure have been harmonized and centralized in the European style market profile. These core components are consequently the basic building blocks from which all electronic document ABIEs are derived.

#### **4.3 From the European style market profile to the document contextual model**

The document contextual model for a given business process is constructed by an information analyst who identifies all the information requirements necessary to satisfy the business process.

Once the information requirements have been identified the information analyst identifies the related ACCs that are available in the European style market profile and contextualises them to meet the information requirements. This contextualisation step creates a set of aggregate business information entities (ABIEs).

In a final step the information analyst assembles together into a specific document contextual model package the ABIEs to form a document model satisfying the business requirements.

#### **4.4 From the document contextual model to the message assembly model**

Once the document contextual model has been finalised, the message assembly model may be automatically generated.

All document contextual models share the same core components and core datatypes. These are defined in the European style market profile (IEC 62325-351) and are contextualised and refined in all document contextual models (IEC 62325-451-x series) respecting the rules as described in IEC 62325-450.

#### **4.5 From the assembly model to the XML schema**

The final modelling step applies a standardized set of criteria in order to generate a uniform XML schema from the assembly model. This transformation process respects the rules defined in IEC 62361-100.

### **5 The transmission capacity allocation business process**

#### **5.1 Overall business context**

The business processes described in this standard are related to the transmission capacity auctions and to the market of transmission capacity rights.

No assumption is made on the way the auction are carried out as well as on the allocation mode or the payment terms.

The auctions can be carried out for products such as:

- multi-year,
- annual,
- monthly,
- weekly,
- daily
- intraday.

The allocation mode can be one of the following:

- order by price with pro rata,
- first come first served,
- pro rata,
- etc.

And the payment terms may vary from:

- pay as bid,
- pay as cleared,
- no payment terms,
- etc.

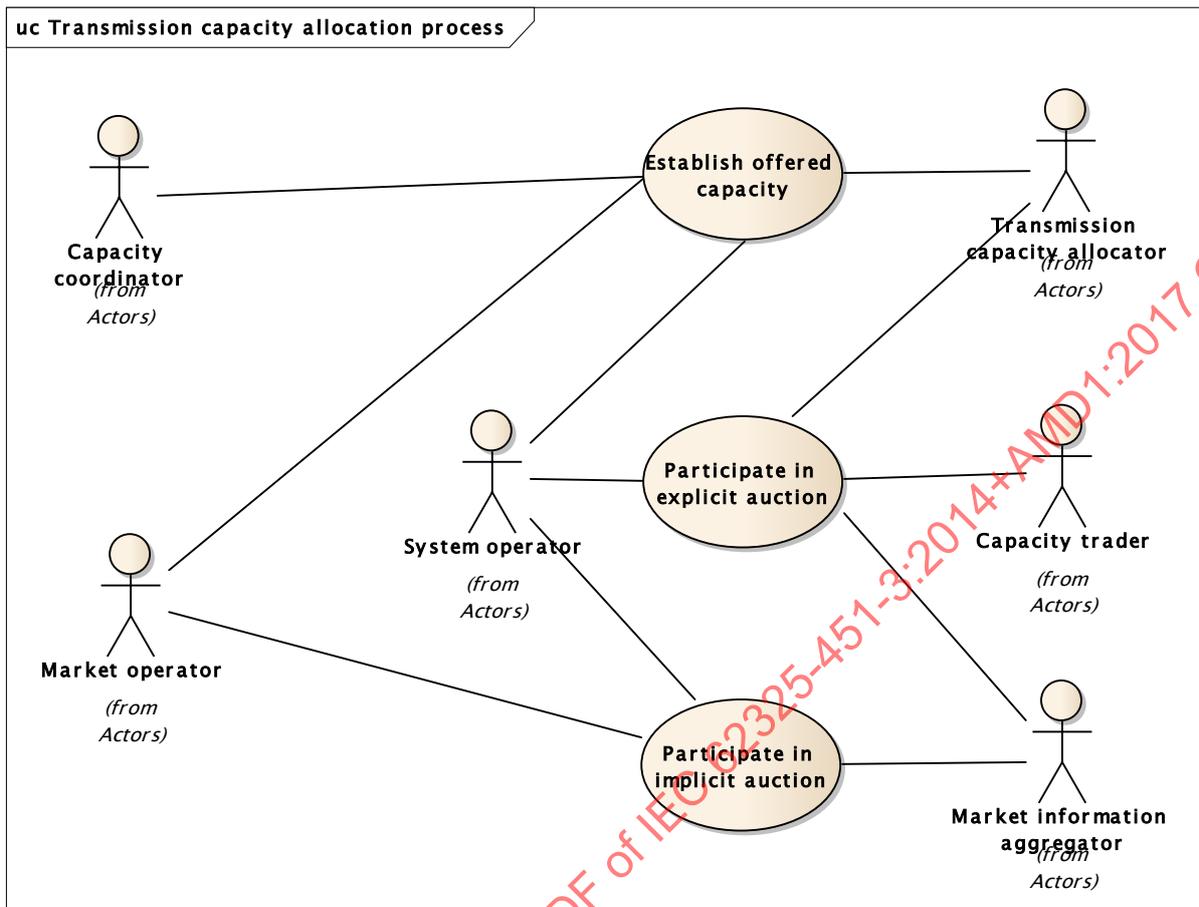
There are two different types of transmission capacity auctioning, explicit or implicit auctions. These are outlined in the use case in Figure 3.

The use case “Establish offered capacity” is common to both explicit and implicit auctions and relates to the identification and publication of the offered capacity that can be allocated. The available transmission capacity has initially to be agreed between the system operators. Once the offered capacity is agreed, it is published with the relevant information that defines the auction, i.e. the transmission capacity auction specification.

The use case “Participate in Explicit auctions” implies the following steps:

- The first step covers the bidding and allocation activity itself. A sub use case of the bidding and allocation activity may be the eventual secondary trade and negotiation of allocated capacity rights between capacity traders or capacity traders and interconnection trade responsible parties. The principle actors are the capacity trader and the transmission capacity allocator.
- The second step concerns nomination, the activity of declaring the long term, daily and intraday capacity rights to be used. This involves the interconnection trade responsible, the nomination validator and the system operator. The nomination validator ensures that all nominations presented are coherent. To carry out this nomination process, the electronic documents defined in IEC 62325-451-2 are to be used.
- The third and final step concerns the validation and final confirmation of all nominations. This step includes cross border matching. The principle actors are the nomination validator and the system operators.

The use case “Participate in Implicit auctions” implies the publication of cross border exchange values with or without prices.



IEC 2136/14

Figure 3 – Use case of the transmission capacity allocation process

## 5.2 Establish offered capacity process

The process necessary to constitute an auction specification is initiated by the system operators who provide the capacity coordinator with all the information necessary for the establishment of the offered capacity.

This capacity may be increased with additional capacity rights submitted by the capacity traders for resale, for the period being addressed such as resale of annual capacity rights to a monthly auction, etc.

This capacity may be also increased with additional capacity rights not used for nomination, i.e. the annual, monthly, weekly capacity rights that have not been used for the daily nomination, and thus that are released (either as “use it or lose it” or “use it or get paid for it” or “use it or sale it”, etc.) to the daily auction.

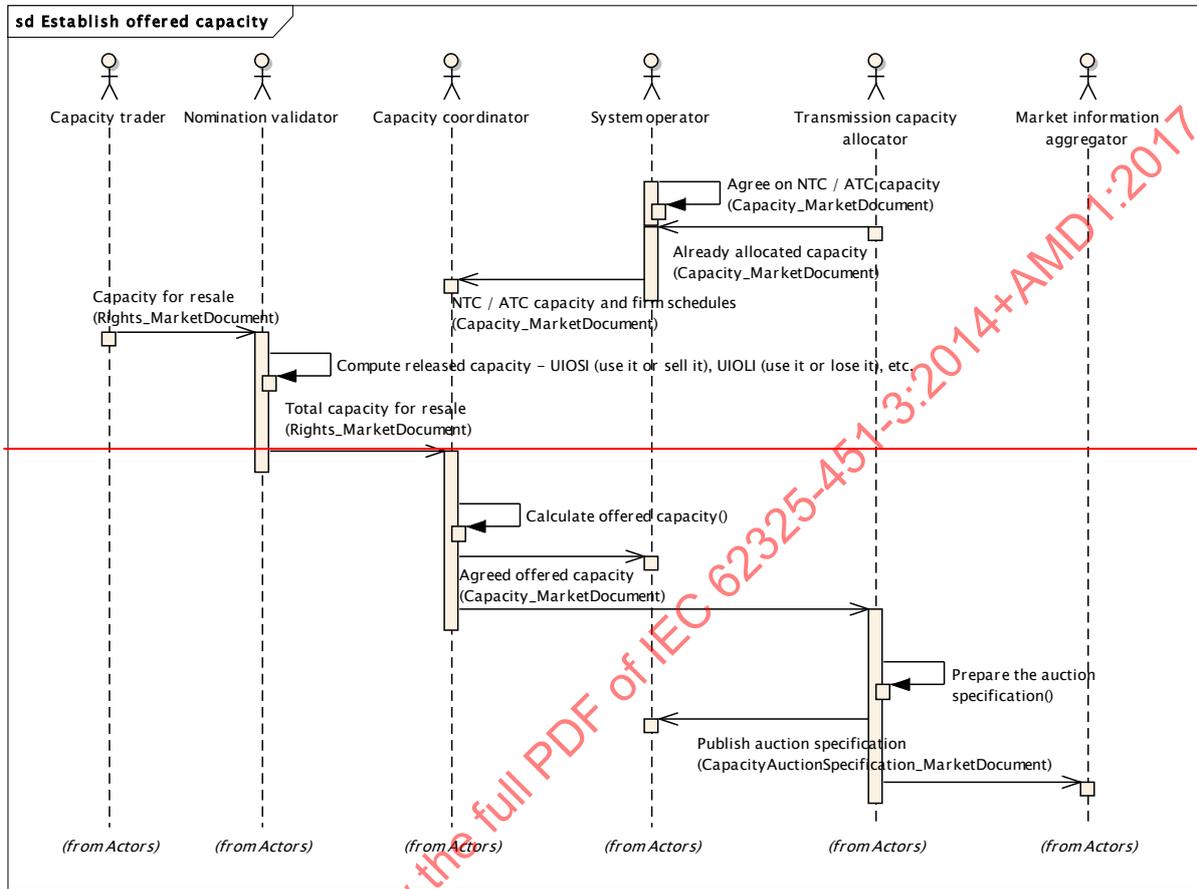
The capacity coordinator then determines the initial offered capacity with the information received.

The offered capacity is then sent to the transmission capacity allocator to enable the establishment of the auction specification for the period in question.

Finally, the auction specification is published. A first version of the AuctionSpecification\_MarketDocument may be publish with only the identification of the auction and the planned date of the auction. Then a new version of document shall be issued with all the relevant information. It is to be noted that this document may be updated to inform the market participant that the auction is cancelled.

This process is described in Figure 4; the documents exchanged within this process are indicated.

The establishment of the offered capacity is common to both explicit and implicit auction process.



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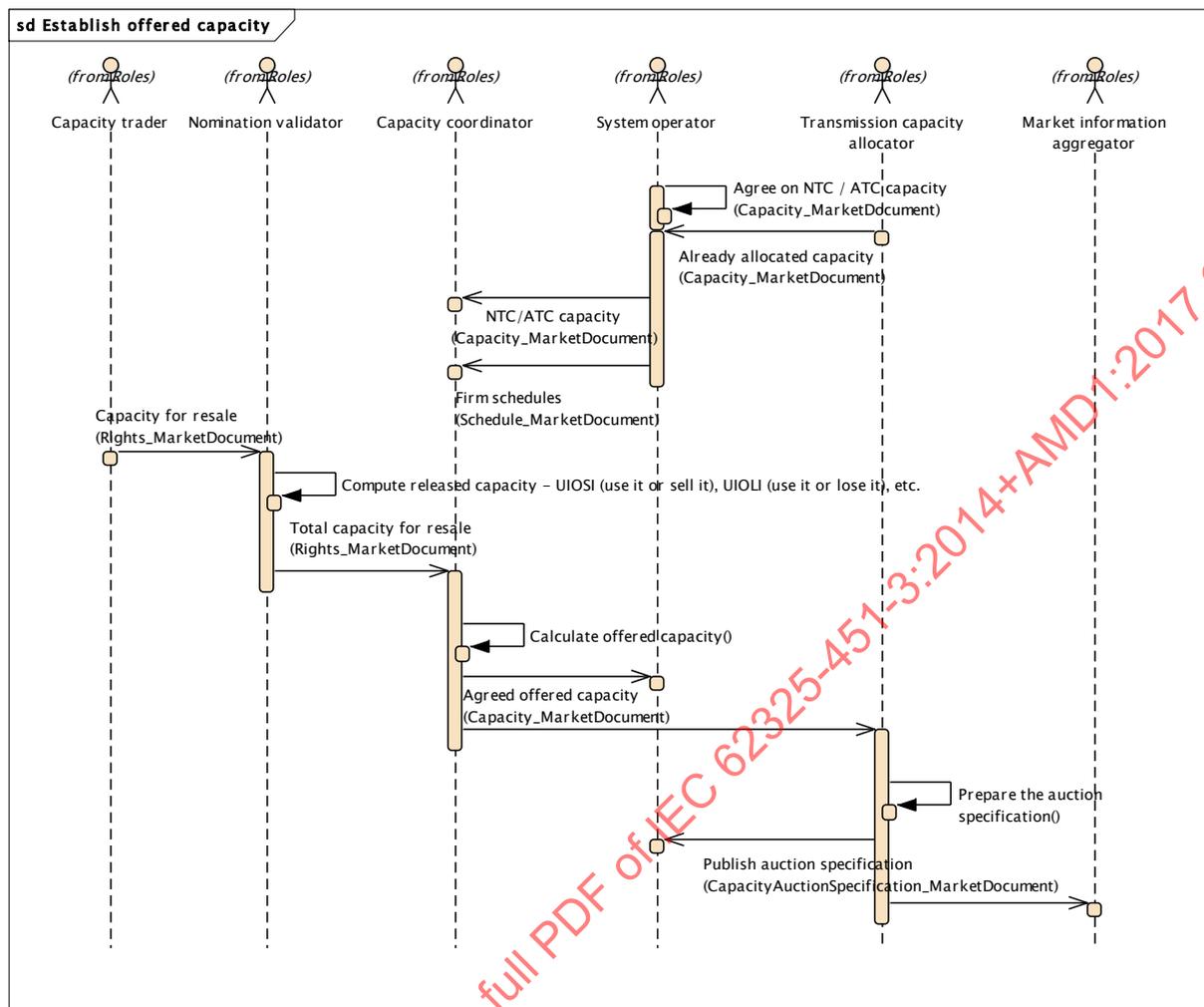


Figure 4 – Establish offered capacity overview

### 5.3 Explicit auction process

#### 5.3.1 Overview of explicit auction process

The explicit auction process is composed of a number of steps described in the following paragraphs:

- Figure 5 describes the submission of bids, the allocation process of capacity rights and the publication of allocated capacity rights.
- Figure 6 describes the resale of capacity rights and the capacity curtailment process for security reason.
- Figure 7 describes the nomination of capacity rights.

#### 5.3.2 Bid and allocate capacity

The capacity traders submit bids for the transmission rights on a border to the transmission capacity allocator during the bidding period.

During a predefined validation window the transmission capacity allocator will verify the correctness of all bids for the auction in question.

After the bidding phase, the bids in question are allocated transmission rights by the transmission capacity allocator in compliance with the published auction rules.

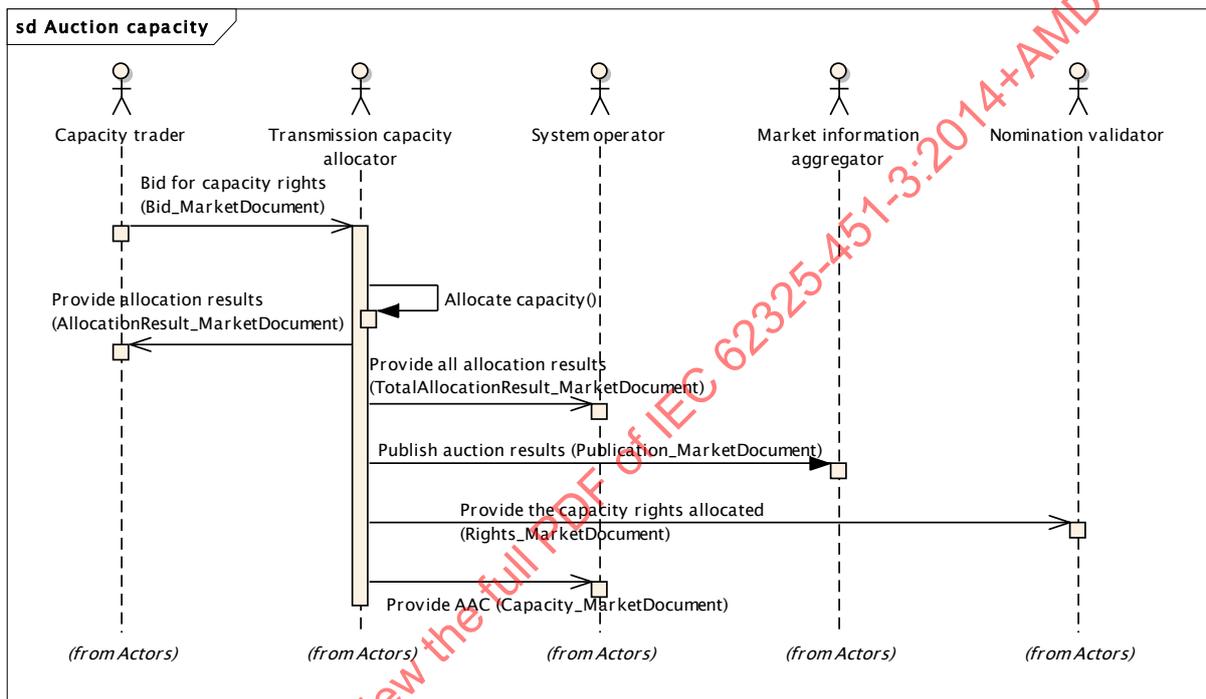
### 5.3.3 Publish auction results

In the final step of the capacity allocation process the transmission capacity allocator publishes the auction results which include the auction outcome of all bids and resales.

Involved system operators are informed of the allocated and resold capacity being the outcome of the auction.

Each capacity trader is informed of the outcome of its bid(s) and resales after the bidding period in compliance with auction rules.

The results may be re-transmitted to market information aggregators for general publication.



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Figure 5 – Auction capacity

### 5.3.4 Trade and negotiate allocated capacity

In this process capacity traders trade transmission capacity rights between themselves and at the end of the trade inform the transmission capacity allocator of the rights transfer.

This is an "Over The Counter (OTC)" market, i.e. there are no specific rules for the trade, only the rules agreed between the parties involved in the trade. This market is also called "secondary market".

The transmission capacity allocator approves the transfer through the transmission of a Rights\_MarketDocument containing the approved transmission rights that have been transferred between both parties. This is sent to both the transferor and the transferee parties.

### 5.3.5 Capacity rights resale

The capacity trader may, dependent on local rules, release his transmission capacity rights that he has previously acquired prior to an auction. If the capacity is released to the

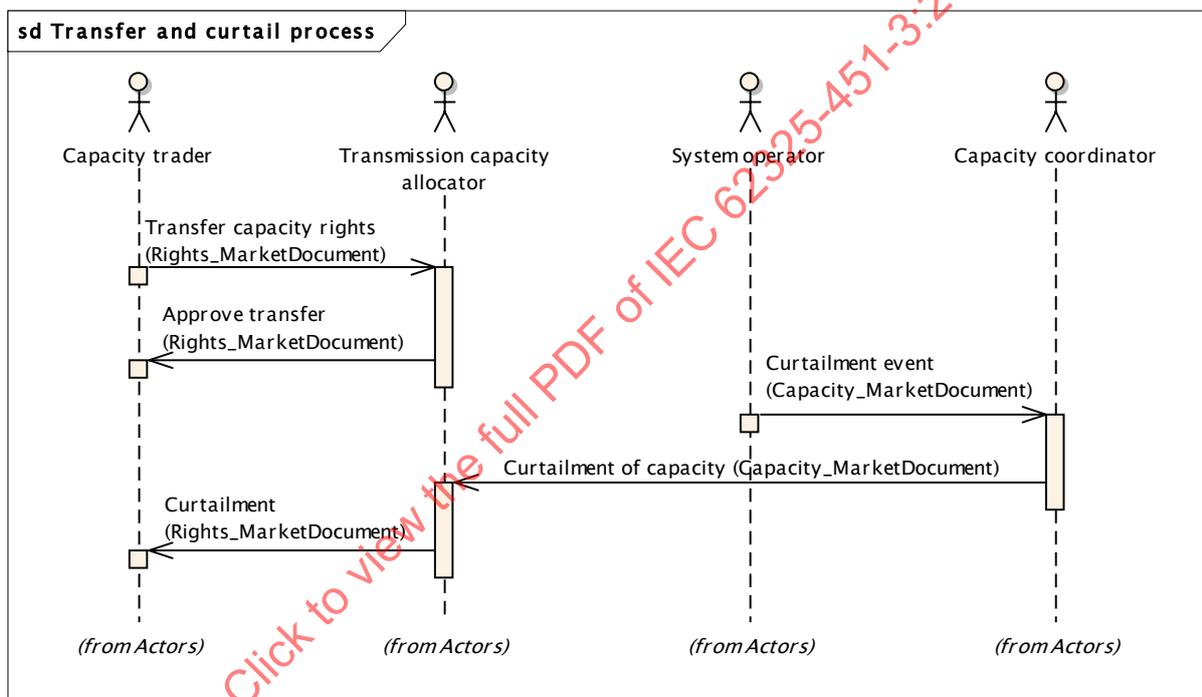
transmission capacity allocator sufficiently in advance the trader can benefit from its resale in the coming auction.

In a “use it or sell it” (UIOSI) model the capacity trader benefits from the resale of the capacity rights in a subsequent auction for the part of the capacity rights that was not nominated beforehand.

In a “use it or lose it” model (UIOLI) capacity not nominated is generally lost by the capacity trader.

### 5.3.6 Possibility of curtailment of allocated capacity

If, in order to ensure network security, the system operator found it necessary to curtail the transmission capacity rights from a previous auction, the system operator informs the corresponding transmission capacity allocator of the curtailment that will have to be imposed. The transmission capacity allocator informs the capacity traders of the new curtailed transmission capacity rights.



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Figure 6 – Transfer and curtailment

### 5.3.7 Designate interconnection trade responsible for nomination

The capacity trader informs the transmission capacity allocator of the interconnection trade responsible that will carry out the nomination of transmission capacity rights on his behalf.

The designation of the interconnection trade responsible that will nominate the capacity rights is transmitted to the transmission capacity allocation with a Rights\_MarketDocument.

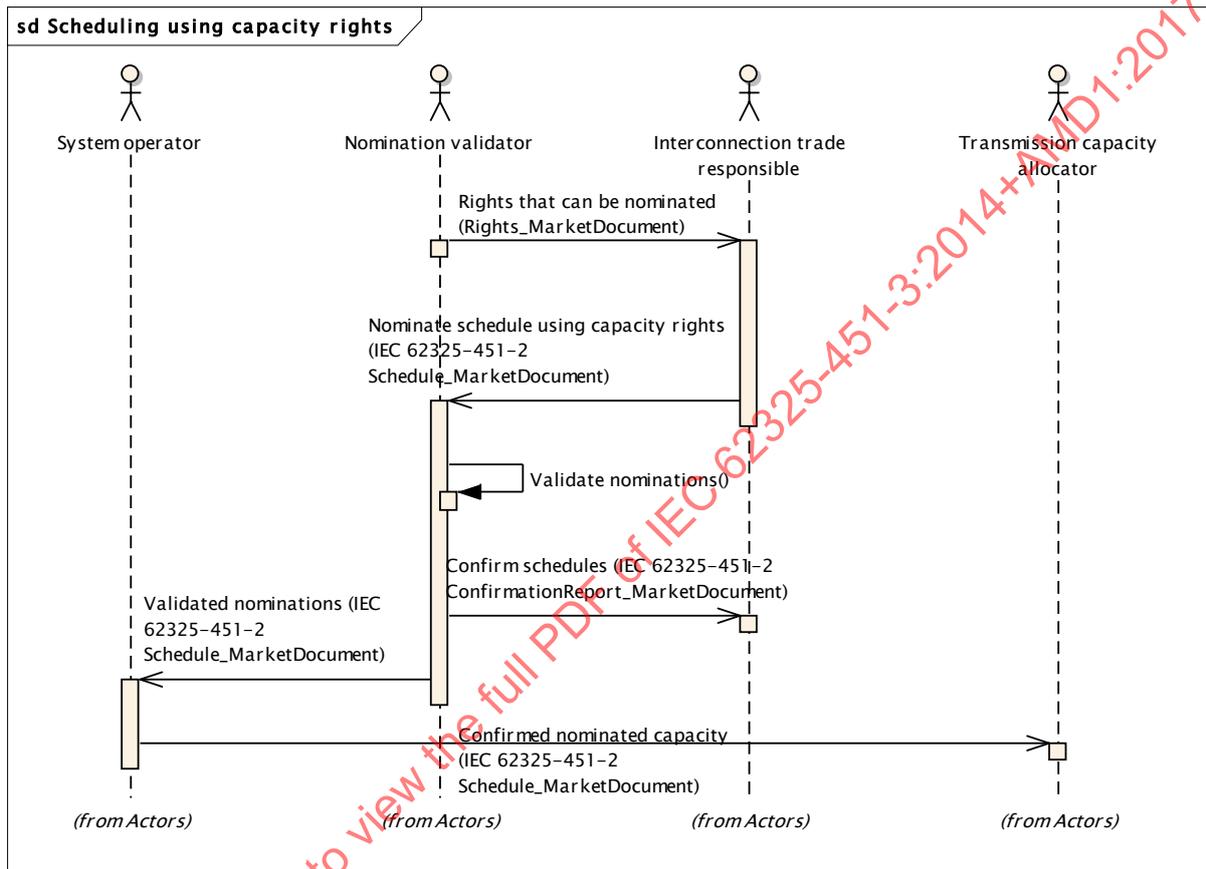
### 5.3.8 Nominate use of border capacity

The nomination validator receives the final allocations (capacity rights) from the transmission capacity allocator, which identifies the interconnection trade responsible parties authorised to nominate the capacity, and sends the authorised nomination capacity to the interconnection trade responsables in question.

### 5.3.9 Validate nominations

The validation process for nominations may take place on one side or both sides of the border.

The nomination validator must check that the nominations from the interconnection trade responsible parties do not exceed the amount of capacity that the transmission capacity allocator has communicated. In the case that the nominations exceeded the amount of the capacity rights the nomination validator applies local market rules.



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Figure 7 – Nomination of capacity rights

## 5.4 Implicit auction process

### 5.4.1 Overview implicit auction process

The implicit auction is characterized by the fact that the trade responsible party bought both energy and transmission capacity at the same time.

Thus the distinction between the role of capacity trader and interconnection trade responsible is not necessary for this business process.

The rules covering the auction mechanism determine the market energy price for the market balance area after applying technical constraints from the system operator.

Figure 8 provides an overview of the implicit auction process and the list of exchanged documents.

### 5.4.2 Submit bids and offers to local exchange

The trade responsible parties submit to their market operator their offer (sell or buy) of energy. The document to carry out this exchange is not further elaborated in this document.

### 5.4.3 Implicit auction

The market operator defines, based on agreed market rules, the “market equilibrium point”, i.e. the cross border flows, the energy prices and the trades that are matched.

### 5.4.4 Publish exchange results

The market operator provides to the involved system operators the result of the matching using the ImplicitAuctionResult\_MarketDocument.

The system operators verify the consistency of the results with the constraints provided when defining the offered capacity.

The result are then provided to the market information aggregator using the Publication\_MarketDocument.

### 5.4.5 Publish trade results

The market operator provides to each market participant the results of the market. The document to carry out this exchange is not further elaborated in this document.

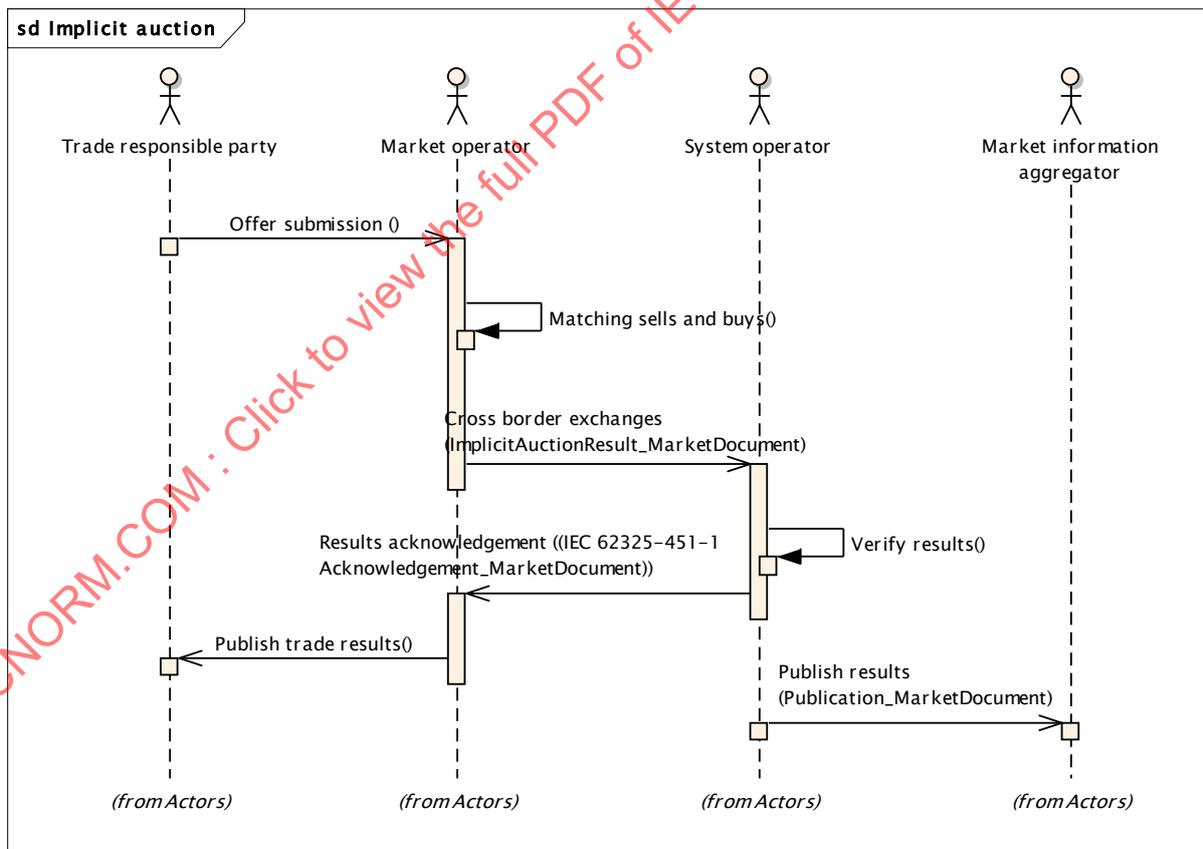


Figure 8 – Implicit auction overview

## 5.5 Business rules for the transmission capacity allocation process

### 5.5.1 General rules

The generic rules defined in IEC 62325-351 apply to all the documents described in this part. In particular, IEC 62325-351 describes the concept of curve type that is to be used to define the pattern of an auction.

For each electronic data interchange defined in this document, an application acknowledgement is required as defined in IEC 62325-451-1, except for the document sent to the capacity trader or the interconnection trade responsible as receiver\_MarketParticipant.marketRole.type.

When a document is received, it shall be checked at the application level to ensure that there are no faults in it that could prevent its normal processing. After this check, an acknowledgement document, as defined in IEC 62325-451-1, shall be generated either accepting in its entirety the document in question or rejecting it.

In the case of explicit auction, nomination of capacity rights shall be made using the schedule document as described in IEC 62325-451-2.

### 5.5.2 Rules governing the Bid\_MarketDocument

The following rules apply to the Bid\_MarketDocument:

- A bid document contains a set of bids (a bid is represented by a time series).
- There may be several bids submitted by the sender for the same bid period and subject party (capacity trader).
- To cancel a complete set of bids the bid document is resubmit with a new version number but no time series under it.
- There can only be one sender for a given subject party.
- A bid document can only be for the only one subject party.
- A bid document received with the same document identification and document version as an existing bid document shall be rejected.
- The last version of a bid document with the same document identification shall constitute the last valid bid for the document in question.
- Each Bid\_TimeSeries within a document is considered a bid within this specification. The bid mRID that the bidder assigns is the unique identification of the bid for a given auction identification (auction.mRID).
- Table 1 provides the dependency concerning the bid indicators:

**Table 1 – Bid indicators dependency**

	Default case	Other cases			
		NO	NO	YES	YES
Divisible (possible values)	YES	NO	NO	YES	YES
Linked Bids Identification (attribute used or not)	Not used	Used	Not used	Not used	Not applicable
Block Bid (possible values)	NO	YES	YES	NO	Not applicable

NOTE "Not used" signifies that the attribute cannot be used. "Not applicable" signifies that the attributes in question do not apply to the dependency case.

For example: a LinkedBidIdentification could only contain an identification where Divisible was "NO" and a BlockedBid was "YES". In all other cases it could not contain an identification.

### 5.5.3 Rules governing the Capacity\_MarketDocument

The dependencies are listed here after:

- The document type “Agreed capacity” is to be used with the process type “Capacity determination” and the business types “Offered capacity”, “NTC” or “ATC”, the “Reason” could be “Curtailement”;
- The document type “Proposed capacity” is to be used with the process type “Capacity determination” and the business types “Offered capacity”, “NTC” or “ATC”, the “Reason” could be “Curtailement”;
- The document type “Interconnection capacity” is to be used with the process type “Capacity determination” and the business types “AAC” or “Released AAC”;
- The document type “Interconnection capacity” is to be used with the process type “Capacity allocation” and the business type “General capacity information”.

NOTE the Business Type “General Capacity Information” is a generic type for the identification of a time series that provides the total capacity available on a TSO border

### 5.5.4 Rules governing the AllocationResult\_MarketDocument

The following rules apply to the AllocationResult\_MarketDocument:

- There is only one contract identification assigned by the transmission capacity allocator per auction identification, bid period and subject party.
- There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.
- Only one of these three possibilities is permitted in a given allocation result document:
  - a) In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.
  - b) It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.
  - c) A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.
- The bid result may mirror the original bid itself in which case the curveType shall not be used, or a profile may be provided as a result in which the curveType shall be used.
- The choice of whether or not to mirror the original bids must be consistent within the whole result document.

### 5.5.5 Rules governing the TotalAllocationResult\_MarketDocument

The following rules apply to the TotalAllocationResult\_MarketDocument:

- There is only one contract identification assigned by the transmission capacity allocator per auction identification, bid period and bidding party.
- Only one of these three possibilities is permitted in a given total allocation result document:
  - a) In the case where the total allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

- b) It is also possible for the total allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.
- c) A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.
- The bid result may mirror the original bid itself in which case the curveType shall not be used, or a profile may be provided as a result in which the curveType shall be used.
- The choice of whether or not to mirror the original bids must be consistent within the whole result document.

#### **5.5.6 Rules governing the Rights\_MarketDocument**

The following rules apply to the Rights\_MarketDocument:

- A Rights\_MarketDocument is used in various business contexts. In general it identifies the capacity transmission rights that a capacity trader or an interconnection trade responsible has in his portfolio for a given border.
- Any time a party's capacity transmission rights change for a given period the capacity trader may inform the party of his new portfolio by sending a new version of the rights document to the party in question.
- A rights document may also be used to provide the complete portfolio for a given border.
- In addition, a rights document may be used to provide information on rights compensation such as UIOSI pricing or rights curtailment compensation.
- There can only be one sender for a given subject party.
- A Rights\_MarketDocument can only be for only one subject party.
- A Rights\_MarketDocument received with the same document identification and document version as an existing Rights\_MarketDocument shall be rejected.
- Table 2 provides the dependency concerning the Rights\_MarketDocument indicators:

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**Table 2 – Rights\_MarketDocument dependency table**

Document type	Business type	Rights holder	Transferee	Previous contract identification	Auction identification
Capacity for resale	Released AAC	Mandatory			Mandatory
	Capacity rights not nominated	Mandatory			
Approved transfer	Capacity transfer notification	Mandatory			
AAC transfer	Capacity transfer notification Interconnection trade responsible designation	Mandatory	Mandatory	Mandatory	
Transmission rights portfolio	Capacity rights	Mandatory			
Allocations	Authorised AAC	Mandatory			
	Minimum authorised AAC	Mandatory			
	Maximum authorised AAC	Mandatory			
Compensation rights	Use it or sell it pricing Resale compensation following cancellation Rights curtailment Use it or sell it compensation Auction cancellation	Mandatory			

When using the document type “Allocations”, the business type “Authorised AAC” is generally sufficient to provide the maximum amount of AAC available for nomination. However, if the business type “Minimum authorized AAC” is used then the business type “Maximum authorised AAC” shall be used in the place of the business type “Authorised AAC”.

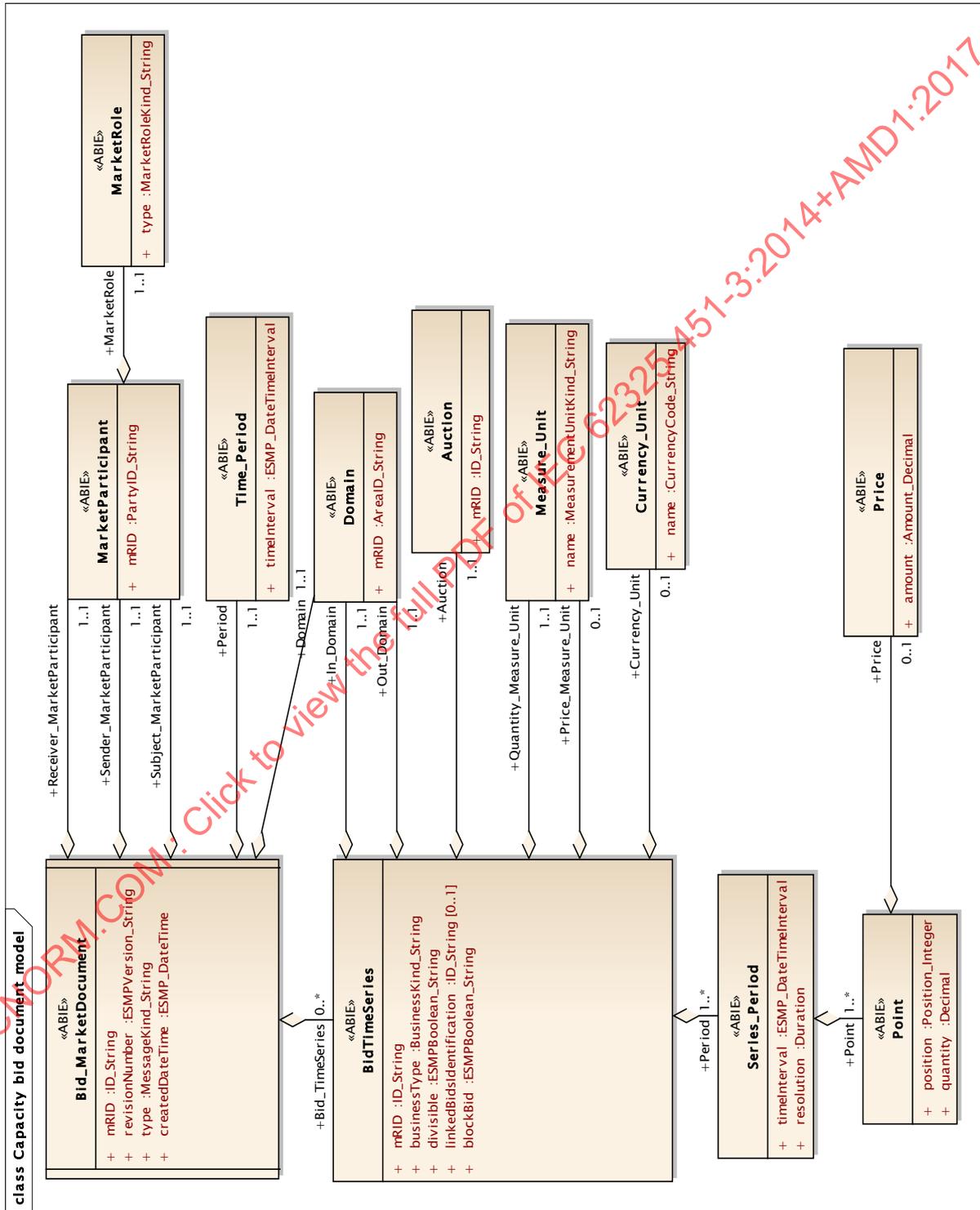
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## 6 Contextual and assembly models

### 6.1 Bid contextual model

#### 6.1.1 Overview of the model

Figure 9 shows the model.



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Figure 9 – Bid contextual model

### 6.1.2 IsBasedOn relationships from the European style market profile

Table 3 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 3 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Bid_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.1.3 Detailed Bid contextual model

#### 6.1.3.1 Bid\_MarketDocument root class

A bid document contains a set of bids (a bid is represented by a time series). There may be several bids submitted by the sender for the same bid period and subject party.

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: ESMPClasses::MarketDocument

Table 4 shows all attributes of Bid\_MarketDocument.

**Table 4 – Attributes of Bid contextual model::Bid\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 5 shows all association ends of Bid\_MarketDocument with other classes.

**Table 5 – Association ends of Bid contextual model::  
Bid\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	The timeseries contains the bids that are submitted to the auction. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	The domain covered within the bid document, i.e. the border for which auction is done. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Subject_MarketParticipant	MarketParticipant	The party for whom the bid is being submitted. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.1.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 6 shows all attributes of Auction.

**Table 6 – Attributes of Bid contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.1.3.3 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 7 shows all attributes of BidTimeSeries.

**Table 7 – Attributes of Bid contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	blockBid	ESMPBoolean_String	The indication that the values in the period are considered as a whole. They cannot be changed or subdivided.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	divisible	ESMPBoolean_String	An indication whether or not each element of the bid may be partially accepted or not.
[0..1]	linkedBidsIdentification	ID_String	The unique identification used to identify associated bids with each other.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 8 shows all association ends of BidTimeSeries with other classes.

**Table 8 – Association ends of Bid contextual model:  
 BidTimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the bid to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed (MW, MWh, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

#### 6.1.3.4 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 9 shows all attributes of Currency\_Unit.

**Table 9 – Attributes of Bid contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

#### 6.1.3.5 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 10 shows all attributes of Domain.

**Table 10 – Attributes of Bid contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

#### 6.1.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 11 shows all attributes of MarketParticipant.

**Table 11 – Attributes of Bid contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 12 shows all association ends of MarketParticipant with other classes.

**Table 12 – Association ends of Bid contextual model::  
 MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.1.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 13 shows all attributes of MarketRole.

**Table 13 – Attributes of Bid contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.1.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 14 shows all attributes of Measure\_Unit.

**Table 14 – Attributes of Bid contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.1.3.9 Point

The quantity that is bid for the interval in question.

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 15 shows all attributes of Point.

**Table 15 – Attributes of Bid contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 16 shows all association ends of Point with other classes.

**Table 16 – Association ends of Bid contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed for each unit of quantity. The price amount is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules (for example "first come first serve"). Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

#### 6.1.3.10 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 17 shows all attributes of Price.

**Table 17 – Attributes of Bid contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

#### 6.1.3.11 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 18 shows all attributes of Series\_Period.

**Table 18 – Attributes of Bid contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 19 shows all association ends of Series\_Period with other classes.

**Table 19 – Association ends of Bid contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.1.3.12 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 20 shows all attributes of Time\_Period.

**Table 20 – Attributes of Bid contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

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## 6.2 Bid assembly model

### 6.2.1 Overview of the model

Figure 10 shows the model.

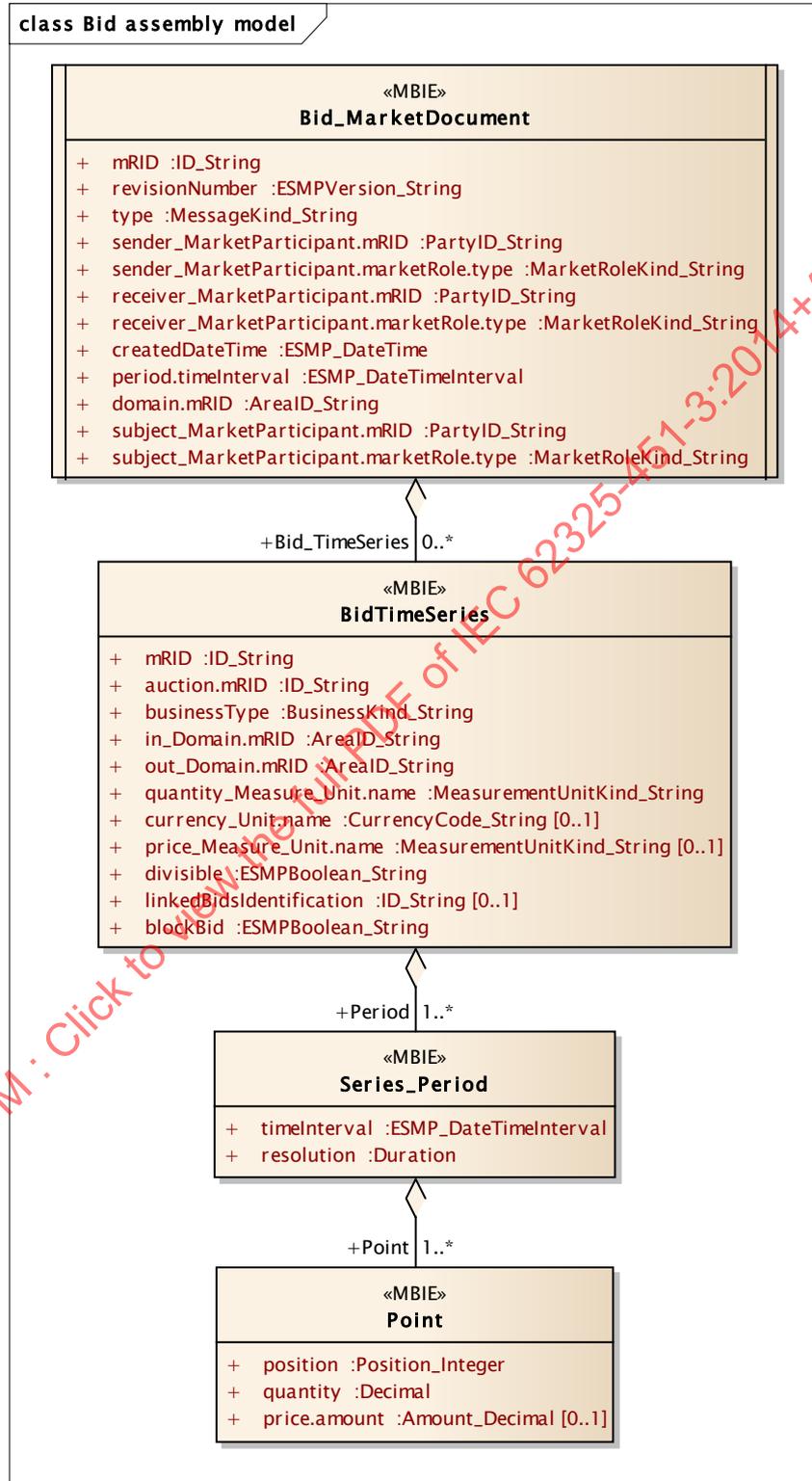


Figure 10 – Bid assembly model

## 6.2.2 IsBasedOn relationships from the European style market profile

Table 21 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 21 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Bid_MarketDocument	Bid contextual model::Bid_MarketDocument	Bid Document\Bid contextual model
BidTimeSeries	Bid contextual model::BidTimeSeries	Bid Document\Bid contextual model
Point	Bid contextual model::Point	Bid Document\Bid contextual model
Series_Period	Bid contextual model::Series_Period	Bid Document\Bid contextual model

## 6.2.3 Detailed Bid assembly model

### 6.2.3.1 Bid\_MarketDocument root class

A bid document contains a set of bids (a bid is represented by a time series). There may be several bids submitted by the sender for the same bid period and subject party.

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: Bid contextual model::Bid\_MarketDocument

Table 22 shows all attributes of Bid\_MarketDocument.

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**Table 22 – Attributes of Bid assembly model::Bid\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the bid document, i.e. the border for which auction is done.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	subject_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- The party for whom the bid is being submitted.
[1..1]	subject_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The party for whom the bid is being submitted.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 23 shows all association ends of Bid\_MarketDocument with other classes.

**Table 23 – Association ends of Bid assembly model::  
Bid\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	The timeseries contains the bids that are submitted to the auction. Association Based On: Bid contextual model::BidTimeSeries.Bid_TimeSeries[0..*] ----- Bid contextual model::Bid_MarketDocument.[]

### 6.2.3.2 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: Bid contextual model::BidTimeSeries

Table 24 shows all attributes of BidTimeSeries.

**Table 24 – Attributes of Bid assembly model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the bid to a set of specifications created by the auction operator.
[1..1]	blockBid	ESMPBoolean_String	The indication that the values in the period are considered as a whole. They cannot be changed or subdivided.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[1..1]	divisible	ESMPBoolean_String	An indication whether or not each element of the bid may be partially accepted or not.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[0..1]	linkedBidsIdentification	ID_String	The unique identification used to identify associated bids with each other.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed (MW, MWh, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.

Table 25 shows all association ends of BidTimeSeries with other classes.

**Table 25 – Association ends of Bid assembly model::BidTimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Bid contextual model::Series_Period.Period[1..*] ----- Bid contextual model::BidTimeSeries.[]

### 6.2.3.3 Point

The quantity that is bid for the interval in question.

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Bid contextual model::Point

Table 26 shows all attributes of Point.

**Table 26 – Attributes of Bid assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity. The price amount is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules (for example "first come first serve").
[1..1]	quantity	Decimal	The principal quantity identified for a point.

### 6.2.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Bid contextual model::Series\_Period

Table 27 shows all attributes of Series\_Period.

**Table 27 – Attributes of Bid assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 28 shows all association ends of Series\_Period with other classes.

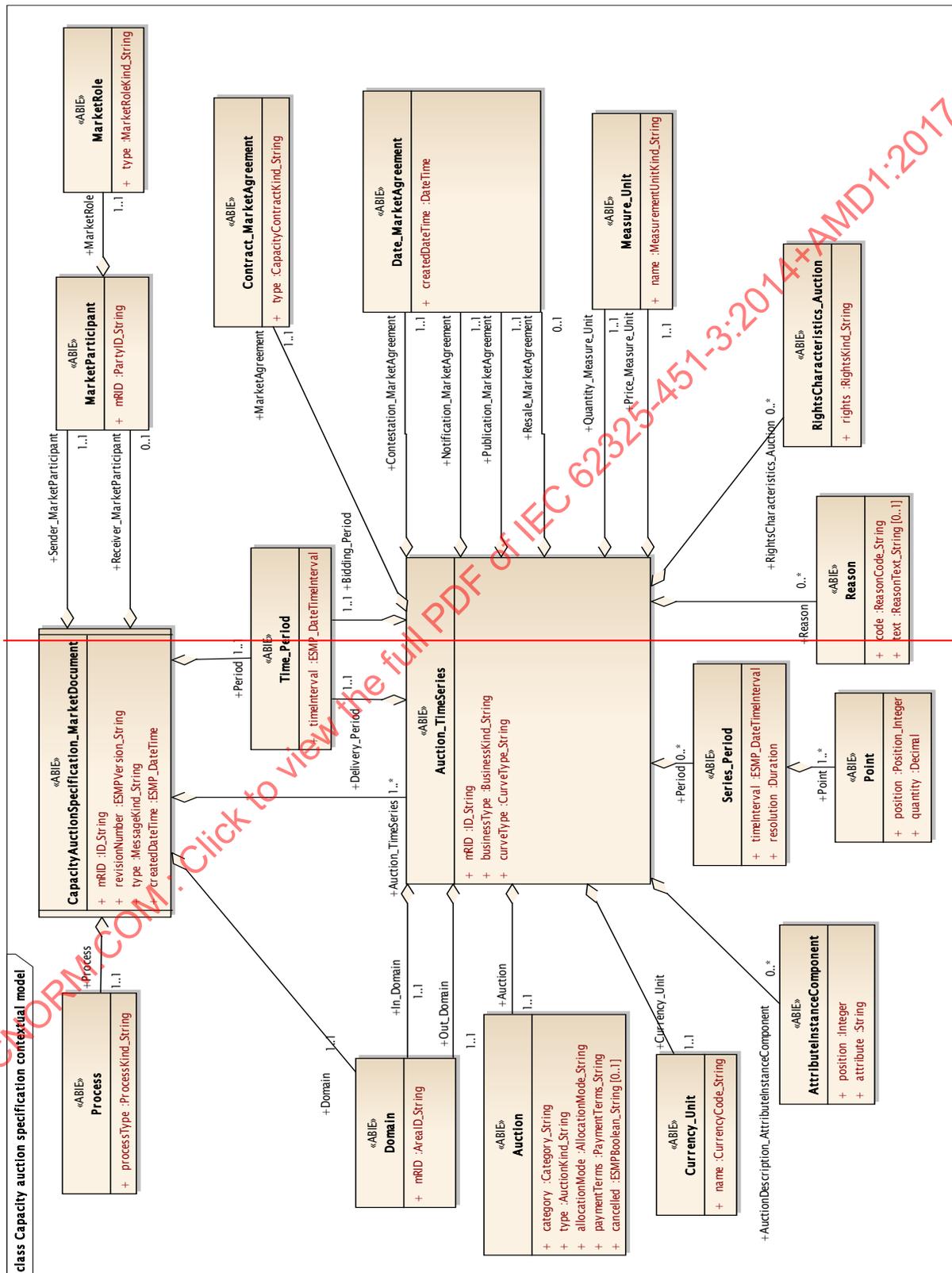
**Table 28 – Association ends of Bid assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Bid contextual model::Point.Point[1..*] ----- Bid contextual model::Series_Period.[]

### 6.3 Capacity auction specification contextual model

#### 6.3.1 Overview of the model

Figure 11 shows the model.



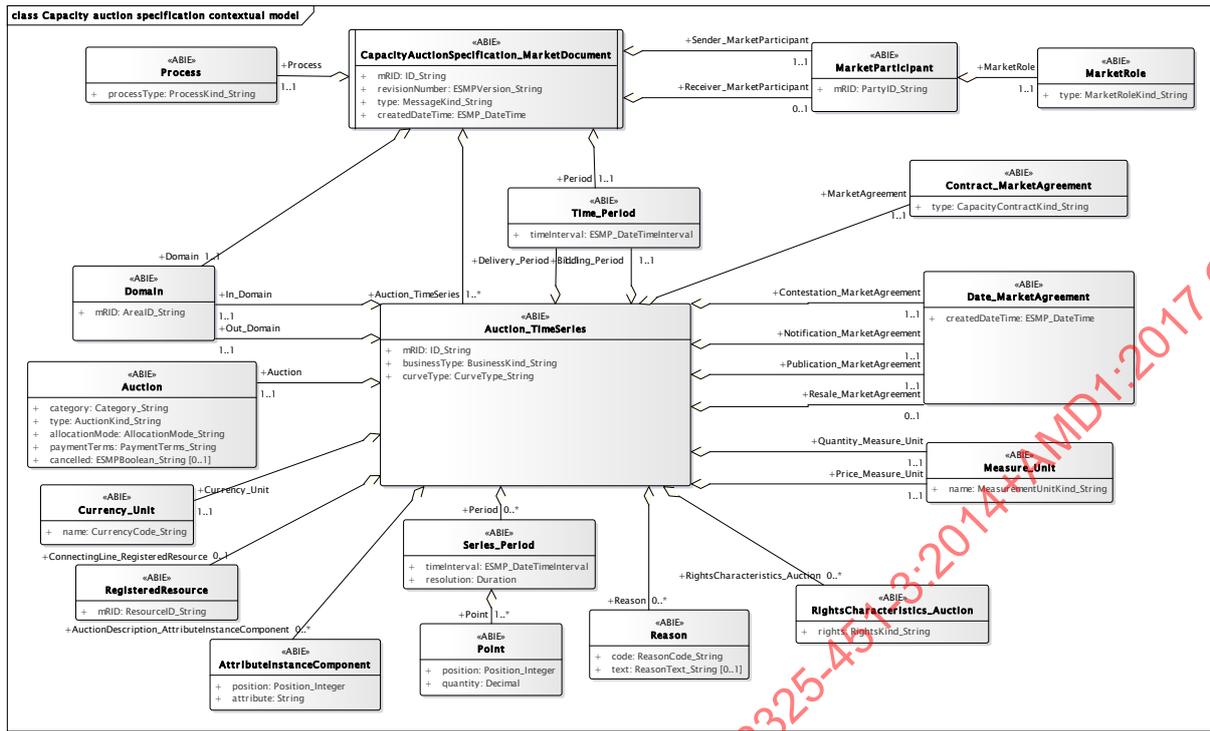


Figure 11 – Capacity auction specification contextual model

### 6.3.2 IsBasedOn relationships from the European style market profile

Table 29 shows the traceability dependency of the classes used in this package towards the upper level.

Table 29 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Auction_TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
CapacityAuctionSpecification_Market Document	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Date_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon

Name	Is BasedOn Class	Complete IsBasedOn Path
RightsCharacteristics_Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.3.3 Detailed Capacity auction specification contextual model

#### 6.3.3.1 CapacityAuctionSpecification\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The CapacityAuctionSpecification\_MarketDocument is issued by the Transmission Capacity Allocator to any market participant interested in the reception of such information.

It provides information on the auction that will be carried out and in particular the unique identification of the auction.

IsBasedOn: ESMPClasses::MarketDocument

Table 30 shows all attributes of CapacityAuctionSpecification\_MarketDocument.

**Table 30 – Attributes of Capacity auction specification contextual model::CapacityAuctionSpecification\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 31 shows all association ends of CapacityAuctionSpecification\_MarketDocument with other classes.

**Table 31 – Association ends of Capacity auction specification contextual model::CapacityAuctionSpecification\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the Capacity AuctionSpecification document, i.e. the border. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the capacity auctions are covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.3.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Table 32 shows all attributes of AttributeInstanceComponent.

**Table 32 – Attributes of Capacity auction specification contextual model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	attribute	String	This provides the textual content of a line within a description (textual description of the auction and its market rules to clarify information that is not formally defined). The identification of an attribute for a given request component.
[1..1]	position	Integer	The position provides the identification of each line within the textual description of an auction. A sequential value representing a relative sequence number.

### 6.3.3.3 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 33 shows all attributes of Auction.

**Table 33 – Attributes of Capacity auction specification contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	allocationMode	AllocationMode_String	The identification of the method of allocation in an auction.
[0..1]	cancelled	ESMPBoolean_String	An indicator that signifies that the object, subject of the TimeSeries, has been cancelled.
[1..1]	category	Category_String	The product category of an auction.
[1..1]	paymentTerms	PaymentTerms_String	The terms which dictate the determination of the bid payment price.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

#### 6.3.3.4 Auction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

The Auction\_TimeSeries provide the necessary information about what is auctioned as transmission capacity.

IsBasedOn: ESMPClasses::TimeSeries

Table 34 shows all attributes of Auction\_TimeSeries.

**Table 34 – Attributes of Capacity auction specification contextual model::Auction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	The identification attributed by the auction office that uniquely identifies the auction. A unique identification of the time series.

Table 35 shows all association ends of Auction\_TimeSeries with other classes.

**Table 35 – Association ends of Capacity auction specification contextual model::Auction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]

mult.	Role	Class type name	Description
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	It provides the textual description of the auction and its market rules to clarify information that is not formally defined. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Bidding_Period	Time_Period	The beginning and ending date and time of the bidding period within which capacity traders can submit a bid to the transmission capacity allocator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Contestation_MarketAgreement	Date_MarketAgreement	The period in which contestations may be provided starts with the notification date time and ends with the contestation date and time. If there is no possibility of contestation both dates and times must be the same. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Delivery_Period	Time_Period	The beginning and ending date and time of the period when the capacity is to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the capacity will be allocated. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Notification_MarketAgreement	Date_MarketAgreement	The date and time that the participants will be notified of the results prior to the contestation period. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]

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mult.	Role	Class type name	Description
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the prices in the auction bids are to be expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Publication_MarketAgreement	Date_MarketAgreement	The date and time that the final auction results will be published to the market after the contestation period. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	It may provide any coded or textual information that is necessary to completely describe a change to the auction specification or its eventual cancellation. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Resale_MarketAgreement	Date_MarketAgreement	The date and time where the resale of capacity rights acquired in previous auctions for this auction will no longer be acceptable. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	The definition of the type of the rights that are to be auctioned. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]

### 6.3.3.5 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 36 shows all attributes of Contract\_MarketAgreement.

**Table 36 – Attributes of Capacity auction specification contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.3.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 37 shows all attributes of Currency\_Unit.

**Table 37 – Attributes of Capacity auction specification contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.3.3.7 Date\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 38 shows all attributes of Date\_MarketAgreement.

**Table 38 – Attributes of Capacity auction specification contextual model::Date\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDate	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement.

### 6.3.3.8 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 39 shows all attributes of Domain.

**Table 39 – Attributes of Capacity auction specification contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ArealD_String	The unique identification of the domain.

### 6.3.3.9 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 40 shows all attributes of MarketParticipant.

**Table 40 – Attributes of Capacity auction specification contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 41 shows all association ends of MarketParticipant with other classes.

**Table 41 – Association ends of Capacity auction specification contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.3.3.10 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 42 shows all attributes of MarketRole.

**Table 42 – Attributes of Capacity auction specification contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.3.3.11 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 43 shows all attributes of Measure\_Unit.

**Table 43 – Attributes of Capacity auction specification contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.3.3.12 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 44 shows all attributes of Point.

**Table 44 – Attributes of Capacity auction specification contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity to be auctioned for the interval in question. The principal quantity identified for a point.

### 6.3.3.13 Process

A formal identification of the business process in which a flow of information is exchanged.

IsBasedOn: ESMPClasses::Process

Table 45 shows all attributes of Process.

**Table 45 – Attributes of Capacity auction specification contextual model::Process**

mult.	Attribute name	Attribute type	Description
[1..1]	processType	ProcessKind_String	The identification of the nature of process that the document addresses.

### 6.3.3.14 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 46 shows all attributes of Reason.

**Table 46 – Attributes of Capacity auction specification contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.3.3.15 RightsCharacteristics\_Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 47 shows all attributes of RightsCharacteristics\_Auction.

**Table 47 – Attributes of Capacity auction specification contextual model::RightsCharacteristics\_Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	rights	RightsKind_String	The rights of use that is accorded to what is acquired in an auction.

### 6.3.3.16 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 48 shows all attributes of Series\_Period.

**Table 48 – Attributes of Capacity auction specification contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 49 shows all association ends of Series\_Period with other classes.

**Table 49 – Association ends of Capacity auction specification contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.3.3.17 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 50 shows all attributes of Time\_Period.

**Table 50 – Attributes of Capacity auction specification contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.3.3.18 RegisteredResource

A resource that is registered through the market participant registration system. Examples include generating unit, load, and non-physical generator or load.

IsBasedOn: ESMPClasses::RegisteredResource

Table 254 shows all attributes of RegisteredResource.

**Table 254 – Attributes of Capacity auction specification contextual model::RegisteredResource**

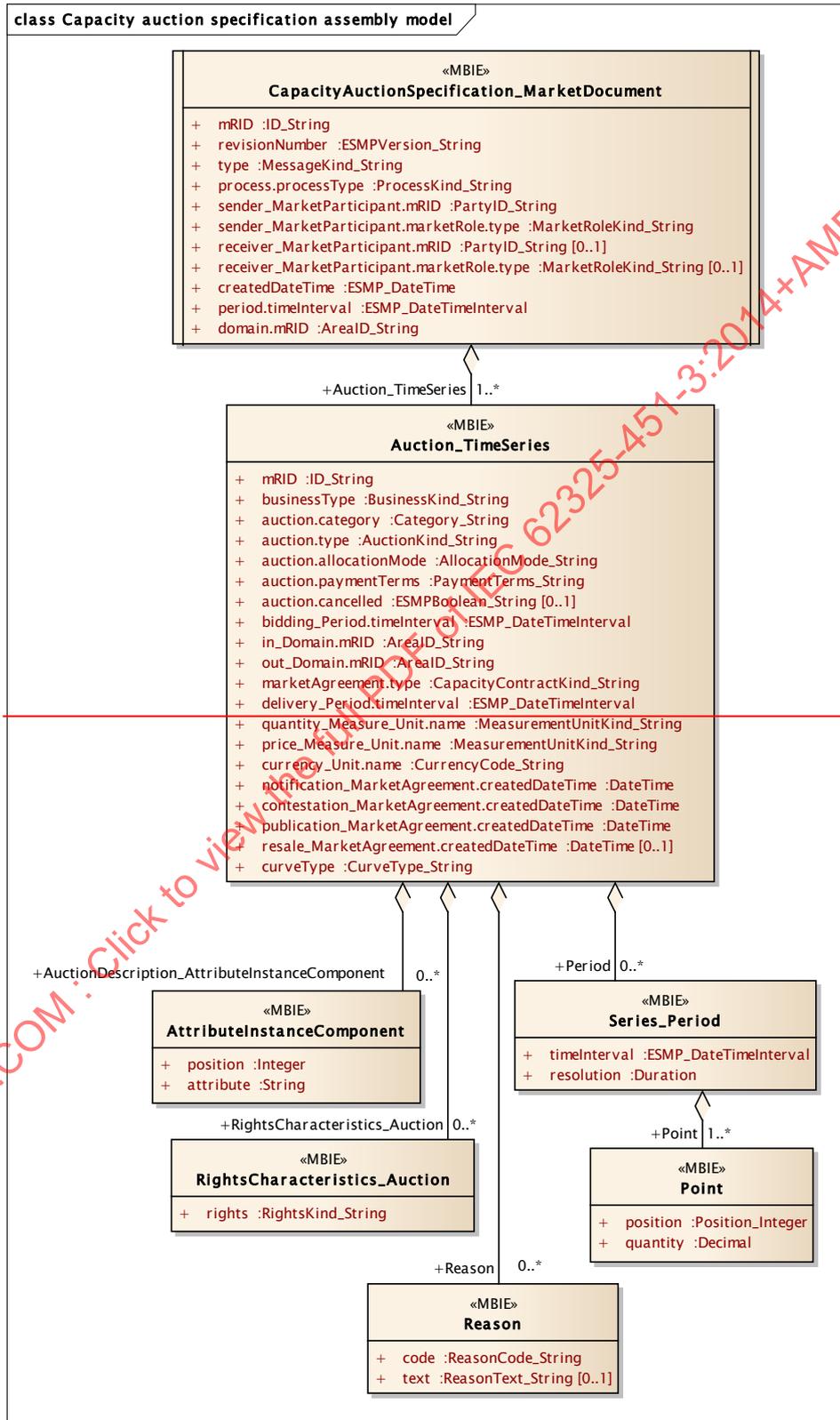
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ResourceID_String	The unique identification of a resource.

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## 6.4 Capacity auction specification assembly model

### 6.4.1 Overview of the model

Figure 12 shows the model.



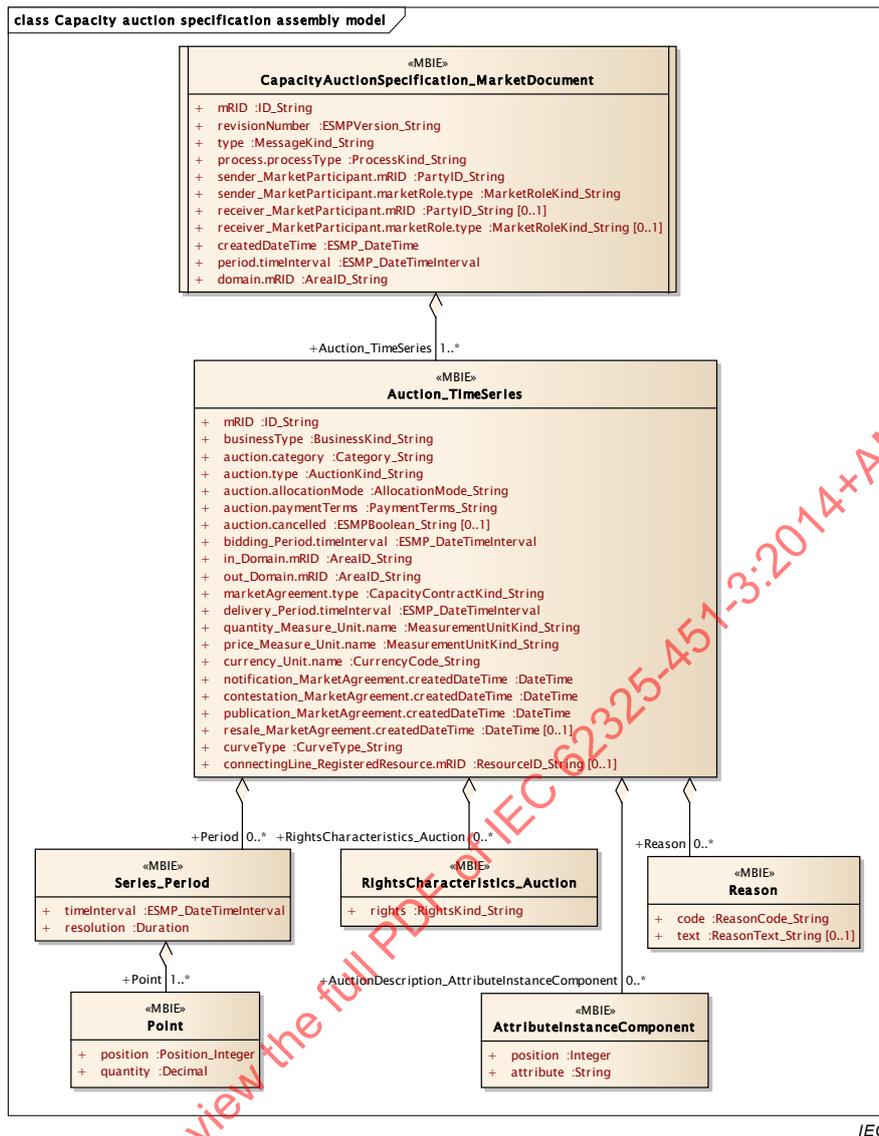


Figure 12 – Capacity auction specification assembly model

### 6.4.2 IsBasedOn relationships from the European style market profile

Table 51 shows the traceability dependency of the classes used in this package towards the upper level.

Table 51 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	Capacity auction specification contextual model::AttributeInstanceComponent	Capacity Auction Specification Document\Capacity auction specification contextual model
Auction_TimeSeries	Capacity auction specification contextual model::Auction_TimeSeries	Capacity Auction Specification Document\Capacity auction specification contextual model
CapacityAuctionSpecification_Market Document	Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument	Capacity Auction Specification Document\Capacity auction specification contextual model

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	Capacity auction specification contextual model::Point	Capacity Auction Specification Document\Capacity auction specification contextual model
Reason	Capacity auction specification contextual model::Reason	Capacity Auction Specification Document\Capacity auction specification contextual model
RightsCharacteristics_Auction	Capacity auction specification contextual model::RightsCharacteristics_Auction	Capacity Auction Specification Document\Capacity auction specification contextual model
Series_Period	Capacity auction specification contextual model::Series_Period	Capacity Auction Specification Document\Capacity auction specification contextual model

### 6.4.3 Detailed Capacity auction specification assembly model

#### 6.4.3.1 CapacityAuctionSpecification\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The CapacityAuctionSpecification\_MarketDocument is issued by the Transmission Capacity Allocator to any market participant interested in the reception of such information.

It provides information on the auction that will be carried out and in particular the unique identification of the auction.

IsBasedOn: Capacity auction specification contextual  
 model::CapacityAuctionSpecification\_MarketDocument

Table 52 shows all attributes of CapacityAuctionSpecification\_MarketDocument.

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**Table 52 – Attributes of Capacity auction specification assembly  
model::CapacityAuctionSpecification\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the Capacity AuctionSpecification document, i.e. the border.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the capacity auctions are covering.
[1..1]	process.processType	ProcessKind_String	The identification of the nature of process that the document addresses.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 53 shows all association ends of CapacityAuctionSpecification\_MarketDocument with other classes.

**Table 53 – Association ends of Capacity auction specification assembly  
model::CapacityAuctionSpecification\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: Capacity auction specification contextual model::Auction_TimeSeries.Auction_TimeSeries[1..*] ----- Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument.[]

### 6.4.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: Capacity auction specification contextual model::AttributeInstanceComponent

Table 54 shows all attributes of AttributeInstanceComponent.

**Table 54 – Attributes of Capacity auction specification assembly model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	attribute	String	This provides the textual content of a line within a description (textual description of the auction and its market rules to clarify information that is not formally defined). The identification of an attribute for a given request component.
[1..1]	position	Integer	The position provides the identification of each line within the textual description of an auction. A sequential value representing a relative sequence number.

### 6.4.3.3 Auction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

The Auction\_TimeSeries provide the necessary information about what is auctioned as transmission capacity.

IsBasedOn: Capacity auction specification contextual model::Auction\_TimeSeries

Table 55 shows all attributes of Auction\_TimeSeries.

**Table 55 – Attributes of Capacity auction specification assembly model::Auction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	auction.allocationMode	AllocationMode_String	The identification of the method of allocation in an auction.
[0..1]	auction.cancelled	ESMPBoolean_String	An indicator that signifies that the object, subject of the TimeSeries, has been cancelled.
[1..1]	auction.category	Category_String	The product category of an auction.
[1..1]	auction.paymentTerms	PaymentTerms_String	The terms which dictate the determination of the bid payment price.
[1..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).
[1..1]	bidding_Period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the bidding period within which capacity traders can submit a bid to the transmission capacity allocator.

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	The unique identification of a resource. --- The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines.
[1..1]	contestation_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The period in which contestations may be provided starts with the notification date time and ends with the contestation date and time. If there is no possibility of contestation both dates and times must be the same.
[1..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[1..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	delivery_Period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period when the capacity is to be used.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity will be allocated.
[1..1]	mRID	ID_String	The identification attributed by the auction office that uniquely identifies the auction. A unique identification of the time series.
[1..1]	notification_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time that the participants will be notified of the results prior to the contestation period.

mult.	Attribute name	Attribute type	Description
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the prices in the auction bids are to be expressed.
[1..1]	publication_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time that the final auction results will be published to the market after the contestation period.
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.
[0..1]	resale_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time where the resale of capacity rights acquired in previous auctions for this auction will no longer be acceptable.

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Table 56 shows all association ends of Auction\_TimeSeries with other classes.

**Table 56 – Association ends of Capacity auction specification assembly model::Auction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	It provides the textual description of the auction and its market rules to clarify information that is not formally defined. Association Based On: Capacity auction specification contextual model::AttributeInstanceComponent.AuctionDescription_AttributeInstanceComponent[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: Capacity auction specification contextual model::Series_Period.Period[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	Reason	Reason	It may provide any coded or textual information that is necessary to completely describe a change to the auction specification or its eventual cancellation. Association Based On: Capacity auction specification contextual model::Reason.Reason[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	The definition of the type of the rights that are to be auctioned. Association Based On: Capacity auction specification contextual model::RightsCharacteristics_Auction.RightsCharacteristics_Auction[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]

#### 6.4.3.4 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Capacity auction specification contextual model::Point

Table 57 shows all attributes of Point.

**Table 57 – Attributes of Capacity auction specification assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity to be auctioned for the interval in question. The principal quantity identified for a point.

#### 6.4.3.5 Reason

The motivation of an act.

IsBasedOn: Capacity auction specification contextual model::Reason

Table 58 shows all attributes of Reason.

**Table 58 – Attributes of Capacity auction specification assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.4.3.6 RightsCharacteristics\_Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: Capacity auction specification contextual model::RightsCharacteristics\_Auction

Table 59 shows all attributes of RightsCharacteristics\_Auction.

**Table 59 – Attributes of Capacity auction specification assembly model::RightsCharacteristics\_Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	rights	RightsKind_String	The rights of use that is accorded to what is acquired in an auction.

#### 6.4.3.7 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Capacity auction specification contextual model::Series\_Period

Table 60 shows all attributes of Series\_Period.

**Table 60 – Attributes of Capacity auction specification assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 61 shows all association ends of Series\_Period with other classes.

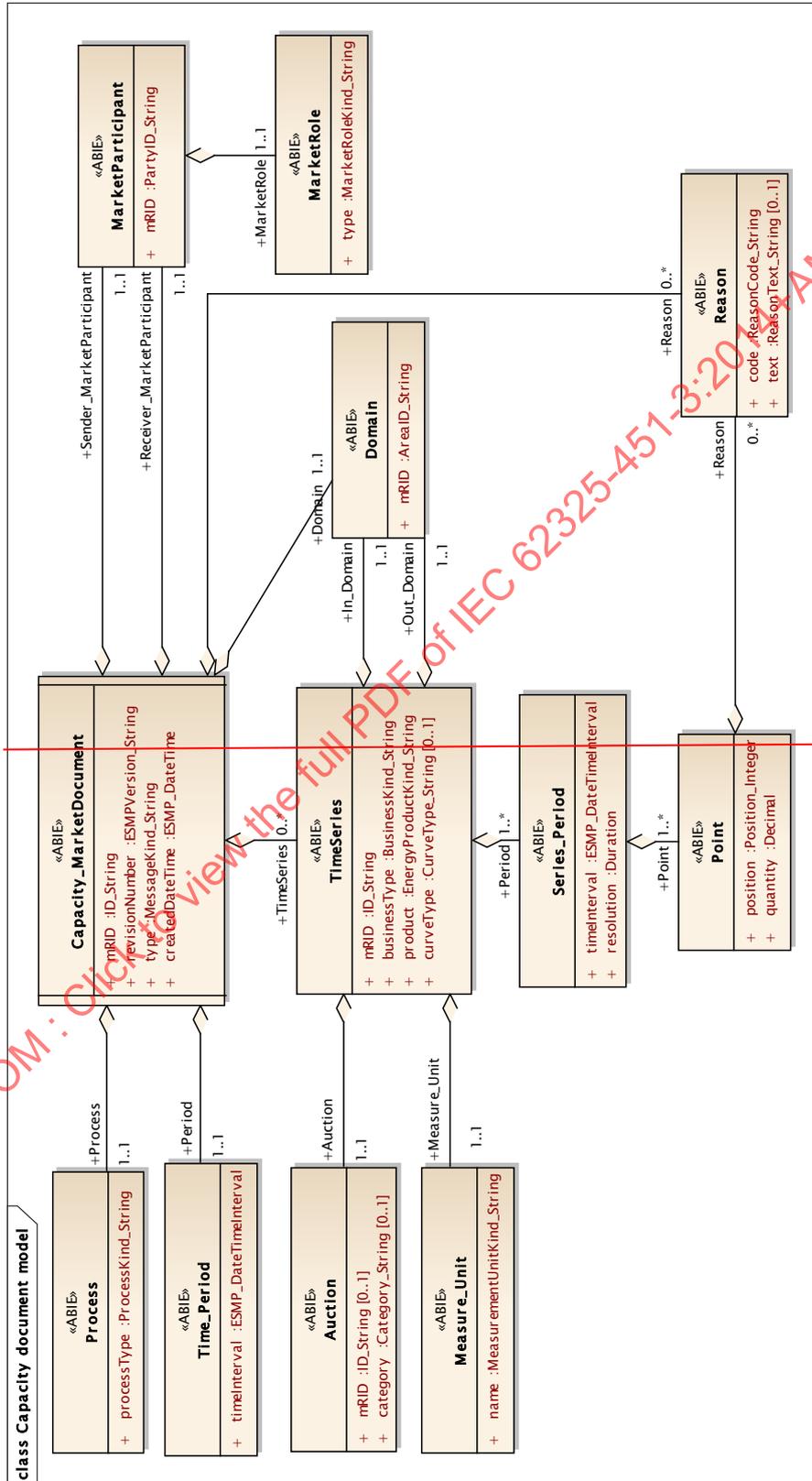
**Table 61 – Association ends of Capacity auction specification assembly model::Series\_Period with other classes**

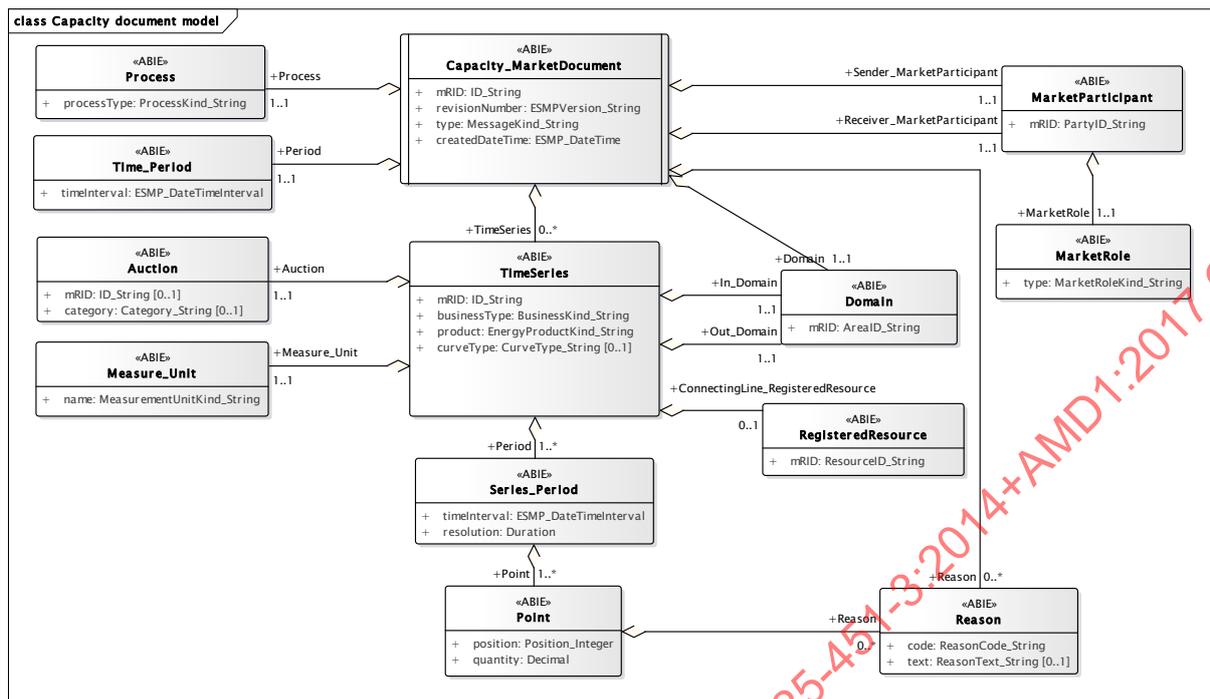
mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Capacity auction specification contextual model::Point.Point[1..*] ----- Capacity auction specification contextual model::Series_Period.[]

## 6.5 Capacity contextual model

### 6.5.1 Overview of the model

Figure 13 shows the model.





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Figure 13 – Capacity contextual model

### 6.5.2 IsBasedOn relationships from the European style market profile

Table 62 shows the traceability dependency of the classes used in this package towards the upper level.

Table 62 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Capacity_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.5.3 Detailed Capacity contextual model

#### 6.5.3.1 Capacity\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The Capacity\_MarketDocument enables the exchange of information related to transmission capacity. These exchanges could be related to capacity determination or capacity allocation. The values exchanged could be related to NTC, ATC, AAC, released AAC, offered capacity or general capacity information.

IsBasedOn: ESMPClasses::MarketDocument

Table 63 shows all attributes of Capacity\_MarketDocument.

**Table 63 – Attributes of Capacity contextual model::Capacity\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 64 shows all association ends of Capacity\_MarketDocument with other classes.

**Table 64 – Association ends of Capacity contextual model::  
Capacity\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the Capacity_MarketDocument. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]

mult.	Role	Class type name	Description
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.5.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

The unique identification of the set of specifications that clearly identifies the auction to which the capacity is addressed.

IsBasedOn: ESMPClasses::Auction

Table 65 shows all attributes of Auction.

**Table 65 – Attributes of Capacity contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[0..1]	mRID	ID_String	The unique identification of the auction.

### 6.5.3.3 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 66 shows all attributes of Domain.

**Table 66 – Attributes of Capacity contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.5.3.4 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 67 shows all attributes of MarketParticipant.

**Table 67 – Attributes of Capacity contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 68 shows all association ends of MarketParticipant with other classes.

**Table 68 – Association ends of Capacity contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant [] ----- ESMPClasses::MarketRole.MarketRole[0..1]

#### 6.5.3.5 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 69 shows all attributes of MarketRole.

**Table 69 – Attributes of Capacity contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

#### 6.5.3.6 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 70 shows all attributes of Measure\_Unit.

**Table 70 – Attributes of Capacity contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.5.3.7 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 71 shows all attributes of Point.

**Table 71 – Attributes of Capacity contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 72 shows all association ends of Point with other classes.

**Table 72 – Association ends of Capacity contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.5.3.8 Process

A formal identification of the business process in which a flow of information is exchanged.

IsBasedOn: ESMPClasses::Process

Table 73 shows all attributes of Process.

**Table 73 – Attributes of Capacity contextual model::Process**

mult.	Attribute name	Attribute type	Description
[1..1]	process.Type	ProcessKind_String	The identification of the nature of process that the document addresses.

### 6.5.3.9 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 74 shows all attributes of Reason.

**Table 74 – Attributes of Capacity contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.5.3.10 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 75 shows all attributes of Series\_Period.

**Table 75 – Attributes of Capacity contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 76 shows all association ends of Series\_Period with other classes.

**Table 76 – Association ends of Capacity contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.5.3.11 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 77 shows all attributes of Time\_Period.

**Table 77 – Attributes of Capacity contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.5.3.12 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 78 shows all attributes of TimeSeries.

**Table 78 – Attributes of Capacity contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	product	EnergyProductKind_String	The identification of the nature of an energy product such as power, energy, reactive power, etc.

Table 79 shows all association ends of TimeSeries with other classes.

**Table 79 – Association ends of Capacity contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification of a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]

### 6.5.3.13 RegisteredResource

A resource that is registered through the market participant registration system. Examples include generating unit, load, and non-physical generator or load.

IsBasedOn: ESMPClasses::RegisteredResource

Table 255 shows all attributes of RegisteredResource.

**Table 255 – Attributes of Capacity contextual model::RegisteredResource**

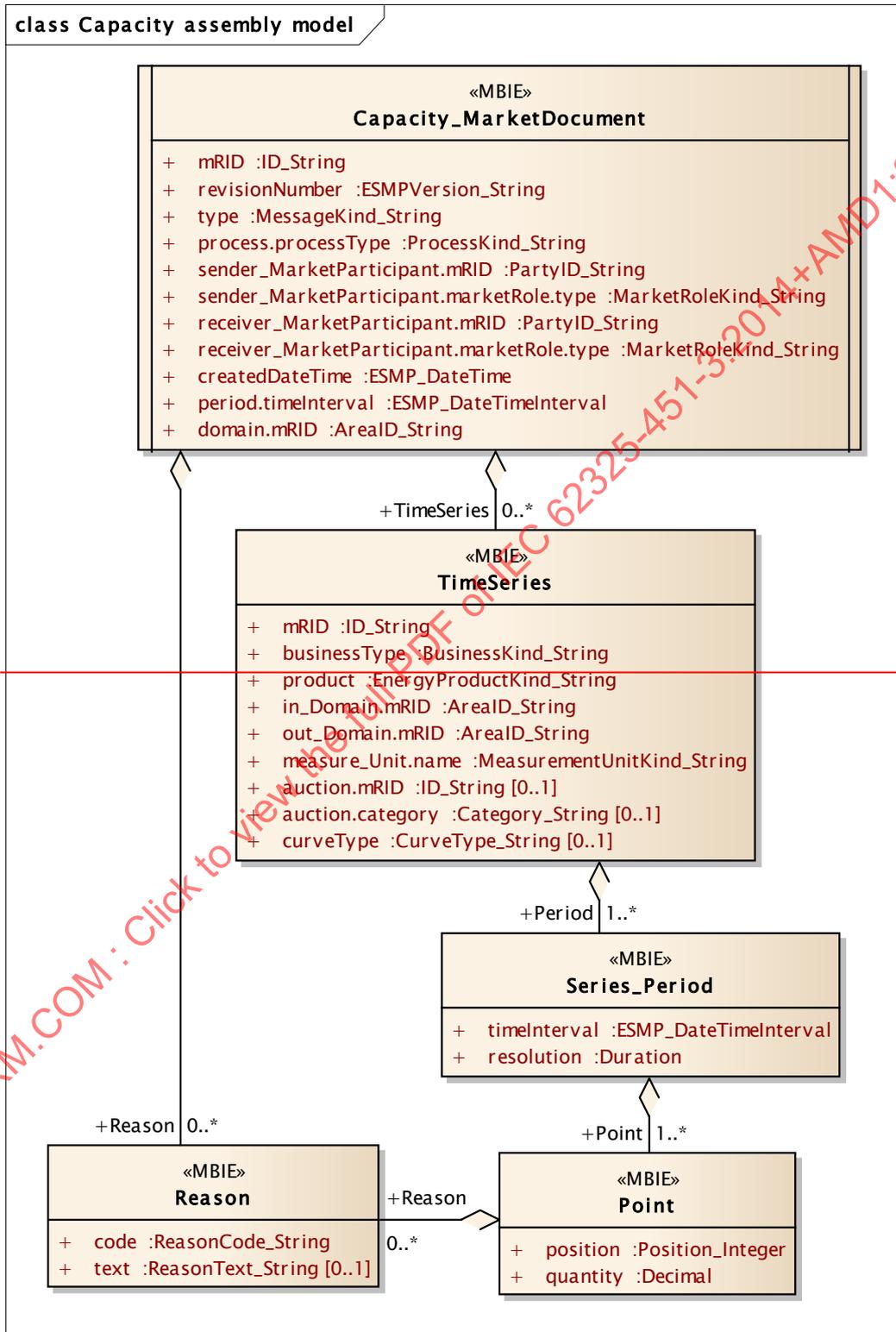
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ResourceID_String	The unique identification of a resource.

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## 6.6 Capacity assembly model

### 6.6.1 Overview of the model

Figure 14 shows the model.



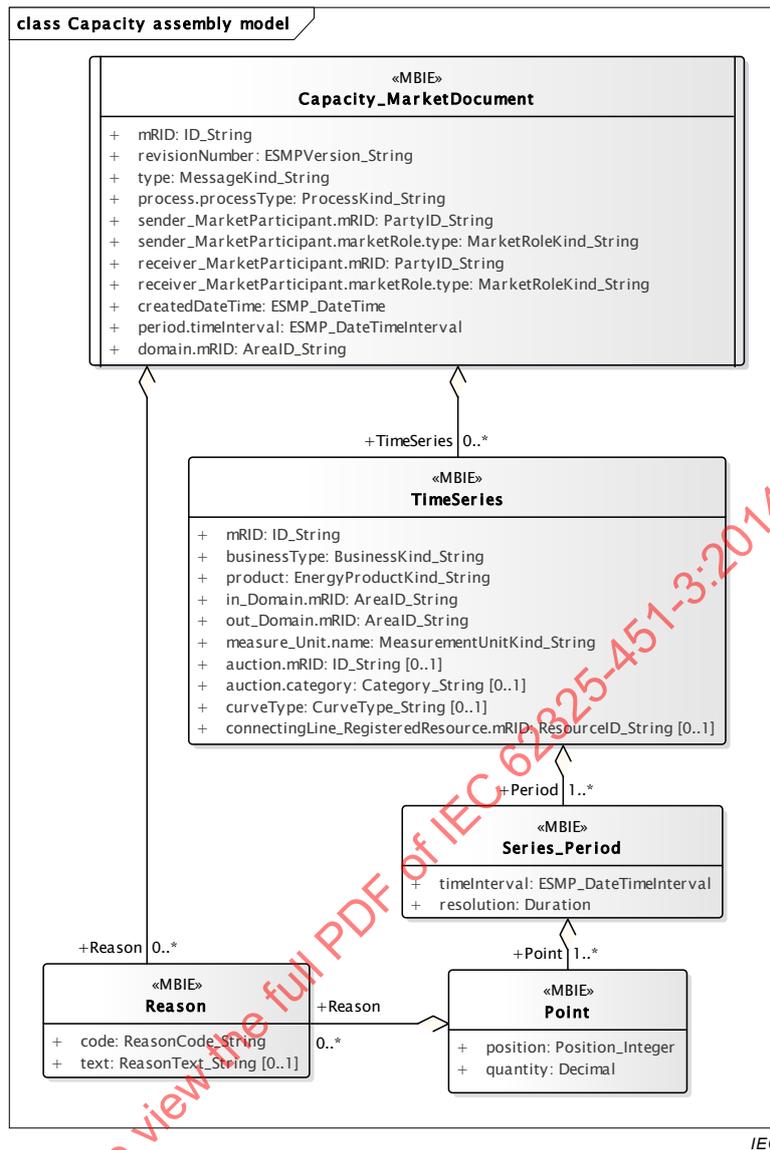


Figure 14 – Capacity assembly model

### 6.6.2 IsBasedOn relationships from the European style market profile

Table 80 shows the traceability dependency of the classes used in this package towards the upper level.

Table 80 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
Capacity_MarketDocument	Capacity contextual model::Capacity_MarketDocument	Capacity Document\Capacity contextual model
Point	Capacity contextual model::Point	Capacity Document\Capacity contextual model
Reason	Capacity contextual model::Reason	Capacity Document\Capacity contextual model
Series_Period	Capacity contextual model::Series_Period	Capacity Document\Capacity contextual model
TimeSeries	Capacity contextual model::TimeSeries	Capacity Document\Capacity contextual model

### 6.6.3 Detailed Capacity assembly model

#### 6.6.3.1 Capacity\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The Capacity\_MarketDocument enables the exchange of information related to transmission capacity. These exchanges could be related to capacity determination or capacity allocation. The values exchanged could be related to NTC, ATC, AAC, released AAC, offered capacity or general capacity information.

IsBasedOn: Capacity contextual model::Capacity\_MarketDocument

Table 81 shows all attributes of Capacity\_MarketDocument.

**Table 81 – Attributes of Capacity assembly model::Capacity\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the Capacity_MarketDocument.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	process.processType	ProcessKind_String	The identification of the nature of process that the document addresses.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 82 shows all association ends of Capacity\_MarketDocument with other classes.

**Table 82 – Association ends of Capacity assembly model::  
Capacity\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Capacity contextual model::Reason.Reason[0..*] ----- Capacity contextual model::Capacity_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Capacity contextual model::TimeSeries.TimeSeries[0..*] ----- Capacity contextual model::Capacity_MarketDocument.[]

### 6.6.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Capacity contextual model::Point

Table 83 shows all attributes of Point.

**Table 83 – Attributes of Capacity assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 84 shows all association ends of Point with other classes.

**Table 84 – Association ends of Capacity assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Capacity contextual model::Reason.Reason[0..*] ----- Capacity contextual model::Point.[]

### 6.6.3.3 Reason

The motivation of an act.

IsBasedOn: Capacity contextual model::Reason

Table 85 shows all attributes of Reason.

**Table 85 – Attributes of Capacity assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.6.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Capacity contextual model::Series\_Period

Table 86 shows all attributes of Series\_Period.

**Table 86 – Attributes of Capacity assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 87 shows all association ends of Series\_Period with other classes.

**Table 87 – Association ends of Capacity assembly model::Series\_Period with other classes**

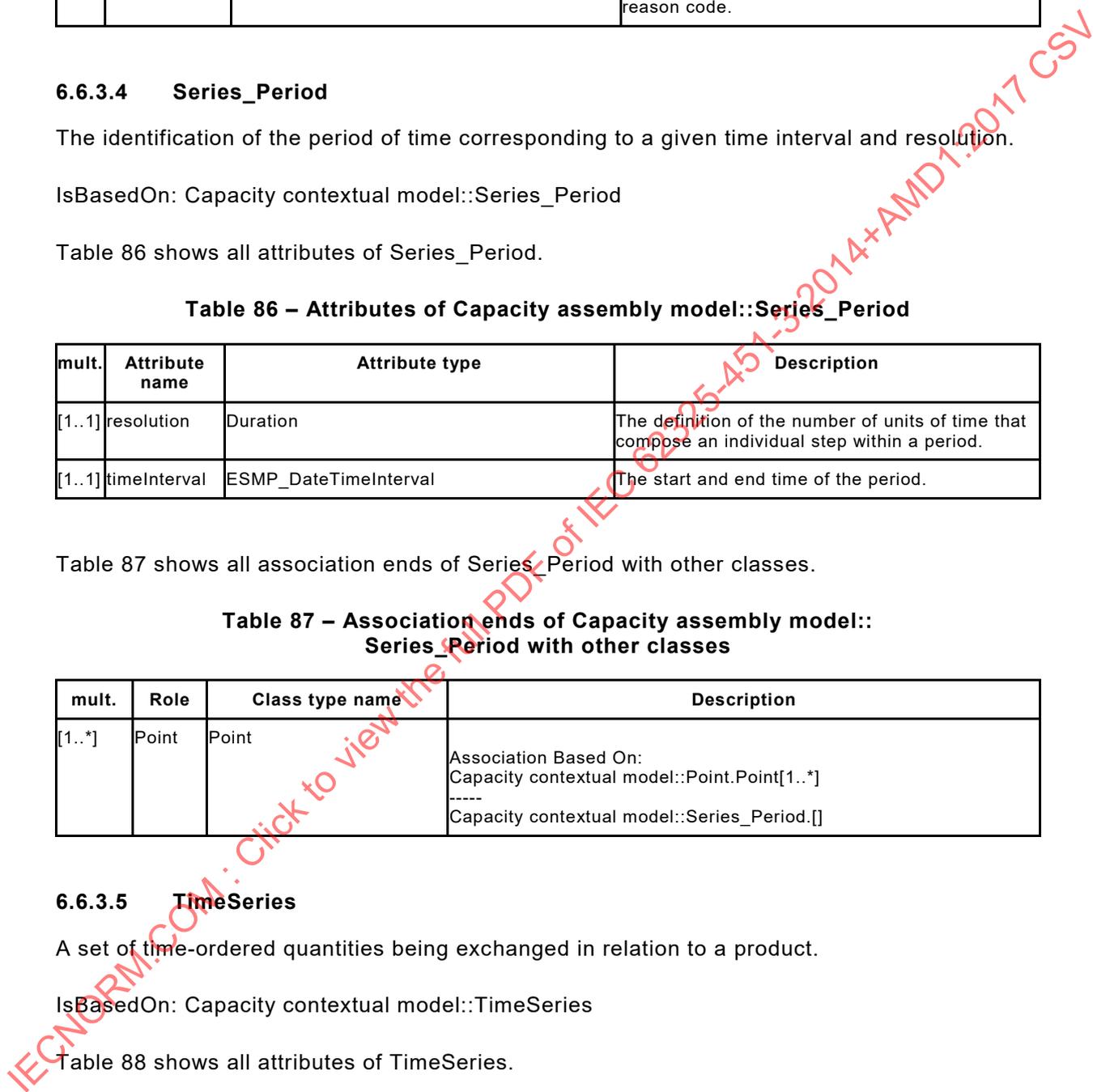
mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Capacity contextual model::Point.Point[1..*] ----- Capacity contextual model::Series_Period.[]

#### 6.6.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Capacity contextual model::TimeSeries

Table 88 shows all attributes of TimeSeries.



**Table 88 – Attributes of Capacity assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification of a set of specifications created by the auction operator.
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification of a set of specifications created by the auction operator.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	The unique identification of a resource. --- The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	product	EnergyProductKind_String	The identification of the nature of an energy product such as power, energy, reactive power, etc.

Table 89 shows all association ends of TimeSeries with other classes.

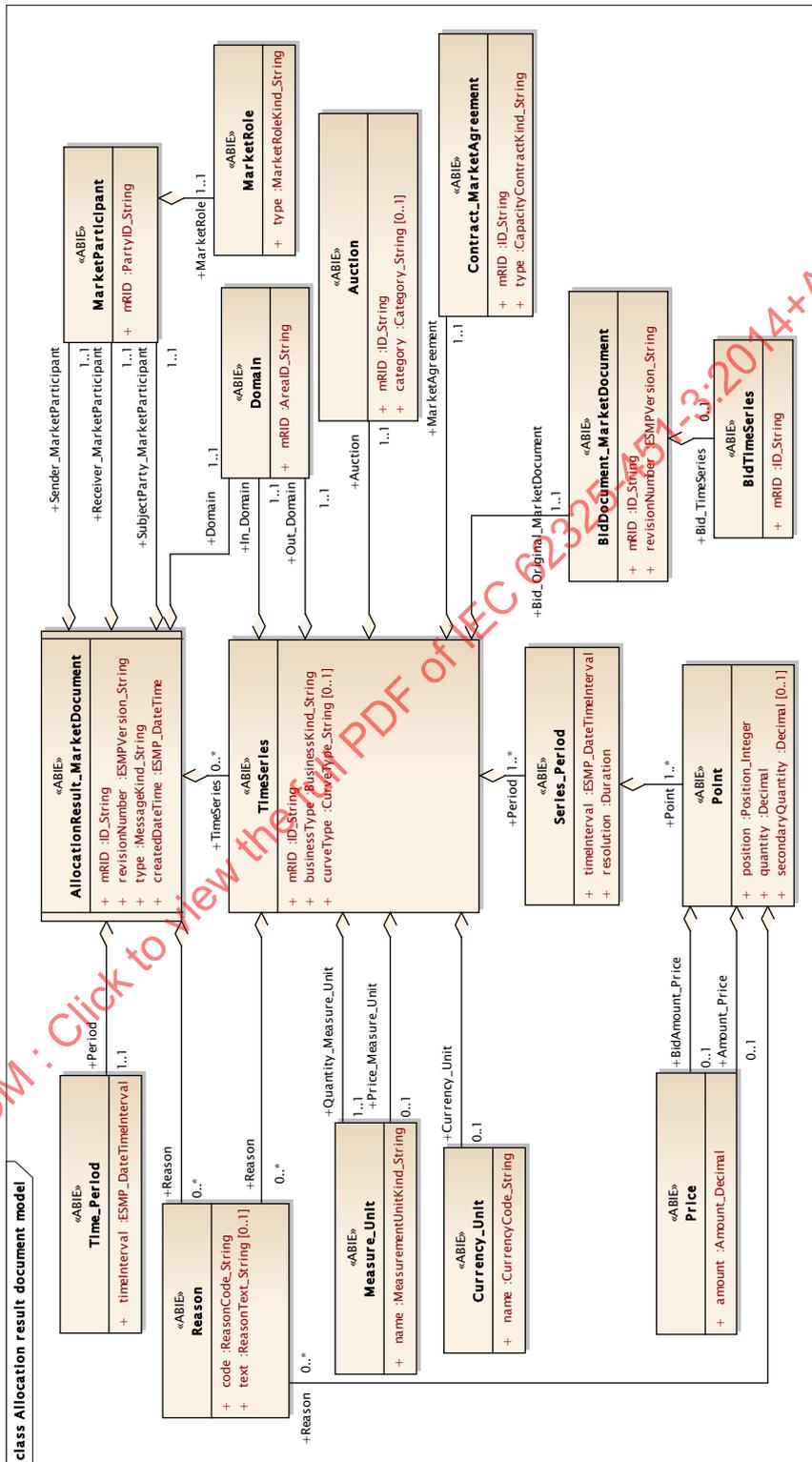
**Table 89 – Association ends of Capacity assembly model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Capacity contextual model::Series_Period.Period[1..*] ----- Capacity contextual model::TimeSeries.[]

## 6.7 Allocation result contextual model

### 6.7.1 Overview of the model

Figure 15 shows the model.



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Figure 15 – Allocation result contextual model

## 6.7.2 IsBasedOn relationships from the European style market profile

Table 90 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 90 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

## 6.7.3 Detailed Allocation result contextual model

### 6.7.3.1 AllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.

In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.

A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.

Only one of these possibilities is permitted in a given allocation result document.

IsBasedOn: ESMPClasses::MarketDocument

Table 91 shows all attributes of AllocationResult\_MarketDocument.

**Table 91 – Attributes of Allocation result contextual model::AllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 92 shows all association ends of AllocationResult\_MarketDocument with other classes.

**Table 92 – Association ends of Allocation result contextual model::AllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	SubjectParty_MarketParticipant	MarketParticipant	The party for whom the bid is allocated. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

mult.	Role	Class type name	Description
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.7.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

The unique identification of the set of specifications that clearly identify the auction to which the bid is addressed.

IsBasedOn: ESMPClasses::Auction

Table 93 shows all attributes of Auction.

**Table 93 – Attributes of Allocation result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.7.3.3 BidDocument\_MarketDocument

An electronic document containing the information necessary to satisfy the requirements of a given business process.

Each bid allocated is contained in the bid document sent by the user.

IsBasedOn: ESMPClasses::MarketDocument

Table 94 shows all attributes of BidDocument\_MarketDocument.

**Table 94 – Attributes of Allocation result contextual model::BidDocument\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.

Table 95 shows all association ends of BidDocument\_MarketDocument with other classes.

**Table 95 – Association ends of Allocation result contextual model::BidDocument\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Bid_TimeSeries	BidTimeSeries	The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

#### 6.7.3.4 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 96 shows all attributes of BidTimeSeries.

**Table 96 – Attributes of Allocation result contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

#### 6.7.3.5 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 97 shows all attributes of Contract\_MarketAgreement.

**Table 97 – Attributes of Allocation result contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

#### 6.7.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 98 shows all attributes of Currency\_Unit.

**Table 98 – Attributes of Allocation result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.7.3.7 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 99 shows all attributes of Domain.

**Table 99 – Attributes of Allocation result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.7.3.8 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 100 shows all attributes of MarketParticipant.

**Table 100 – Attributes of Allocation result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 101 shows all association ends of MarketParticipant with other classes.

**Table 101 – Association ends of Allocation result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.7.3.9 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 102 shows all attributes of MarketRole.

**Table 102 – Attributes of Allocation result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

#### 6.7.3.10 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 103 shows all attributes of Measure\_Unit.

**Table 103 – Attributes of Allocation result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

#### 6.7.3.11 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 104 shows all attributes of Point.

**Table 104 – Attributes of Allocation result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid or resale document. The secondary quantity identified for a point.

Table 105 shows all association ends of Point with other classes.

**Table 105 – Association ends of Allocation result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Amount_Price	Price	The price expressed for each unit of quantity allocated. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	The original price expressed in the original bid or resale for each unit of quantity requested. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

#### 6.7.3.12 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 106 shows all attributes of Price.

**Table 106 – Attributes of Allocation result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

#### 6.7.3.13 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 107 shows all attributes of Reason.

**Table 107 – Attributes of Allocation result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.7.3.14 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 108 shows all attributes of Series\_Period.

**Table 108 – Attributes of Allocation result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 109 shows all association ends of Series\_Period with other classes.

**Table 109 – Association ends of Allocation result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.7.3.15 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 110 shows all attributes of Time\_Period.

**Table 110 – Attributes of Allocation result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

#### 6.7.3.16 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

For each time series in the document, the identification shall be a unique number assigned by the auction office.

IsBasedOn: ESMPClasses::TimeSeries

Table 111 shows all attributes of TimeSeries.

**Table 111 – Attributes of Allocation result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 112 shows all association ends of TimeSeries with other classes.

**Table 112 – Association ends of Allocation result contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the allocation to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	Bid_Original_MarketDocument	BidDocument_MarketDocument	The identification of the document that contains the bids or resales referenced in the BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

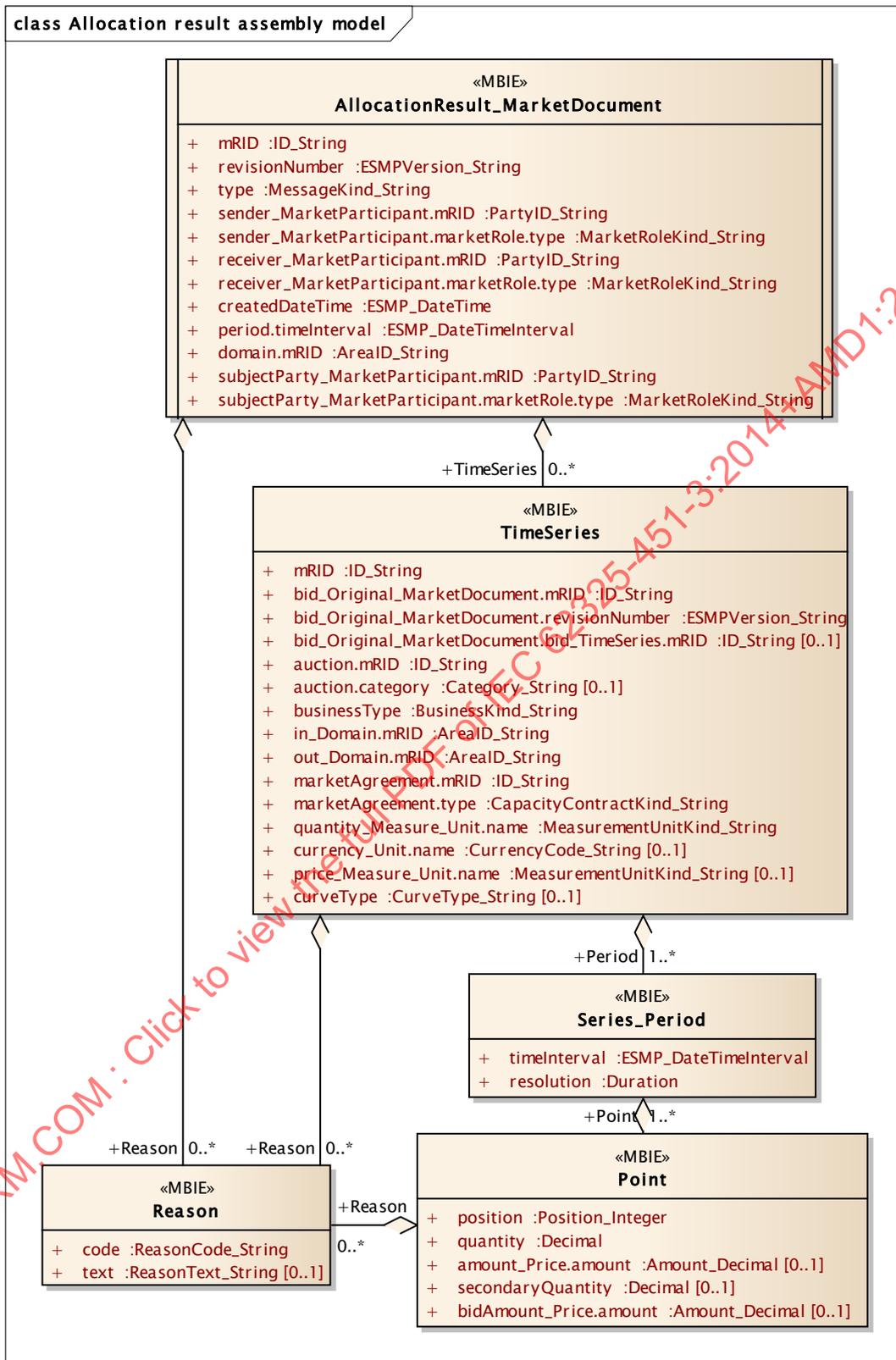
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.8 Allocation result assembly model

### 6.8.1 Overview of the model

Figure 16 shows the model.

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Figure 16 – Allocation result assembly model

## 6.8.2 IsBasedOn relationships from the European style market profile

Table 113 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 113 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AllocationResult_MarketDocument	Allocation result contextual model::AllocationResult_MarketDocument	Allocation Result Document\Allocation result contextual model
Point	Allocation result contextual model::Point	Allocation Result Document\Allocation result contextual model
Reason	Allocation result contextual model::Reason	Allocation Result Document\Allocation result contextual model
Series_Period	Allocation result contextual model::Series_Period	Allocation Result Document\Allocation result contextual model
TimeSeries	Allocation result contextual model::TimeSeries	Allocation Result Document\Allocation result contextual model

## 6.8.3 Detailed Allocation result assembly model

### 6.8.3.1 AllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.

In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.

A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.

Only one of these possibilities is permitted in a given allocation result document.

IsBasedOn: Allocation result contextual model::AllocationResult\_MarketDocument

Table 114 shows all attributes of AllocationResult\_MarketDocument.

**Table 114 – Attributes of Allocation result assembly  
model::AllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	subjectParty_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- The party for whom the bid is allocated.
[1..1]	subjectParty_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The party for whom the bid is allocated.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 115 shows all association ends of AllocationResult\_MarketDocument with other classes.

**Table 115 – Association ends of Allocation result assembly model::AllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]

### 6.8.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Allocation result contextual model::Point

Table 116 shows all attributes of Point.

**Table 116 – Attributes of Allocation result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[0..1]	amount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity allocated.
[0..1]	bidAmount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The original price expressed in the original bid or resale for each unit of quantity requested.
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid or resale document. The secondary quantity identified for a point.

Table 117 shows all association ends of Point with other classes.

**Table 117 – Association ends of Allocation result assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::Point.[]

### 6.8.3.3 Reason

The motivation of an act.

IsBasedOn: Allocation result contextual model::Reason

Table 118 shows all attributes of Reason.

**Table 118 – Attributes of Allocation result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.8.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Allocation result contextual model::Series\_Period

Table 119 shows all attributes of Series\_Period.

**Table 119 – Attributes of Allocation result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 120 shows all association ends of Series\_Period with other classes.

**Table 120 – Association ends of Allocation result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Allocation result contextual model::Point.Point[1..*] ----- Allocation result contextual model::Series_Period.[]

### 6.8.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

For each time series in the document, the identification shall be a unique number assigned by the auction office.

IsBasedOn: Allocation result contextual model::TimeSeries

Table 121 shows all attributes of TimeSeries.

**Table 121 – Attributes of Allocation result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[0..1]	bid_Original_MarketDocument. bid_TimeSeries.mRID	ID_String	A unique identification of the time series. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.
[1..1]	bid_Original_MarketDocument. mRID	ID_String	The unique identification of the document being exchanged within a business process flow. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	bid_Original_MarketDocument.r evisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	marketAgreement.mRID	ID_String	The unique identification of the agreement. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	marketAgreement.type	CapacityContractKind_S tring	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	mRID	ID_String	A unique identification of the time series.

mult.	Attribute name	Attribute type	Description
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.

Table 122 shows all association ends of TimeSeries with other classes.

**Table 122 – Association ends of Allocation result assembly model::TimeSeries with other classes**

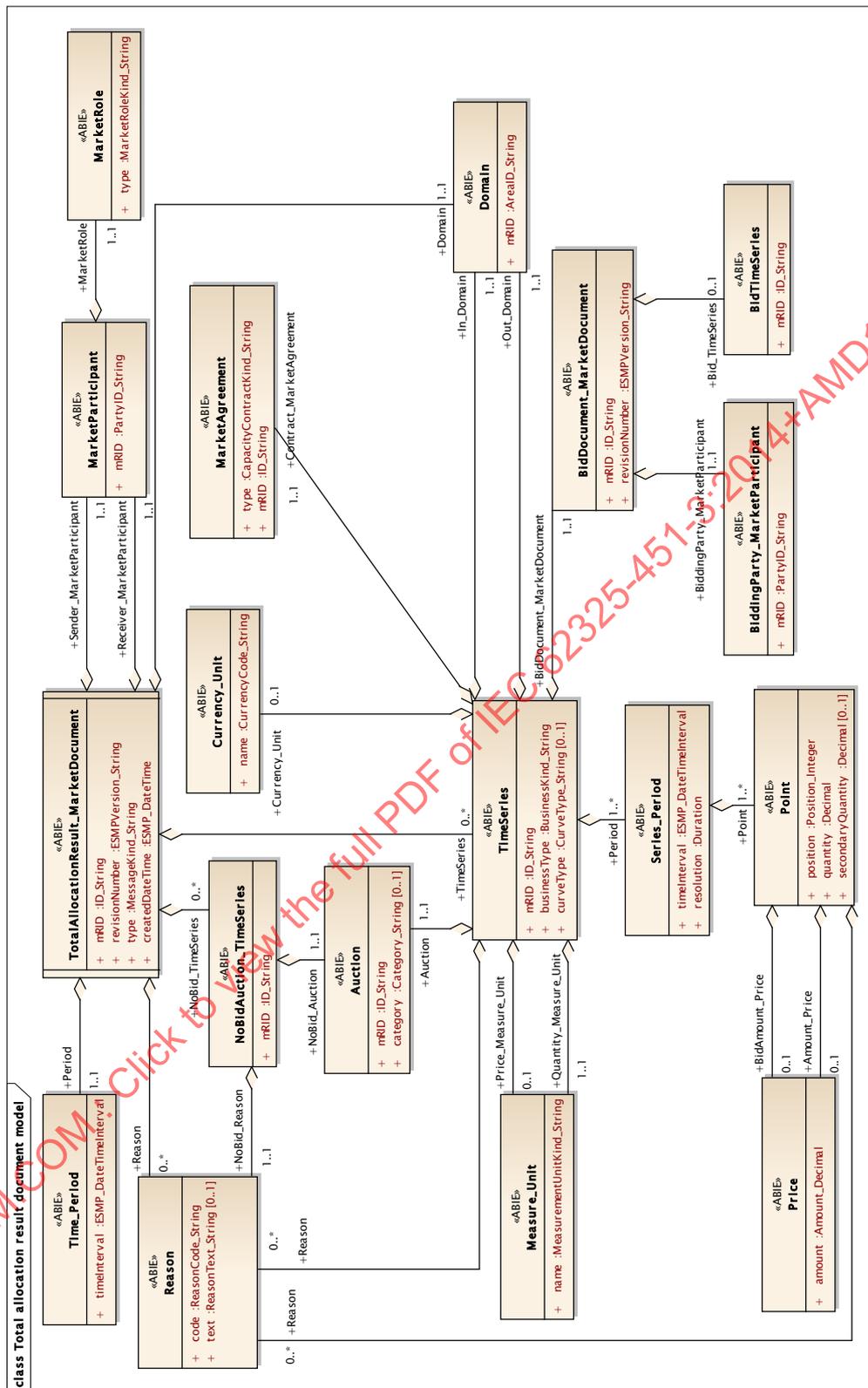
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Allocation result contextual model::Series_Period.Period[1..*] ----- Allocation result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::TimeSeries.[]

## 6.9 Total allocation result contextual model

### 6.9.1 Overview of the model

Figure 17 shows the model.

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Figure 17 – Total allocation result contextual model

### 6.9.2 IsBasedOn relationships from the European style market profile

Table 123 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 123 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BiddingParty_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
NoBidAuction_TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
TotalAllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses

### 6.9.3 Detailed Total allocation result contextual model

#### 6.9.3.1 TotalAllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The total allocation result document contains the results of the auction for all the bidding parties with the same granularity information as the allocation result document.

IsBasedOn: ESMPClasses::MarketDocument

Table 124 shows all attributes of TotalAllocationResult\_MarketDocument.

**Table 124 – Attributes of Total allocation result contextual model::TotalAllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.

mult.	Attribute name	Attribute type	Description
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 125 shows all association ends of TotalAllocationResult\_MarketDocument with other classes.

**Table 125 – Association ends of Total allocation result contextual model::TotalAllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the document, i.e. the border. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	This specific time series is to be used when there is no bid submitted at an auction. In such a case, the time series provides the identification of the cancelled auction. A reason class is to be provided with the value corresponding to the information "no bid". Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.9.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 126 shows all attributes of Auction.

**Table 126 – Attributes of Total allocation result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.9.3.3 BiddingParty\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 127 shows all attributes of BiddingParty\_MarketParticipant.

**Table 127 – Attributes of Total allocation result contextual model::BiddingParty\_MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

### 6.9.3.4 BidDocument\_MarketDocument

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: ESMPClasses::MarketDocument

Table 128 shows all attributes of BidDocument\_MarketDocument.

**Table 128 – Attributes of Total allocation result contextual model::BidDocument\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.

Table 129 shows all association ends of BidDocument\_MarketDocument with other classes.

**Table 129 – Association ends of Total allocation result contextual model::BidDocument\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Bid_TimeSeries	BidTimeSeries	The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	BiddingParty_MarketParticipant	BiddingParty_MarketParticipant	The identification of the party who bid for the capacity or resold it. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.9.3.5 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 130 shows all attributes of BidTimeSeries.

**Table 130 – Attributes of Total allocation result contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

### 6.9.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 131 shows all attributes of Currency\_Unit.

**Table 131 – Attributes of Total allocation result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.9.3.7 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 132 shows all attributes of Domain.

**Table 132 – Attributes of Total allocation result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ArealD_String	The unique identification of the domain.

### 6.9.3.8 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 133 shows all attributes of MarketAgreement.

**Table 133 – Attributes of Total allocation result contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.9.3.9 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 134 shows all attributes of MarketParticipant.

**Table 134 – Attributes of Total allocation result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 135 shows all association ends of MarketParticipant with other classes.

**Table 135 – Association ends of Total allocation result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant. ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.9.3.10 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 136 shows all attributes of MarketRole.

**Table 136 – Attributes of Total allocation result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.9.3.11 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 137 shows all attributes of Measure\_Unit.

**Table 137 – Attributes of Total allocation result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.9.3.12 NoBidAuction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 138 shows all attributes of NoBidAuction\_TimeSeries.

**Table 138 – Attributes of Total allocation result contextual model::NoBidAuction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 139 shows all association ends of NoBidAuction\_TimeSeries with other classes.

**Table 139 – Association ends of Total allocation result contextual model::NoBidAuction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	NoBid_Auction	Auction	It provides the auction identification when there is no bid submitted. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	NoBid_Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.9.3.13 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 140 shows all attributes of Point.

**Table 140 – Attributes of Total allocation result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid document. The secondary quantity identified for a point.

Table 141 shows all association ends of Point with other classes.

**Table 141 – Association ends of Total allocation result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Amount_Price	Price	The price expressed for each unit of quantity allocated. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	The original price expressed in the original bid or resale for each unit of quantity requested. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

#### 6.9.3.14 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 142 shows all attributes of Price.

**Table 142 – Attributes of Total allocation result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

#### 6.9.3.15 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 143 shows all attributes of Reason.

**Table 143 – Attributes of Total allocation result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.9.3.16 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 144 shows all attributes of Series\_Period.

**Table 144 – Attributes of Total allocation result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 145 shows all association ends of Series\_Period with other classes.

**Table 145 – Association ends of Total allocation result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.9.3.17 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 146 shows all attributes of Time\_Period.

**Table 146 – Attributes of Total allocation result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.9.3.18 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 147 shows all attributes of TimeSeries.

**Table 147 – Attributes of Total allocation result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 148 shows all association ends of TimeSeries with other classes.

**Table 148 – Association ends of Total allocation result contextual model::TimeSeries with other classes**

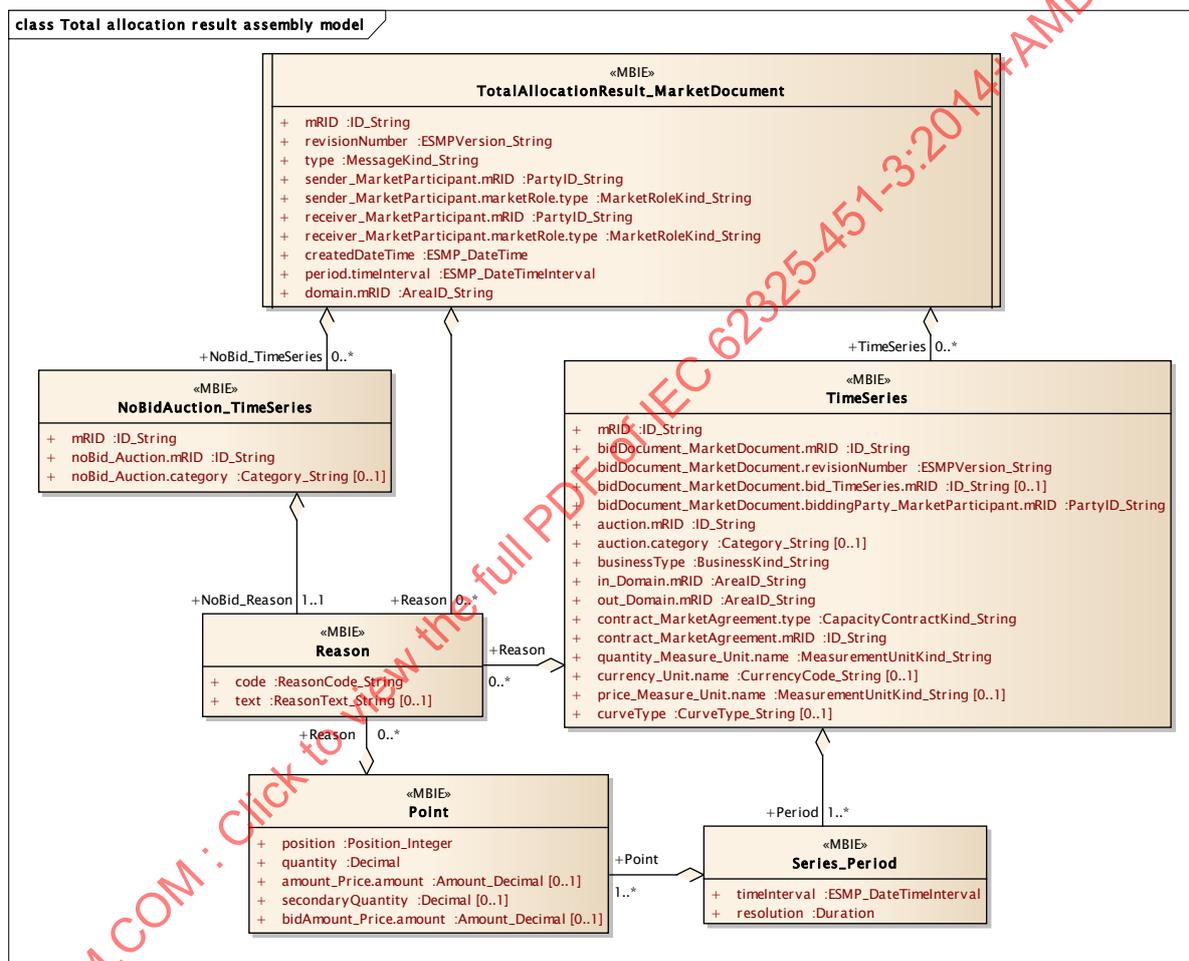
mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the allocation to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	BidDocument_MarketDocument	BidDocument_MarketDocument	The identification of the document that contains the bids or resales referenced in the BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[1..1]	Contract_MarketAgreement	MarketAgreement	The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.10 Total allocation result assembly model

### 6.10.1 Overview of the model

Figure 18 shows the model.



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Figure 18 – Total allocation result assembly model

### 6.10.2 IsBasedOn relationships from the European style market profile

Table 149 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 149 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
NoBidAuction_TimeSeries	Total allocation result contextual model::NoBidAuction_TimeSeries	Total Allocation Result Document\Total allocation result contextual model
Point	Total allocation result contextual model::Point	Total Allocation Result Document\Total allocation result contextual model
Reason	Total allocation result contextual model::Reason	Total Allocation Result Document\Total allocation result contextual model
Series_Period	Total allocation result contextual model::Series_Period	Total Allocation Result Document\Total allocation result contextual model
TimeSeries	Total allocation result contextual model::TimeSeries	Total Allocation Result Document\Total allocation result contextual model
TotalAllocationResult_MarketDocument	Total allocation result contextual model::TotalAllocationResult_MarketDocument	Total Allocation Result Document\Total allocation result contextual model

### 6.10.3 Detailed Total allocation result assembly model

#### 6.10.3.1 TotalAllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The total allocation result document contains the results of the auction for all the bidding parties with the same granularity information as the allocation result document.

IsBasedOn: Total allocation result contextual model::TotalAllocationResult\_MarketDocument

Table 150 shows all attributes of TotalAllocationResult\_MarketDocument.

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**Table 150 – Attributes of Total allocation result assembly  
model::TotalAllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the document, i.e. the border.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 151 shows all association ends of TotalAllocationResult\_MarketDocument with other classes.

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**Table 151 – Association ends of Total allocation result assembly model::TotalAllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	This specific time series is to be used when there is no bid submitted at an auction. In such a case, the time series provides the identification of the cancelled auction. A reason class is to be provided with the value corresponding to the information "no bid". Association Based On: Total allocation result contextual model::NoBidAuction_TimeSeries.NoBid_TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Total allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]

### 6.10.3.2 NoBidAuction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Total allocation result contextual model::NoBidAuction\_TimeSeries

Table 152 shows all attributes of NoBidAuction\_TimeSeries.

**Table 152 – Attributes of Total allocation result assembly model::NoBidAuction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.
[0..1]	noBid_Auction.category	Category_String	The product category of an auction. --- It provides the auction identification when there is no bid submitted.
[1..1]	noBid_Auction.mRID	ID_String	The unique identification of the auction. --- It provides the auction identification when there is no bid submitted.

Table 153 shows all association ends of NoBidAuction\_TimeSeries with other classes.

**Table 153 – Association ends of Total allocation result assembly model::NoBidAuction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	NoBid_Reason	Reason	Association Based On: Total allocation result contextual model::Reason.NoBid_Reason[1..1] ----- Total allocation result contextual model::NoBidAuction_TimeSeries.[]

### 6.10.3.3 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Total allocation result contextual model::Point

Table 154 shows all attributes of Point.

**Table 154 – Attributes of Total allocation result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[0..1]	amount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity allocated.
[0..1]	bidAmount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The original price expressed in the original bid or resale for each unit of quantity requested.
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid document. The secondary quantity identified for a point.

Table 155 shows all association ends of Point with other classes.

**Table 155 – Association ends of Total allocation result assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::Point.[]

### 6.10.3.4 Reason

The motivation of an act.

IsBasedOn: Total allocation result contextual model::Reason

Table 156 shows all attributes of Reason.

**Table 156 – Attributes of Total allocation result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.10.3.5 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Total allocation result contextual model::Series\_Period

Table 157 shows all attributes of Series\_Period.

**Table 157 – Attributes of Total allocation result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 158 shows all association ends of Series\_Period with other classes.

**Table 158 – Association ends of Total allocation result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Total allocation result contextual model::Point.Point[1..*] ----- Total allocation result contextual model::Series_Period.[]

### 6.10.3.6 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Total allocation result contextual model::TimeSeries

Table 159 shows all attributes of TimeSeries.

**Table 159 – Attributes of Total allocation result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[0..1]	bidDocument_MarketDocument.bid_TimeSeries.mRID	ID_String	A unique identification of the time series. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.
[1..1]	bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the party who bid for the capacity or resold it.
[1..1]	bidDocument_MarketDocument.mRID	ID_String	The unique identification of the document being exchanged within a business process flow. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	bidDocument_MarketDocument.revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	contract_MarketAgreement.mRID	ID_String	The unique identification of the agreement. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	contract_MarketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.

mult.	Attribute name	Attribute type	Description
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.

Table 160 shows all association ends of TimeSeries with other classes.

**Table 160 – Association ends of Total allocation result assembly model::TimeSeries with other classes**

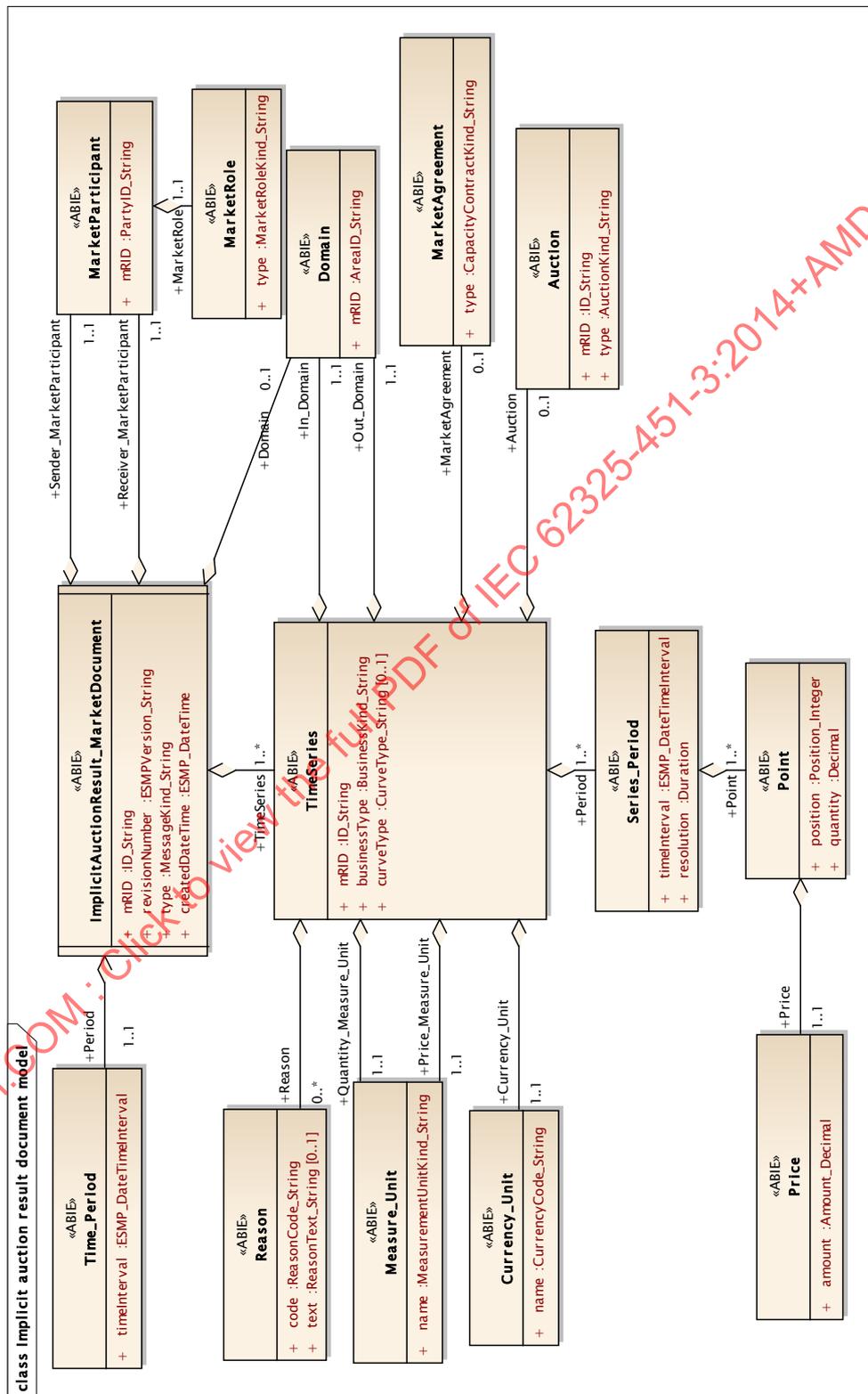
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Total allocation result contextual model::Series_Period.Period[1..*] ----- Total allocation result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::TimeSeries.[]

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## 6.11 Implicit auction result contextual model

### 6.11.1 Overview of the model

Figure 19 shows the model.



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Figure 19 – Implicit auction result contextual model

### 6.11.2 IsBasedOn relationships from the European style market profile

Table 161 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 161 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
ImplicitAuctionResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.11.3 Detailed Implicit auction result contextual model

#### 6.11.3.1 ImplicitAuctionResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

An implicit auction result document is issued by the market operator at the end of a specific auctioning cycle or by the System Operator once the NTC values have been agreed. It could be yearly, monthly or daily auctions in addition to intraday auctions.

IsBasedOn: ESMPClasses::MarketDocument

Table 162 shows all attributes of ImplicitAuctionResult\_MarketDocument.

**Table 162 – Attributes of Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 163 shows all association ends of ImplicitAuctionResult\_MarketDocument with other classes.

**Table 163 – Association ends of Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Domain	Domain	The domain covered within the implicit auction result document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the implicit auction result document is covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.11.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 164 shows all attributes of Auction.

**Table 164 – Attributes of Implicit auction result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

### 6.11.3.3 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 165 shows all attributes of Currency\_Unit.

**Table 165 – Attributes of Implicit auction result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.11.3.4 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 166 shows all attributes of Domain.

**Table 166 – Attributes of Implicit auction result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.11.3.5 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 167 shows all attributes of MarketAgreement.

**Table 167 – Attributes of Implicit auction result contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.11.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 168 shows all attributes of MarketParticipant.

**Table 168 – Attributes of Implicit auction result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 169 shows all association ends of MarketParticipant with other classes.

**Table 169 – Association ends of Implicit auction result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.11.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 170 shows all attributes of MarketRole.

**Table 170 – Attributes of Implicit auction result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.11.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 171 shows all attributes of Measure\_Unit.

**Table 171 – Attributes of Implicit auction result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.11.3.9 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 172 shows all attributes of Point.

**Table 172 – Attributes of Implicit auction result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	This information defines the quantity auctioned for the interval in question and that is expressed in the measurement unit quantity. The principal quantity identified for a point.

Table 173 shows all association ends of Point with other classes.

**Table 173 – Association ends of Implicit auction result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[1..1]	Price	Price	This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. For market prices the price provided is always the InArea price A price may be negative in cases where it is providing the difference between in and out area market prices. Price differential calculated with the following formula: InArea – OutArea. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.11.3.10 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 174 shows all attributes of Price.

**Table 174 – Attributes of Implicit auction result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.11.3.11 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 175 shows all attributes of Reason.

**Table 175 – Attributes of Implicit auction result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.11.3.12 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 176 shows all attributes of Series\_Period.

**Table 176 – Attributes of Implicit auction result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 177 shows all association ends of Series\_Period with other classes.

**Table 177 – Association ends of Implicit auction result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.11.3.13 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 178 shows all attributes of Time\_Period.

**Table 178 – Attributes of Implicit auction result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.11.3.14 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 179 shows all attributes of TimeSeries.

**Table 179 – Attributes of Implicit auction result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 180 shows all association ends of TimeSeries with other classes.

**Table 180 – Association ends of Implicit auction result contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..1]	MarketAgreement	MarketAgreement	The contract type defines the conditions under which the capacity was allocated and handled, e.g. daily auction, weekly auction, monthly auction, yearly auction, Long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.12 Implicit auction result assembly model

### 6.12.1 Overview of the model

Figure 20 shows the model.

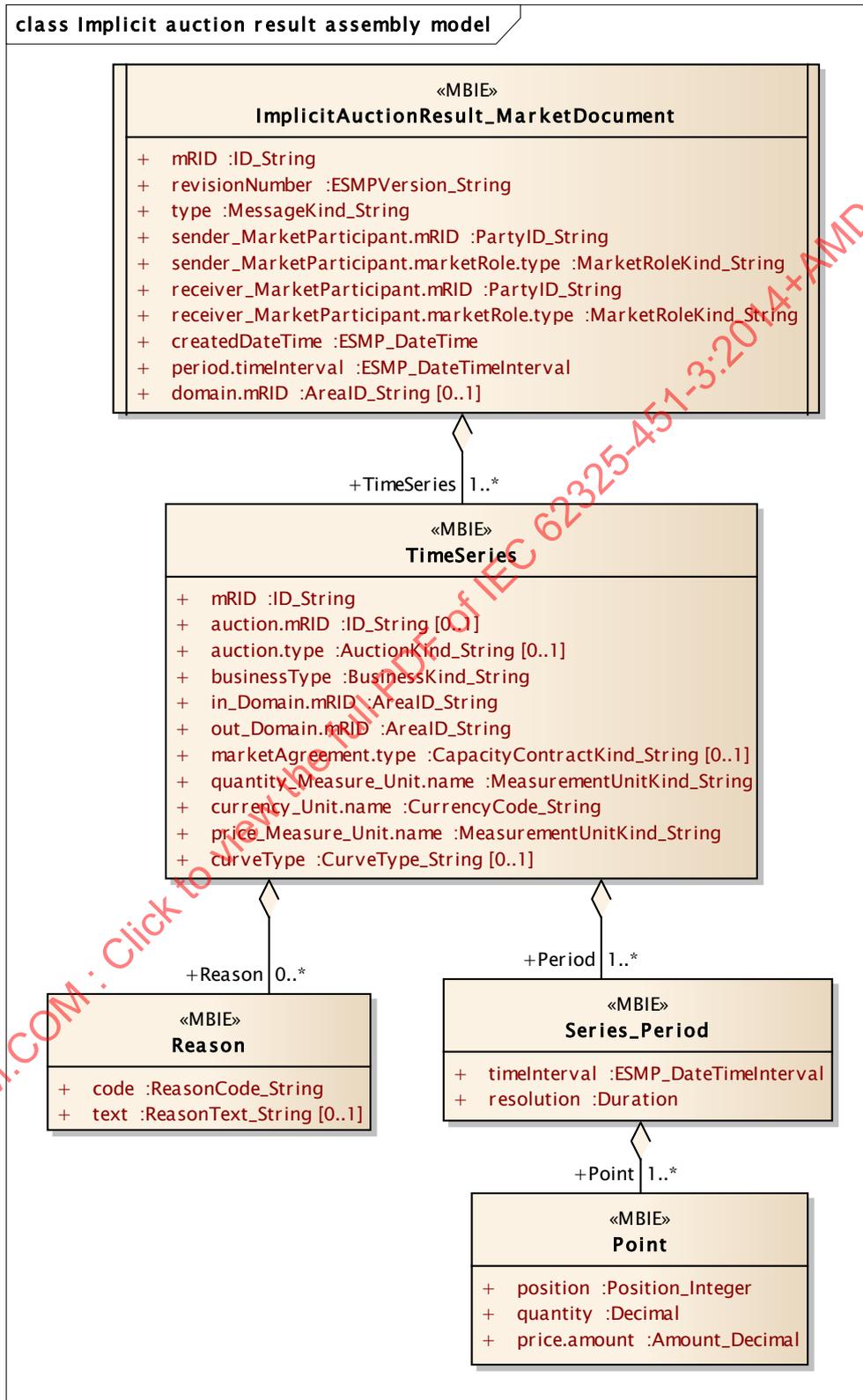


Figure 20 – Implicit auction result assembly model

### 6.12.2 IsBasedOn relationships from the European style market profile

Table 181 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 181 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
ImplicitAuctionResult_MarketDocument	Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument	Implicit Auction Result Document\Implicit auction result contextual model
Point	Implicit auction result contextual model::Point	Implicit Auction Result Document\Implicit auction result contextual model
Reason	Implicit auction result contextual model::Reason	Implicit Auction Result Document\Implicit auction result contextual model
Series_Period	Implicit auction result contextual model::Series_Period	Implicit Auction Result Document\Implicit auction result contextual model
TimeSeries	Implicit auction result contextual model::TimeSeries	Implicit Auction Result Document\Implicit auction result contextual model

### 6.12.3 Detailed Implicit auction result assembly model

#### 6.12.3.1 ImplicitAuctionResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

An implicit auction result document is issued by the market operator at the end of a specific auctioning cycle or by the System Operator once the NTC values have been agreed. It could be yearly, monthly or daily auctions in addition to intraday auctions.

IsBasedOn: Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument

Table 182 shows all attributes of ImplicitAuctionResult\_MarketDocument.

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**Table 182 – Attributes of Implicit auction result assembly  
 model::ImplicitAuctionResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[0..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the implicit auction result document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the implicit auction result document is covering.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 183 shows all association ends of ImplicitAuctionResult\_MarketDocument with other classes.

**Table 183 – Association ends of Implicit auction result assembly  
 model::ImplicitAuctionResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Implicit auction result contextual model::TimeSeries.TimeSeries[1..*] ----- Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument.[]

### 6.12.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Implicit auction result contextual model::Point

Table 184 shows all attributes of Point.

**Table 184 – Attributes of Implicit auction result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. For market prices the price provided is always the InArea price A price may be negative in cases where it is providing the difference between in and out area market prices. Price differential calculated with the following formula: InArea – OutArea.
[1..1]	quantity	Decimal	This information defines the quantity auctioned for the interval in question and that is expressed in the measurement unit quantity. The principal quantity identified for a point.

### 6.12.3.3 Reason

The motivation of an act.

IsBasedOn: Implicit auction result contextual model::Reason

Table 185 shows all attributes of Reason.

**Table 185 – Attributes of Implicit auction result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.12.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Implicit auction result contextual model::Series\_Period

Table 186 shows all attributes of Series\_Period.

**Table 186 – Attributes of Implicit auction result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 187 shows all association ends of Series\_Period with other classes.

**Table 187 – Association ends of Implicit auction result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Implicit auction result contextual model::Point.Point[1..*] ----- Implicit auction result contextual model::Series_Period.[]

### 6.12.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Implicit auction result contextual model::TimeSeries

Table 188 shows all attributes of TimeSeries.

**Table 188 – Attributes of Implicit auction result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...). --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[0..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, Long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.).

mult.	Attribute name	Attribute type	Description
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.

Table 189 shows all association ends of TimeSeries with other classes.

**Table 189 – Association ends of Implicit auction result assembly model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Implicit auction result contextual model::Series_Period.Period[1..*] ----- Implicit auction result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Implicit auction result contextual model::Reason.Reason[0..*] ----- Implicit auction result contextual model::TimeSeries.[]

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### 6.13.2 IsBasedOn relationships from the European style market profile

Table 190 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 190 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Publication_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Winners_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses

### 6.13.3 Detailed Publication contextual model

#### 6.13.3.1 Publication\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

A publication document is issued by the transmission capacity allocator at the end of a specific auctioning cycle or by the system operator once the NTC values have been agreed.

IsBasedOn: ESMPClasses::MarketDocument

Table 191 shows all attributes of Publication\_MarketDocument.

**Table 191 – Attributes of Publication contextual model::Publication\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 192 shows all association ends of Publication\_MarketDocument with other classes.

**Table 192 – Association ends of Publication contextual model::Publication\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Domain	Domain	The domain covered within the publication document Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the publication document is covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.13.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Table 193 shows all attributes of AttributeInstanceComponent.

**Table 193 – Attributes of Publication contextual model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Integer	A sequential value representing a relative sequence number.

### 6.13.3.3 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 194 shows all attributes of Auction.

**Table 194 – Attributes of Publication contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

### 6.13.3.4 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 195 shows all attributes of Contract\_MarketAgreement.

**Table 195 – Attributes of Publication contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.13.3.5 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 196 shows all attributes of Currency\_Unit.

**Table 196 – Attributes of Publication contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.13.3.6 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 197 shows all attributes of Domain.

**Table 197 – Attributes of Publication contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.13.3.7 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 198 shows all attributes of MarketParticipant.

**Table 198 – Attributes of Publication contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 199 shows all association ends of MarketParticipant with other classes.

**Table 199 – Association ends of Publication contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.13.3.8 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 200 shows all attributes of MarketRole.

**Table 200 – Attributes of Publication contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.13.3.9 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 201 shows all attributes of Measure\_Unit.

**Table 201 – Attributes of Publication contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.13.3.10 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 202 shows all attributes of Point.

**Table 202 – Attributes of Publication contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	quantity	Decimal	The quantity auctioned for the interval in question. The principal quantity identified for a point.

Table 203 shows all association ends of Point with other classes.

**Table 203 – Association ends of Publication contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed per currency per unit of price measure. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. A price may be negative in cases where it is providing the difference between in and out area market prices. The price is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.13.3.11 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 204 shows all attributes of Price.

**Table 204 – Attributes of Publication contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.13.3.12 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 205 shows all attributes of Reason.

**Table 205 – Attributes of Publication contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.13.3.13 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 206 shows all attributes of Series\_Period.

**Table 206 – Attributes of Publication contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 207 shows all association ends of Series\_Period with other classes.

**Table 207 – Association ends of Publication contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.13.3.14 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 208 shows all attributes of Time\_Period.

**Table 208 – Attributes of Publication contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

#### 6.13.3.15 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 209 shows all attributes of TimeSeries.

**Table 209 – Attributes of Publication contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 210 shows all association ends of TimeSeries with other classes.

**Table 210 – Association ends of Publication contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ClassificationSequence_AttributeInstanceComponent	AttributeInstanceComponent	The sequence of a time series within a given auction category and contract type. A classification sequence is only provided in the case where there are several auctions in the same category and contract type. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..1]	Contract_MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[0..1]	ParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	The number of parties that participated in the auction. It is only provided if the auction rules permit it. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed., e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	WinnerParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	The number of parties that had successful bids in the auction. This information is only provided if the auction rules permit it. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	The identification of the market participants who get something at the auction. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.13.3.16 Winners\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 211 shows all attributes of Winners\_MarketParticipant.

**Table 211 – Attributes of Publication contextual  
model::Winners\_MarketParticipant**

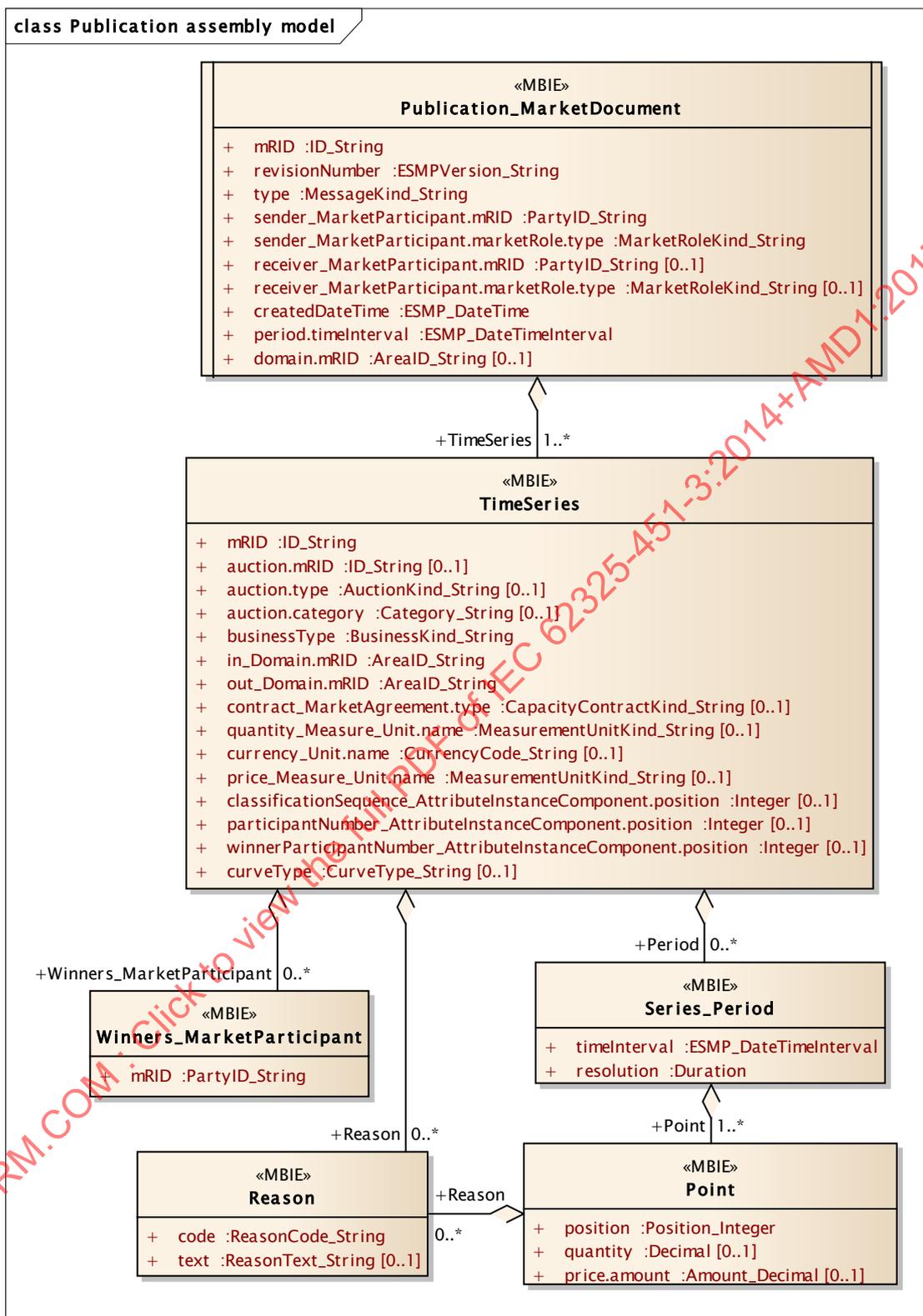
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

## 6.14 Publication assembly model

### 6.14.1 Overview of the model

Figure 22 shows the model.

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Figure 22 – Publication assembly model

### 6.14.2 IsBasedOn relationships from the European style market profile

Table 212 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 212 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	Publication contextual model::Point	Publication Document\Publication contextual model
Publication_MarketDocument	Publication contextual model::Publication_MarketDocument	Publication Document\Publication contextual model
Reason	Publication contextual model::Reason	Publication Document\Publication contextual model
Series_Period	Publication contextual model::Series_Period	Publication Document\Publication contextual model
TimeSeries	Publication contextual model::TimeSeries	Publication Document\Publication contextual model
Winners_MarketParticipant	Publication contextual model::Winners_MarketParticipant	Publication Document\Publication contextual model

### 6.14.3 Detailed Publication assembly model

#### 6.14.3.1 Publication\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

A publication document is issued by the transmission capacity allocator at the end of a specific auctioning cycle or by the system operator once the NTC values have been agreed.

IsBasedOn: Publication contextual model::Publication\_MarketDocument

Table 213 shows all attributes of Publication\_MarketDocument.

**Table 213 – Attributes of Publication assembly model::Publication\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[0..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the publication document
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the publication document is covering.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.

mult.	Attribute name	Attribute type	Description
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 214 shows all association ends of Publication\_MarketDocument with other classes.

**Table 214 – Association ends of Publication assembly model::Publication\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Publication contextual model::TimeSeries.TimeSeries[1..*] ----- Publication contextual model::Publication_MarketDocument.[]

### 6.14.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Publication contextual model::Point

Table 215 shows all attributes of Point.

**Table 215 – Attributes of Publication assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed per currency per unit of price measure. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. A price may be negative in cases where it is providing the difference between in and out area market prices. The price is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules.
[0..1]	quantity	Decimal	The quantity auctioned for the interval in question. The principal quantity identified for a point.

Table 216 shows all association ends of Point with other classes.

**Table 216 – Association ends of Publication assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Publication contextual model::Reason.Reason[0..*] ----- Publication contextual model::Point.[]

### 6.14.3.3 Reason

The motivation of an act.

IsBasedOn: Publication contextual model::Reason

Table 217 shows all attributes of Reason.

**Table 217 – Attributes of Publication assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.14.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Publication contextual model::Series\_Period

Table 218 shows all attributes of Series\_Period.

**Table 218 – Attributes of Publication assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 219 shows all association ends of Series\_Period with other classes.

**Table 219 – Association ends of Publication assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Publication contextual model::Point.Point[1..*] ----- Publication contextual model::Series_Period.[]

### 6.14.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Publication contextual model::TimeSeries

Table 220 shows all attributes of TimeSeries.

**Table 220 – Attributes of Publication assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...). --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	classificationSequence_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The sequence of a time series within a given auction category and contract type. A classification sequence is only provided in the case where there are several auctions in the same category and contract type.
[0..1]	contract_MarketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.

mult.	Attribute name	Attribute type	Description
[0..1]	participantNumber_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The number of parties that participated in the auction. It is only provided if the auction rules permit it.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.).
[0..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed., e.g. MAW.
[0..1]	winnerParticipantNumber_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The number of parties that had successful bids in the auction. This information is only provided if the auction rules permit it.

Table 221 shows all association ends of TimeSeries with other classes.

**Table 221 – Association ends of Publication assembly model::TimeSeries with other classes**

mult	Role	Class type name	Description
[0..*]	Period	Series_Period	Association Based On: Publication contextual model::Series_Period.Period[0..*] ----- Publication contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Publication contextual model::Reason.Reason[0..*] ----- Publication contextual model::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	The identification of the market participants who get something at the auction. Association Based On: Publication contextual model::Winners_MarketParticipant.Winners_MarketParticipant[0..*] ----- Publication contextual model::TimeSeries.[]

### 6.14.3.6 Winners\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: Publication contextual model::Winners\_MarketParticipant

Table 222 shows all attributes of Winners\_MarketParticipant.

**Table 222 – Attributes of Publication assembly model::Winners\_MarketParticipant**

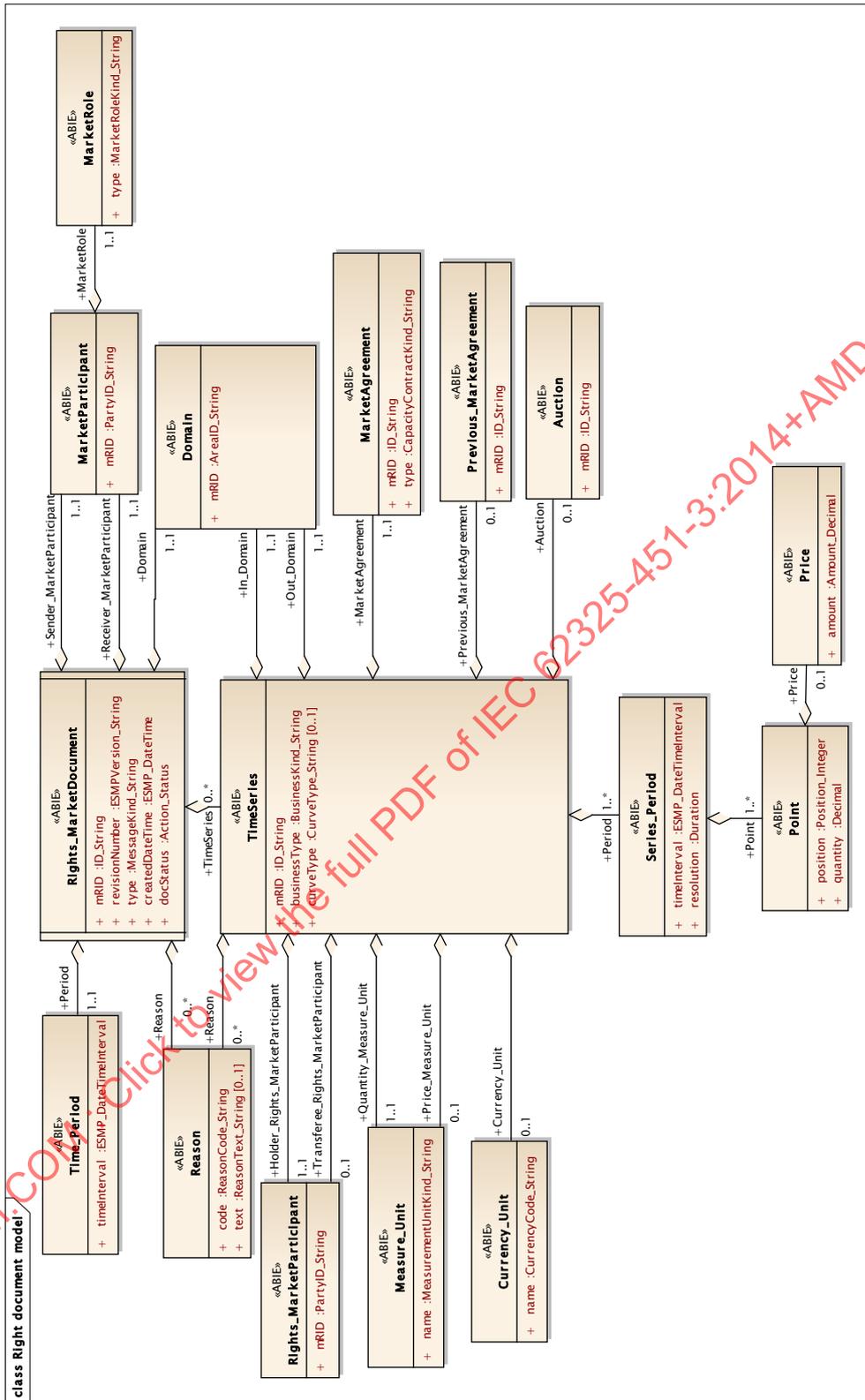
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

## 6.15 Rights contextual model

### 6.15.1 Overview of the model

Figure 23 shows the model.

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Figure 23 – Rights contextual model

### 6.15.2 IsBasedOn relationships from the European style market profile

Table 223 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 223 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Previous_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Rights_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Rights_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.15.3 Detailed Rights contextual model

#### 6.15.3.1 Rights\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The rights document may be sent by a capacity trader to inform the auction office of a transfer of rights.

It may also be sent by the auction office to inform the nomination validator of the parties who have transmission rights for a given period.

The nomination validator may also use this document to inform an interconnection trade responsible of the rights he may use for nomination.

IsBasedOn: ESMPClasses::MarketDocument

Table 224 shows all attributes of Rights\_MarketDocument.

**Table 224 – Attributes of Rights contextual model::Rights\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	docStatus	Action_Status	The identification of the condition or position of the document with regard to its standing.

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 225 shows all association ends of Rights\_MarketDocument with other classes.

**Table 225 – Association ends of Rights contextual model::  
 Rights\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the rights document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.15.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 226 shows all attributes of Auction.

**Table 226 – Attributes of Rights contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.15.3.3 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 227 shows all attributes of Currency\_Unit.

**Table 227 – Attributes of Rights contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.15.3.4 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 228 shows all attributes of Domain.

**Table 228 – Attributes of Rights contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.15.3.5 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 229 shows all attributes of MarketAgreement.

**Table 229 – Attributes of Rights contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.15.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 230 shows all attributes of MarketParticipant.

**Table 230 – Attributes of Rights contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 231 shows all association ends of MarketParticipant with other classes.

**Table 231 – Association ends of Rights contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.15.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 232 shows all attributes of MarketRole.

**Table 232 – Attributes of Rights contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.15.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 233 shows all attributes of Measure\_Unit.

**Table 233 – Attributes of Rights contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.15.3.9 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 234 shows all attributes of Point.

**Table 234 – Attributes of Rights contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	This information defines the quantity that has been assigned to the nomination party for the interval in question and that is expressed in the measurement unit. The principal quantity identified for a point.

Table 235 shows all association ends of Point with other classes.

**Table 235 – Association ends of Rights contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed for each unit of quantity as the minimum selling price. The price indicated in a resale document equal to or above which the quantity may be sold. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. The price amount is mandatory in the case of the resale of capacity for a minimum price depending on local market rules. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.15.3.10 Previous\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 236 shows all attributes of Previous\_MarketAgreement.

**Table 236 – Attributes of Rights contextual model::Previous\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.

### 6.15.3.11 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 237 shows all attributes of Price.

**Table 237 – Attributes of Rights contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.15.3.12 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 238 shows all attributes of Reason.

**Table 238 – Attributes of Rights contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.15.3.13 Rights\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 239 shows all attributes of Rights\_MarketParticipant.

**Table 239 – Attributes of Rights contextual model::Rights\_MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

#### 6.15.3.14 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 240 shows all attributes of Series\_Period.

**Table 240 – Attributes of Rights contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 241 shows all association ends of Series\_Period with other classes.

**Table 241 – Association ends of Rights contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.15.3.15 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 242 shows all attributes of Time\_Period.

**Table 242 – Attributes of Rights contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

#### 6.15.3.16 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 243 shows all attributes of TimeSeries.

**Table 243 – Attributes of Rights contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 244 shows all association ends of TimeSeries with other classes.

**Table 244 – Association ends of Rights contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	The identification linking the capacity rights to a set of specifications created by the transmission capacity allocator. A unique identification of the set of specifications that clearly defines the auction to which the capacity rights submitted by the capacity trader are to be re-auctioned. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Holder_Rights_MarketParticipant	Rights_MarketParticipant	Identification of the party who is owner of, or has the right to use, the transmission rights in question. Whenever rights are transferred, the rights holder is the transferor of the rights. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	MarketAgreement	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Previous_MarketAgreement	Previous_MarketAgreement	The identification of a previous contract used to identify the transfer rights. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Transferee_Rights_MarketParticipant	Rights_MarketParticipant	Identification of the party to whom the rights are being transferred or the Interconnection Trade Responsible designated by the transferor (as designated in the RightsHolder attribute) to use the rights. In certain cases the transferee party also acts as Interconnection Trade Responsible. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

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## 6.16 Rights assembly model

### 6.16.1 Overview of the model

Figure 24 shows the model.

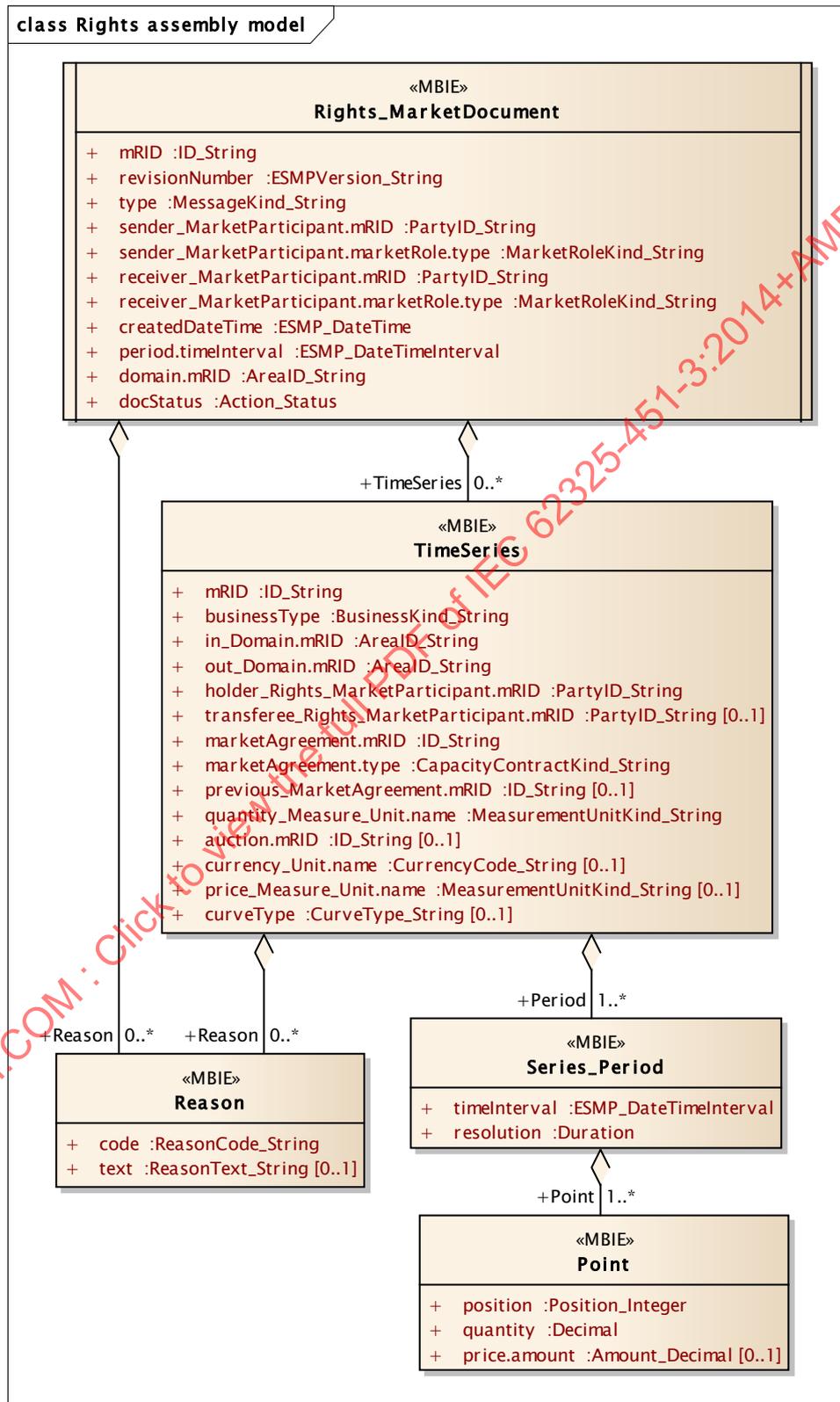


Figure 24 – Rights assembly model

### 6.16.2 IsBasedOn relationships from the European style market profile

Table 245 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 245 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	Rights contextual model::Point	Rights Document\Rights contextual model
Reason	Rights contextual model::Reason	Rights Document\Rights contextual model
Rights_MarketDocument	Rights contextual model::Rights_MarketDocument	Rights Document\Rights contextual model
Series_Period	Rights contextual model::Series_Period	Rights Document\Rights contextual model
TimeSeries	Rights contextual model::TimeSeries	Rights Document\Rights contextual model

### 6.16.3 Detailed Rights assembly model

#### 6.16.3.1 Rights\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The rights document may be sent by a capacity trader to inform the auction office of a transfer of rights.

It may also be sent by the auction office to inform the nomination validator of the parties who have transmission rights for a given period.

The nomination validator may also use this document to inform an interconnection trade responsible of the rights he may use for nomination.

IsBasedOn: Rights contextual model::Rights\_MarketDocument

Table 246 shows all attributes of Rights\_MarketDocument.

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**Table 246 – Attributes of Rights assembly model::Rights\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	docStatus	Action_Status	The identification of the condition or position of the document with regard to its standing.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the rights document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 247 shows all association ends of Rights\_MarketDocument with other classes.

**Table 247 – Association ends of Rights assembly model::Rights\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Rights contextual model::Reason.Reason[0..*] ----- Rights contextual model::Rights_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Rights contextual model::TimeSeries.TimeSeries[0..*] ----- Rights contextual model::Rights_MarketDocument.[]

### 6.16.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Rights contextual model::Point

Table 248 shows all attributes of Point.

**Table 248 – Attributes of Rights assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity as the minimum selling price. The price indicated in a resale document equal to or above which the quantity may be sold. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. The price amount is mandatory in the case of the resale of capacity for a minimum price depending on local market rules.
[1..1]	quantity	Decimal	This information defines the quantity that has been assigned to the nomination party for the interval in question and that is expressed in the measurement unit. The principal quantity identified for a point.

### 6.16.3.3 Reason

The motivation of an act.

IsBasedOn: Rights contextual model::Reason

Table 249 shows all attributes of Reason.

**Table 249 – Attributes of Rights assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.16.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Rights contextual model::Series\_Period

Table 250 shows all attributes of Series\_Period.

**Table 250 – Attributes of Rights assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 251 shows all association ends of Series\_Period with other classes.

**Table 251 – Association ends of Rights assembly model:: Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Rights contextual model::Point.Point[1..*] ----- Rights contextual model::Series_Period.[]

### 6.16.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Rights contextual model::TimeSeries

Table 252 shows all attributes of TimeSeries.

**Table 252 – Attributes of Rights assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the capacity rights to a set of specifications created by the transmission capacity allocator. A unique identification of the set of specifications that clearly defines the auction to which the capacity rights submitted by the capacity trader are to be re-auctioned.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	holder_Rights_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Identification of the party who is owner of, or has the right to use, the transmission rights in question. Whenever rights are transferred, the rights holder is the transferor of the rights.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.

mult.	Attribute name	Attribute type	Description
[1..1]	marketAgreement.mRID	ID_String	The unique identification of the agreement.
[1..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	previous_MarketAgreement.mRID	ID_String	The unique identification of the agreement. --- The identification of a previous contract used to identify the transfer rights.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed (MW per unit, MWh per unit, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.
[0..1]	transferee_Rights_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Identification of the party to whom the rights are being transferred or the Interconnection Trade Responsible designated by the transferor (as designated in the RightsHolder attribute) to use the rights. In certain cases the transferee party also acts as Interconnection Trade Responsible.

Table 253 shows all association ends of TimeSeries with other classes.

**Table 253 – Association ends of Rights assembly model::  
 TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Rights contextual model::Series_Period.Period[1..*] ----- Rights contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Rights contextual model::Reason.Reason[0..*] ----- Rights contextual model::TimeSeries.[]

## 7 XML schema

### 7.1 XML schema URN Namespace rules

In order to provide a generic and stable means of declaring a URN for the European style market profile XML schemas, the namespace will be composed in the following manner:

**urn:iec62325.351:tc57wg16:<process>:<document>:<version>:<release>**

where:

- iec62325.351 shall be the stem of all European style market profile XML schema namespaces.
- tc57wg16 identifies the organisation or group of organisations within IEC that owns the object being referenced. In the case of Technical Committee 57 this shall be the Working Group 16.
- <process> identifies the specific process where the object is situated, e.g. the part of the IEC 62325 standards in which the XML schema is defined, e.g. 451-1, 451-2, 451-3, etc.
- <document> identifies the electronic document schema.
- <version> identifies the version of the document schema.
- <release> identifies the release of the document schema.

Every XML schema representing an electronic document shall have a default namespace corresponding to the namespace that identifies the document and respects the above URI namespace construction.

Every XML schema representing an electronic document shall have a targetNamespace corresponding to the default namespace.

Every XML schema shall have an elementFormDefault as “qualified”.

Every XML schema shall have an attributeFormDefault as “unqualified”.

### 7.2 Code list URN namespace rules

In the case of the codelist library that shall be used for the European style market profile the URN shall be as follows **urn:entsoe.eu:wgedi:codelists**.

### 7.3 URI rules for model documentation

#### 7.3.1 Datatype

In the case of the base data type library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[datatype-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile.
- <cimxx> is the CIM version name.
- [datatype-name] is the name of the CIM datatype or primitive.

EXAMPLES:

`http://iec.ch/TC57/2012/CIM-schema-cim16#String`

`http://iec.ch/TC57/2012/CIM-schema-cim16#Money`

#### 7.3.2 Class

In the case of the base class library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class

EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries`

#### 7.3.3 Attribute

In the case of the base attribute library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[attribute-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class
- [attribute-name] is the name of a class attribute

EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries.product`

#### 7.3.4 Association end role name

In the case of the base association library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[association-end-role-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class
- [association-end-role-name]

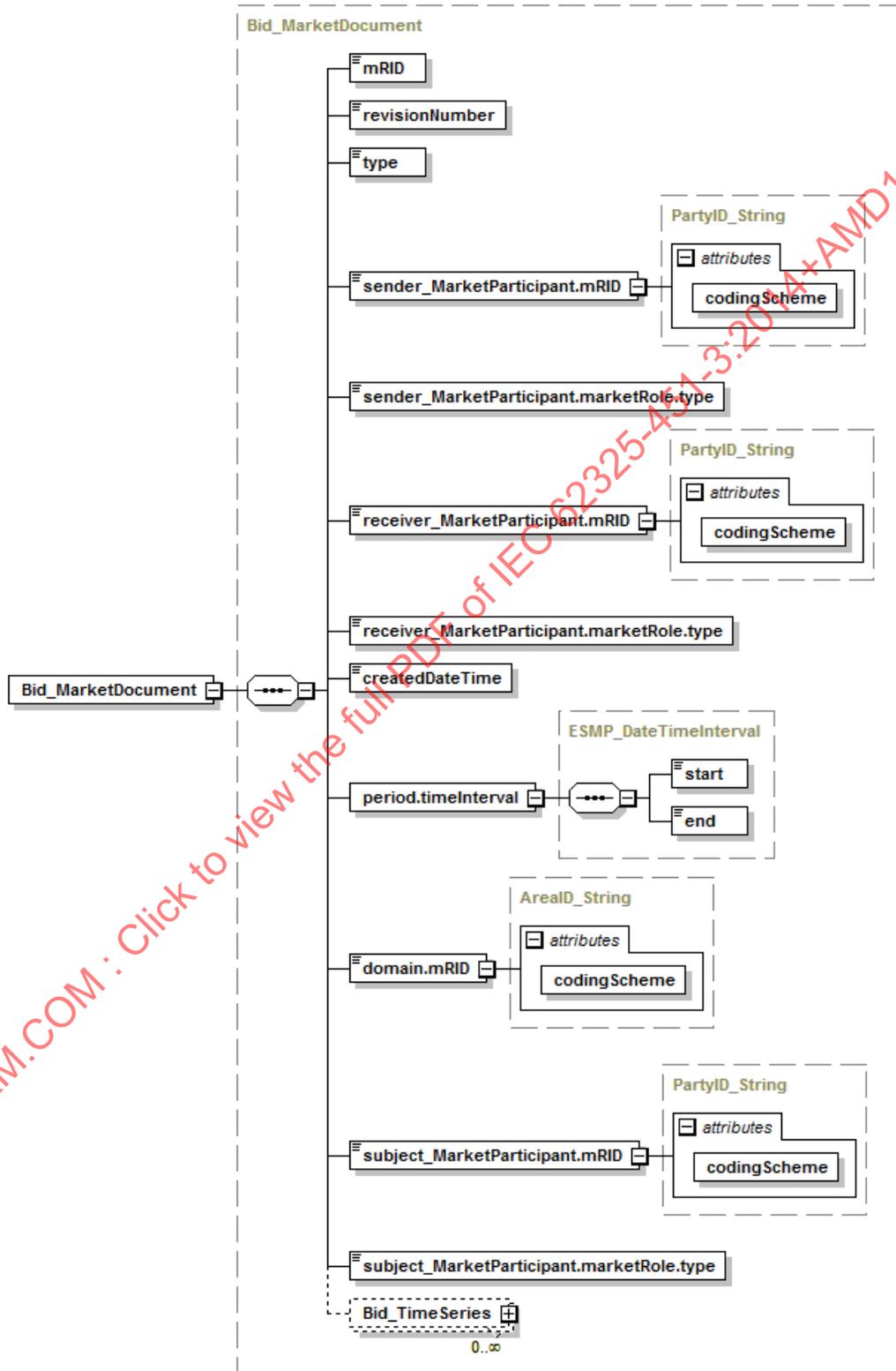
EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#MarketDocument.TimeSeries`

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## 7.4 Bid\_MarketDocument schema

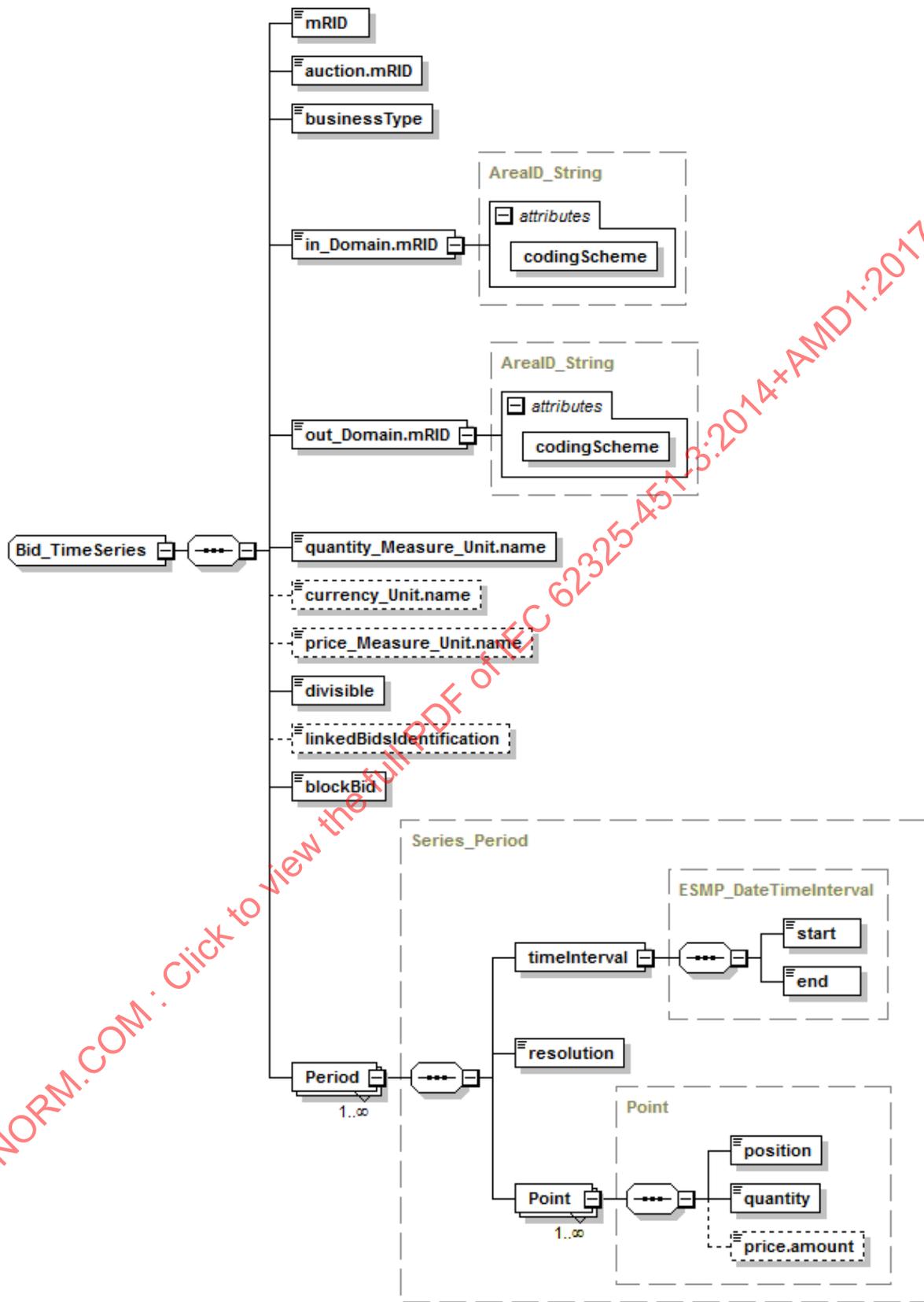
### 7.4.1 Schema Structure

Figure 25 and Figure 26 provide the structure of the schema.



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Figure 25 – Bid\_MarketDocument XML schema structure – 1/2



IEC 2159/14

Figure 26 – Bid\_MarketDocument XML schema structure – 2/2

#### 7.4.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:biddocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:biddocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Bid_MarketDocument" type="Bid_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) \- ( 0[13578] | 1[02] ) \- ( 0[1-
9] | [12] [0-9] | 3[01] ) | ( [0-9]{4} ) \- ( ( 0[469] ) | ( 11 ) \- ( 0[1-9] | [12] [0-9] | 30 ) ) ) T ( ( [01] [0-
9] | 2[0-3] ) : [0-5] [0-9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) \- ( 02 ) \- ( 0[1-9] | 1[0-9] | 2[0-9] ) ) T ( ( [01] [0-9] | 2[0-3] ) : [0-5] [0-
9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) \- ( 02 ) \- ( 0[1-9] | 1[0-9] | 2[0-
8] ) ) T ( ( [01] [0-9] | 2[0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
```



```
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subject_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="Bid_TimeSeries" type="Bid_TimeSeries"
minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Bid_TimeSeries"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:IndicatorTypeList"/>
</xs:simpleType>
<xs:complexType name="Bid_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="divisible" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.divisible"/>
    <xs:element name="linkedBidsIdentification" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.linkedBidsIdentification"/>
    <xs:element name="blockBid" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.blockBid"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#BidTimeSeries.Period"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
```

```
<xs:restriction base="xs:integer">
  <xs:minInclusive value="1"/>
  <xs:maxInclusive value="999999"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.5 CapacityAuctionSpecification\_MarketDocument schema

### 7.5.1 Schema Structure

Figure 27 and Figure 28 provide the structure of the schema.

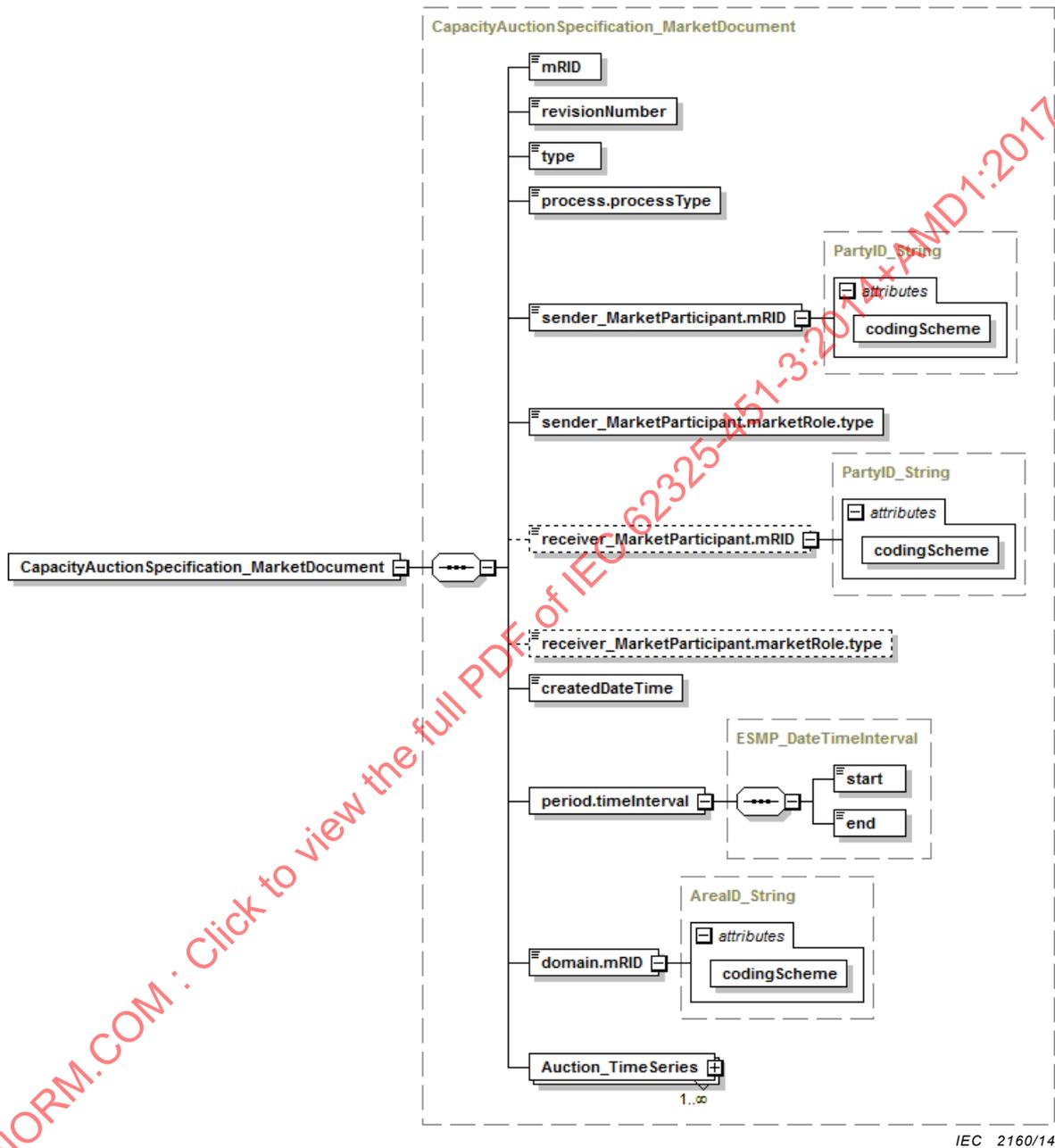
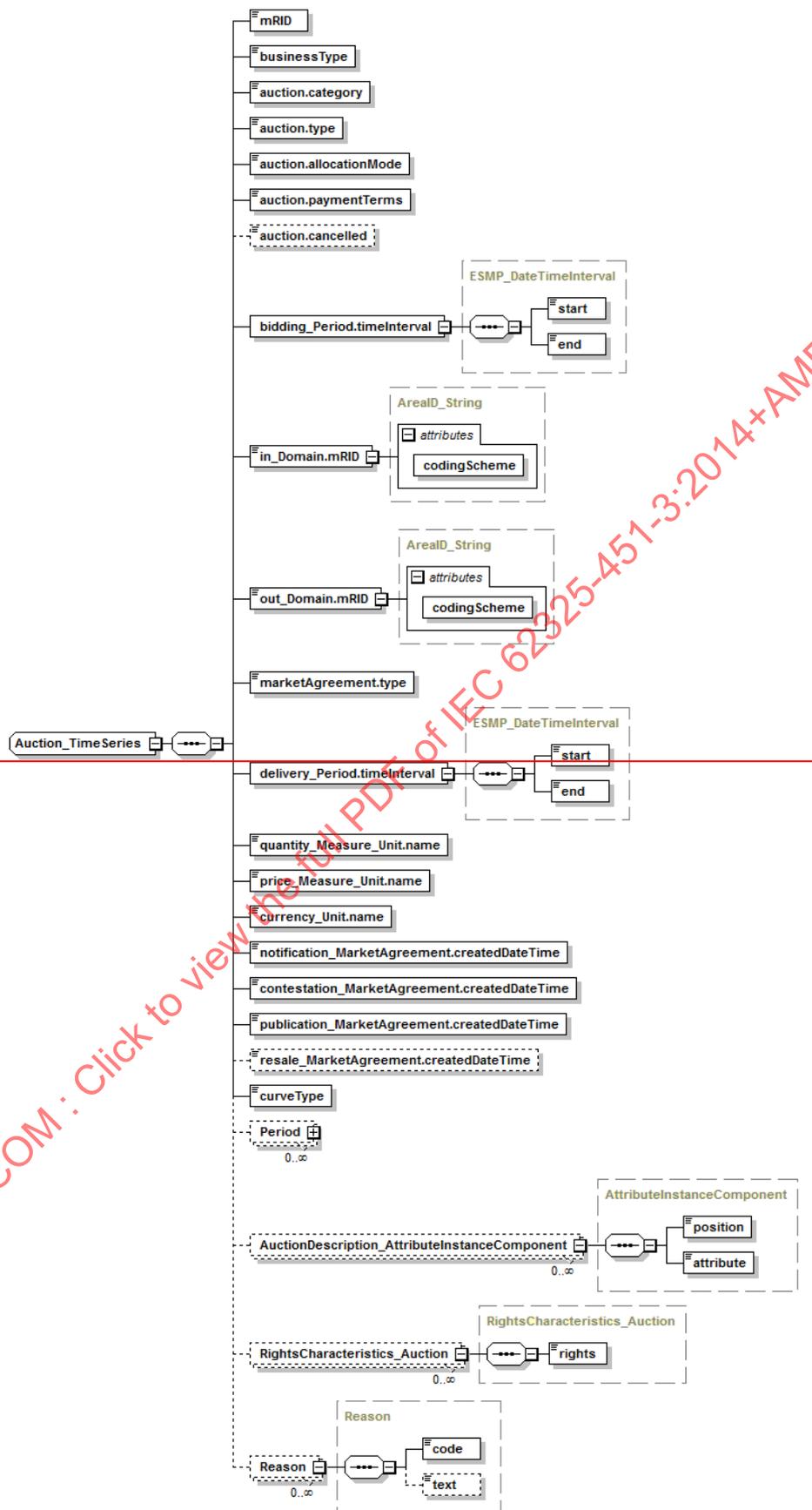
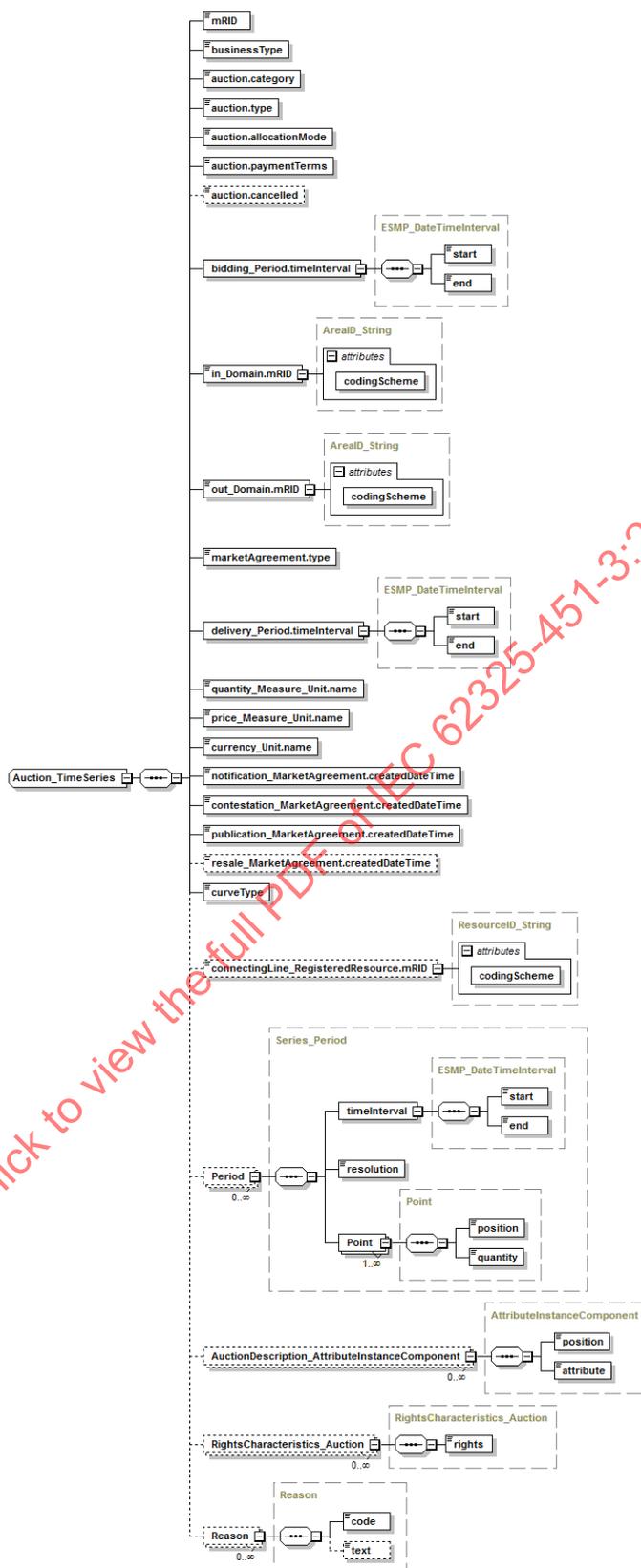


Figure 27 – CapacityAuctionSpecification\_MarketDocument XML schema structure – 1/2



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Figure 28 – CapacityAuctionSpecification\_MarketDocument XML schema structure – 2/2

### 7.5.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:capacityspecificationdocument:7:01" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacityspecificationdocument:7:01"
elementFormDefault="qualified" attributeFormDefault="unqualified">
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="CapacityAuctionSpecification_MarketDocument"
type="CapacityAuctionSpecification_MarketDocument"/>
  <xs:complexType name="AttributeInstanceComponent"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent">
    <xs:sequence>
      <xs:element name="position" type="xs:integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent.position"/>
      <xs:element name="attribute" type="xs:string" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent.attribute"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:BusinessTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AuctionTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AllocationMode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AllocationModeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PaymentTerms_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:PaymentTermsTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:IndicatorTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
```

```
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:simpleType name="ResourceID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="ResourceID_String-base">
      <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
  <xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:string">
      <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-9]|
[12][0-9]|3[01]) | (([0-9]{4}) [\-] ((0[469]|(11)) [\-] (0[1-9]| [12][0-9]|30)) T((([01][0-9]|2[0-3]) : [0-5][0-9]) Z) | ((([13579][26][02468][048] | [13579][01345789] (0)[48] | [13579][01345789][2468][048] | [02468][048][02468][048] | [02468][1235679] (0)[48] | [02468][1235679][2468][048] | [0-9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9]) T((([01][0-9]|2[0-3]) : [0-5][0-9]) Z) | ((([13579][26][02468][1235679] | [13579][01345789] (0)[01235679] | [13579][01345789][2468][1235679] | [02468][048][02468][1235679] | [02468][1235679] (0)[01235679] | [02468][1235679][2468][1235679] | [0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-8]) T((([01][0-9]|2[0-3]) : [0-5][0-9]) Z)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
    <xs:sequence>
      <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.start"/>
      <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.end"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Auction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.businessType"/>
      <xs:element name="auction.category" type="Category_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction.category"/>
      <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction.type"/>
    </xs:sequence>
  </xs:complexType>

```

```
<xs:element name="auction.allocationMode"
type="AllocationMode_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.allocationMode"/>
  <xs:element name="auction.paymentTerms"
type="PaymentTerms_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.paymentTerms"/>
    <xs:element name="auction.cancelled" type="ESMPBoolean_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.cancelled"/>
      <xs:element name="bidding_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
        <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
          <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
            <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
              <xs:element name="delivery_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
                <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                  <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
                      <xs:element name="notification_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                        <xs:element name="contestation_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                          <xs:element name="publication_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                            <xs:element name="resale_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="0" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                              <xs:element name="curveType" type="CurveType_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
                                <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID">
                                  </xs:element>
                                  <xs:element name="Period" type="Series_Period" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
                                    <xs:element name="AuctionDescription_AttributeInstanceComponent"
type="AttributeInstanceComponent" minOccurs="0" maxOccurs="unbounded"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.AuctionDescription_AttributeInstanceComponent"/>
                                      <xs:element name="RightsCharacteristics_Auction"
type="RightsCharacteristics_Auction" minOccurs="0" maxOccurs="unbounded"
                                      </xs:element>
                                  </xs:element>
                                </xs:element>
                              </xs:element>
                            </xs:element>
                          </xs:element>
                        </xs:element>
                      </xs:element>
                    </xs:element>
                  </xs:element>
                </xs:element>
              </xs:element>
            </xs:element>
          </xs:element>
        </xs:element>
      </xs:element>
    </xs:element>
  </xs:element>
</xs:element>
```

```
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.RightsCharacteristics_Auction"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ESMPVersion_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="ProcessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ProcessTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="(((0-9){4})[\-]([\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01]))|((0-9){4})[\-]([\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30))T((01)[0-
9]|2[0-3]):[0-5][0-9]:[0-5][0-
9])Z)|(((13579)[26][02468][048]|13579][01345789])(0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468][1235679])(0)[48]|02468][1235679][2468][048]|0[0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5][0-
9]:[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579][01345789])(0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679])(0)[01235679]|02468][123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((01)[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityAuctionSpecification_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
  </xs:sequence>

```

```
<xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Process.processType"/>
  <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
        <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
          <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
            <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
              <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
                <xs:element name="Auction_TimeSeries" type="Auction_TimeSeries"
minOccurs="1" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Auction_TimeSeries"/>
                  </xs:sequence>
                </xs:complexType>
              <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
                <xs:restriction base="xs:integer">
                  <xs:minInclusive value="1"/>
                  <xs:maxInclusive value="999999"/>
                </xs:restriction>
              </xs:simpleType>
            <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
              <xs:sequence>
                <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
                <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
              </xs:sequence>
            </xs:complexType>
          <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
            <xs:restriction base="cl:ReasonCodeTypeList"/>
          </xs:simpleType>
        <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
          <xs:restriction base="xs:string">
            <xs:maxLength value="512"/>
          </xs:restriction>
        </xs:simpleType>
      <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
        <xs:sequence>
          <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
          <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
        </xs:sequence>
      </xs:complexType>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:sequence>
</xs:complexType>
<xs:simpleType name="RightsKind String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RightsTypeList"/>
</xs:simpleType>
<xs:complexType name="RightsCharacteristics_Auction"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction">
  <xs:sequence>
    <xs:element name="rights" type="RightsKind String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.rights"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

## 7.6 Capacity\_MarketDocument schema

### 7.6.1 Schema Structure

Figure 29 and Figure 30 provide the structure of the schema.

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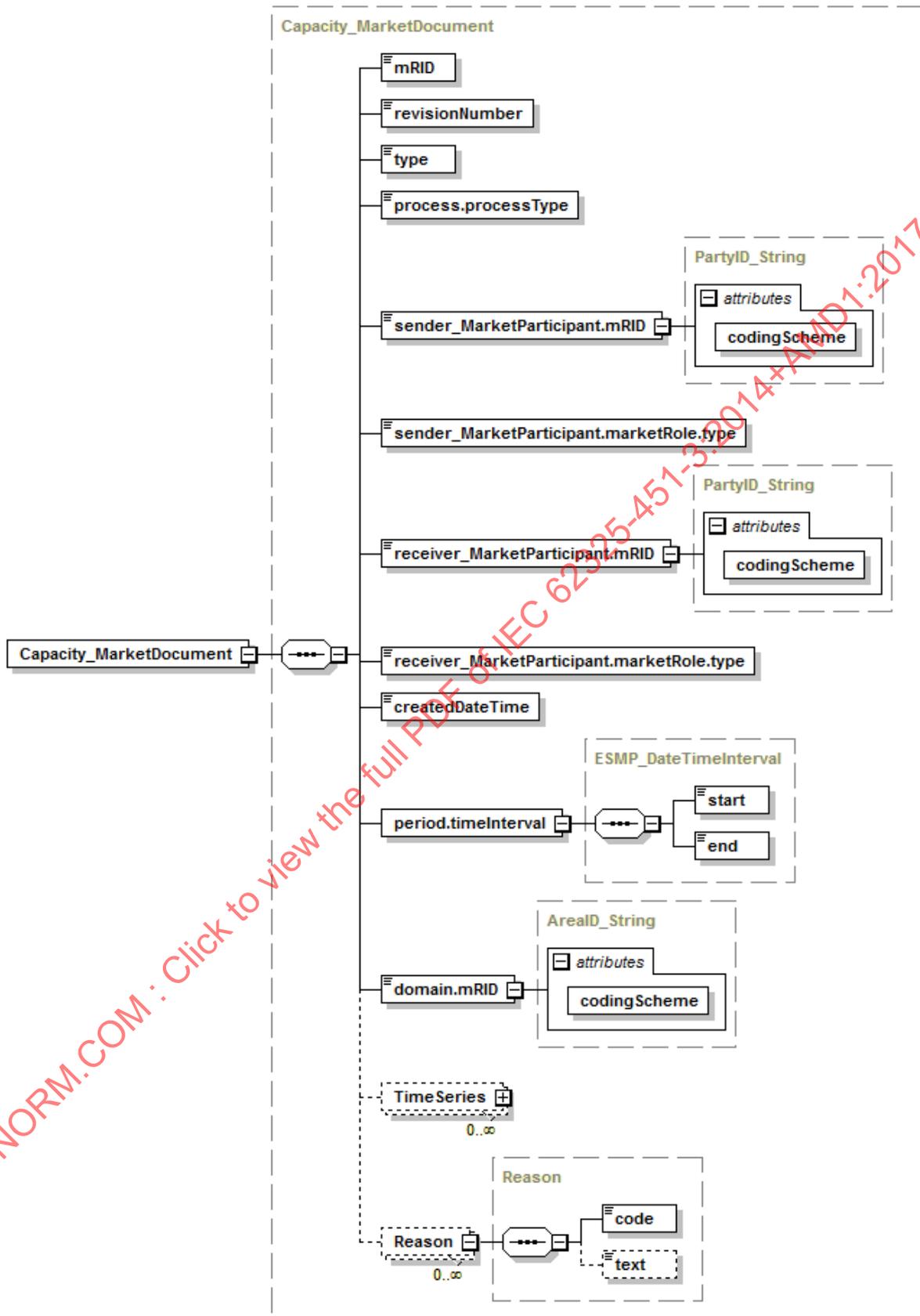
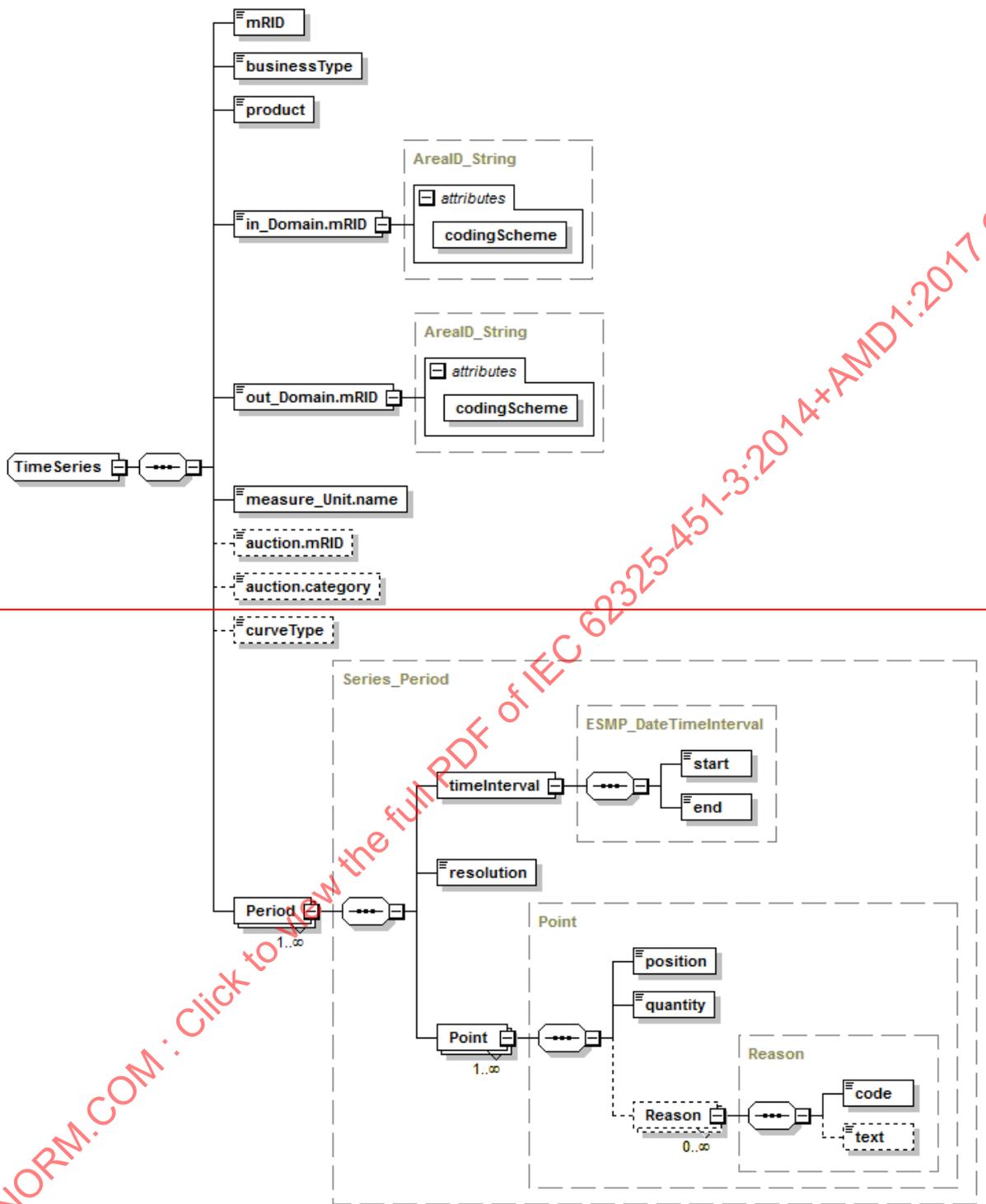


Figure 29 – Capacity\_MarketDocument XML schema structure – 1/2



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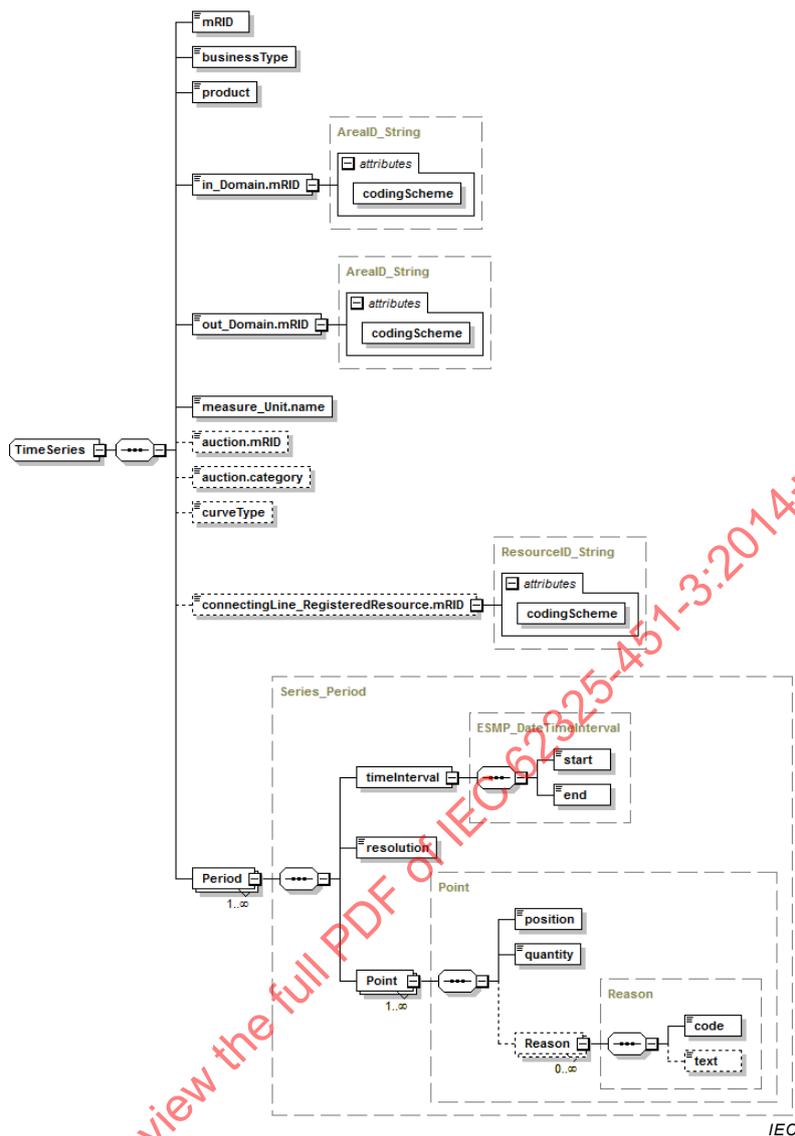


Figure 30 – Capacity\_MarketDocument XML schema structure – 2/2

## 7.6.2 Schema description

```

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:capacitydocument:7:01" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacitydocument:7:01"
elementFormDefault="qualified" attributeFormDefault="unqualified">
xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-
wgedi-codelists.xsd"/>
<xs:element name="Capacity_MarketDocument" type="Capacity_MarketDocument"/>
<xs:simpleType name="ID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="35"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:pattern value="[1-9]([0-9]){0,2}"/>

```

```
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="ProcessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ProcessTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-9]|
[12][0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30))T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|
[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][1235679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-8])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-9]|
[12][0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30))T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|
[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
```



```
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] (0) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789]) [\ -] (02) [\ -] (0 [1-9] | 1 [0-9] | 2 [0-
8]) T (( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] ) Z ) "/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Capacity_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
    <xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Process.processType"/>
    <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
    <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
    <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
```

```
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="EnergyProductKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:EnergyProductTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
```

```
<xs:simpleType name="ResourceID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="ResourceID_String-base">
      <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="TimeSeries"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="product" type="EnergyProductKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.product"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  </xs:sequence>
  <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
</xs:complexType>
</xs:schema>
```

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## 7.7 AllocationResult\_MarketDocument schema

### 7.7.1 Schema Structure

Figure 31 and Figure 32 provide the structure of the schema.

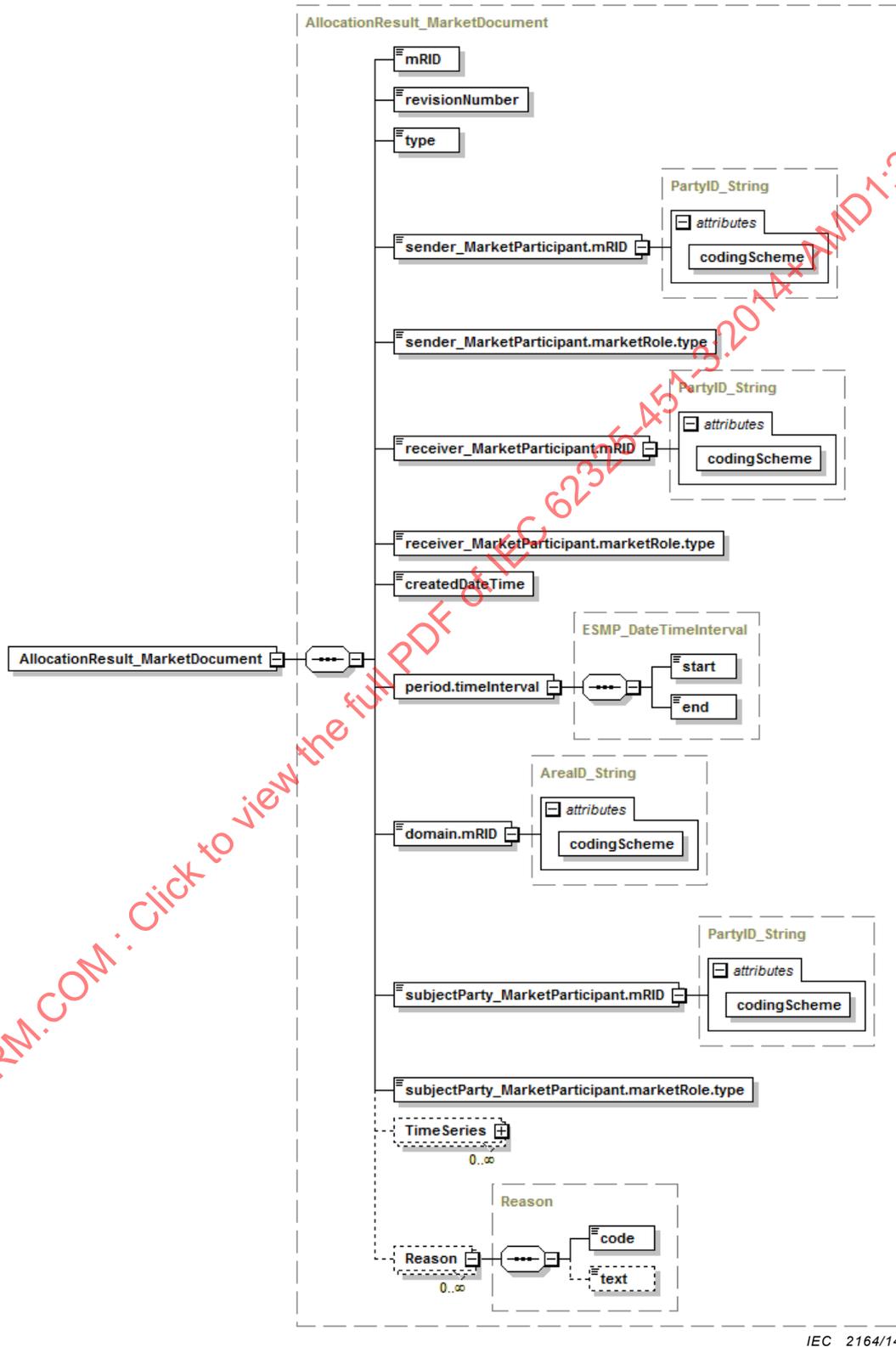


Figure 31 – AllocationResult\_MarketDocument XML schema structure – 1/2

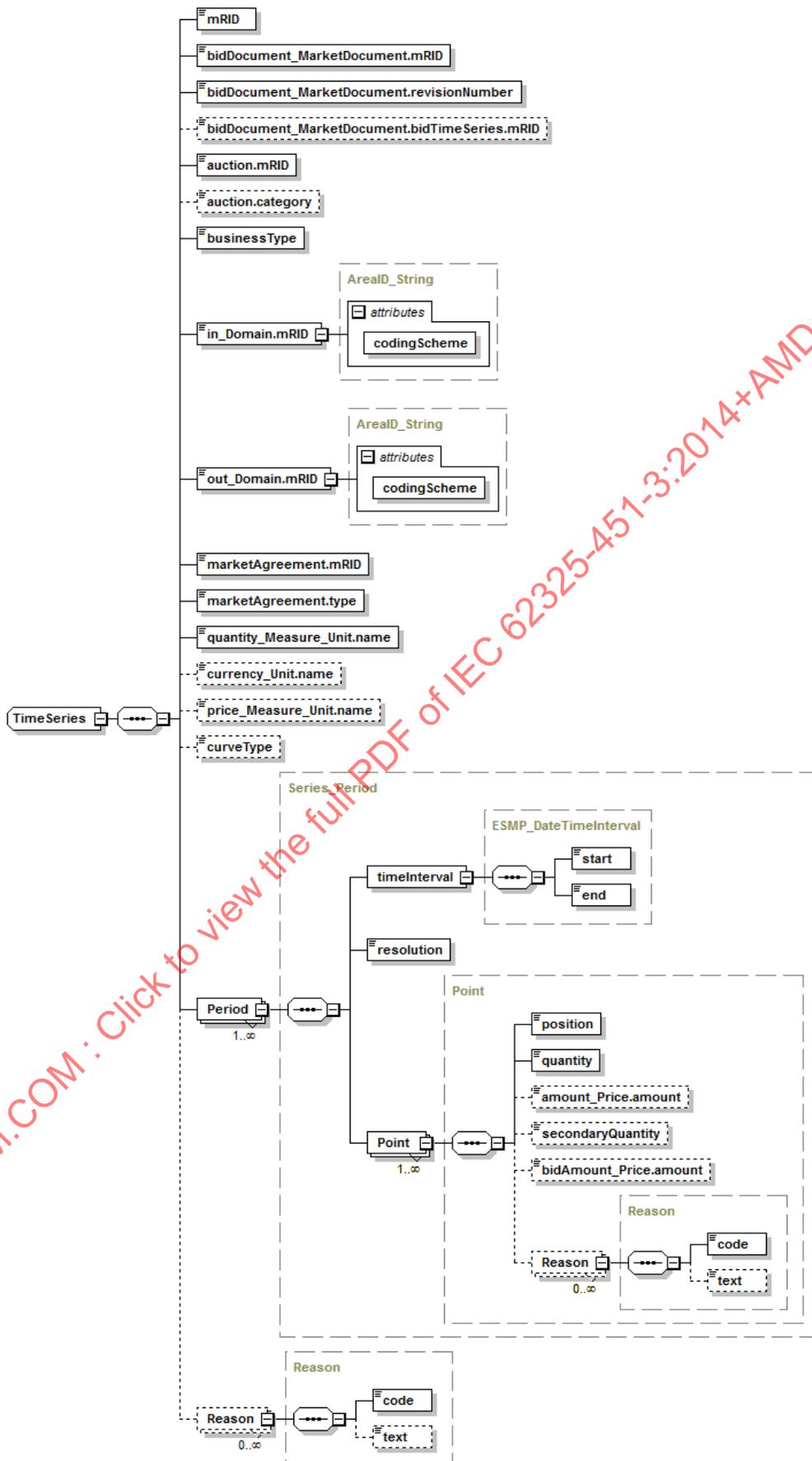


Figure 32 – AllocationResult\_MarketDocument XML schema structure – 2/2





```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Point.secondaryQuantity"/>
    <xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
  </xs:sequence>
</xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
```

```
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
```

```
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
<xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.8 TotalAllocationResult\_MarketDocument schema

### 7.8.1 Schema Structure

Figure 33 and Figure 34 provide the structure of the schema.

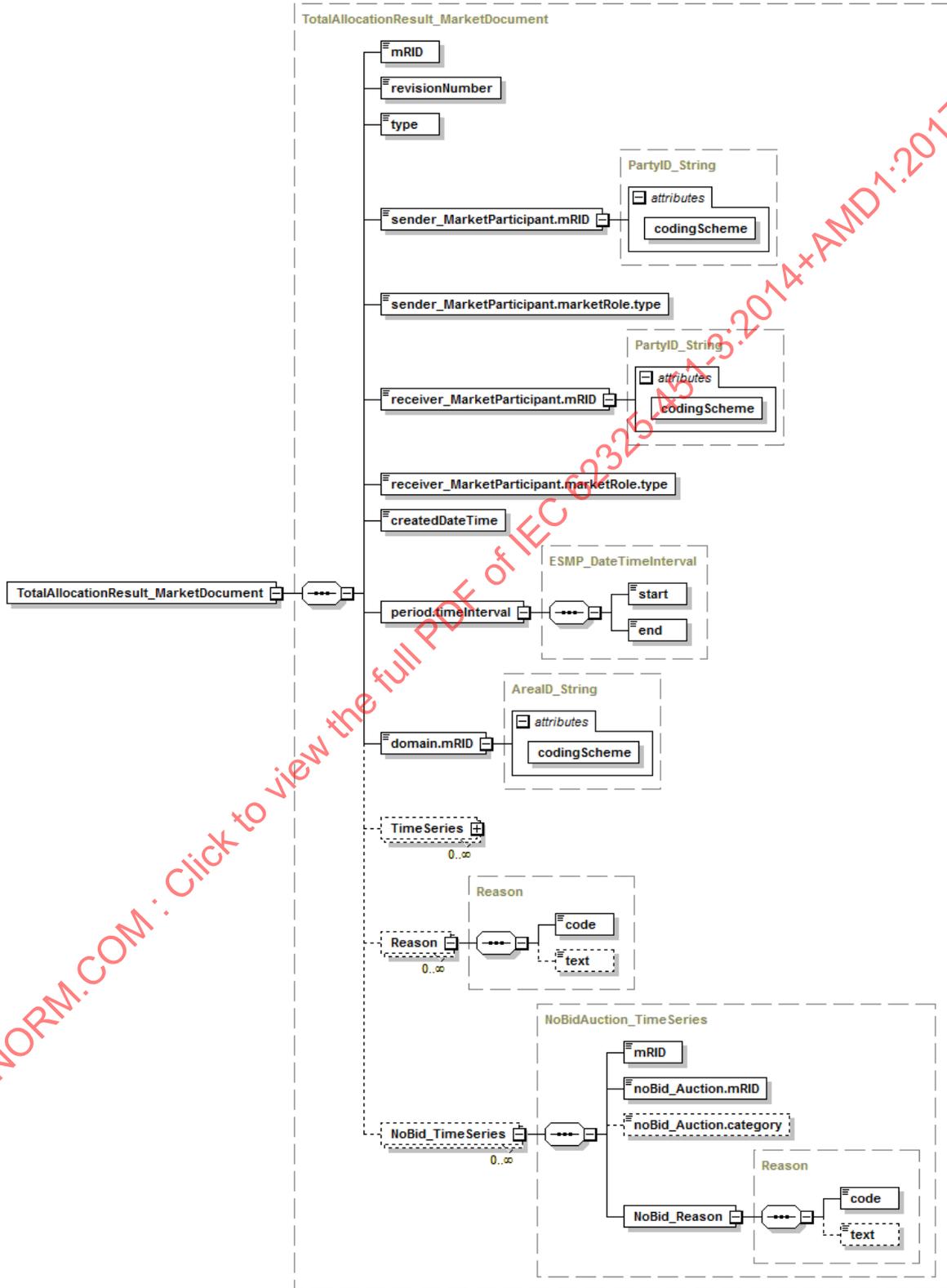
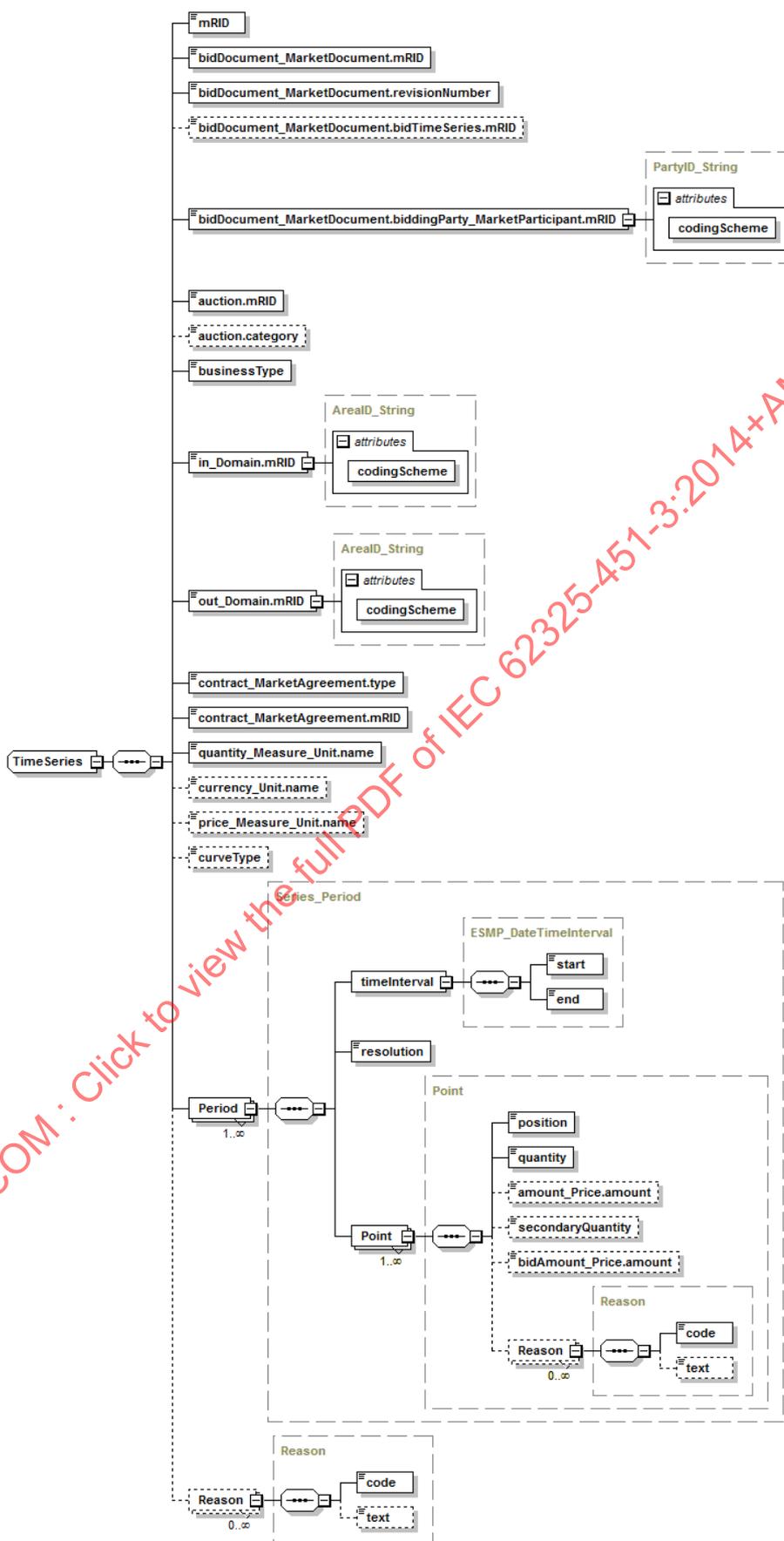


Figure 33 – TotalAllocationResult\_MarketDocument XML schema structure – 1/2



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Figure 34 – TotalAllocationResult\_MarketDocument XML schema structure – 2/2

## 7.8.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="TotalAllocationResult_MarketDocument"
type="TotalAllocationResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:complexType name="NoBidAuction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction.category"/>
      <xs:element name="NoBid Reason" type="Reason" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.NoBid_Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
      <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.secondaryQuantity"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

```
<xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-
9]|12)[0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30)T((01)[0-
9]|2[0-3]):[0-5][0-
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9)[0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5][0-
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5679][2468][1235679]|0-9)[0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((01)[0-9]|2[0-3]):[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
```



```
<xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
  </xs:sequence>
</xs:complexType>

```

```
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element
name="bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
        <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
          <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
            <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
              <xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
                <xs:element name="contract_MarketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
                  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
                      <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                        <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
                          <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
                            <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
                              </xs:sequence>
                            </xs:complexType>
                          <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                            <xs:restriction base="cl:MessageTypeList"/>
                          </xs:simpleType>
                        <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                            <xs:restriction base="cl:RoleTypeList"/>
                          </xs:simpleType>
                        <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
                            <xs:restriction base="xs:dateTime">
                              <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-9]|30))T(([01][0-
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```

```
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789]) [\-] (02) [\-] (0 [1-9] | 1 [0-9] | 2 [0-8]) T (( [01] [0-9] | 2 [0-3]) : [0-5] [0-9] : [0-5] [0-9]) Z) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="TotalAllocationResult_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
    <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
    <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
    <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
    <xs:element name="NoBid_TimeSeries"
type="NoBidAuction_TimeSeries" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.NoBid_TimeSeries"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.9 ImplicitAuctionResult\_MarketDocument schema

### 7.9.1 Schema Structure

Figure 35 and Figure 36 provide the structure of the schema.

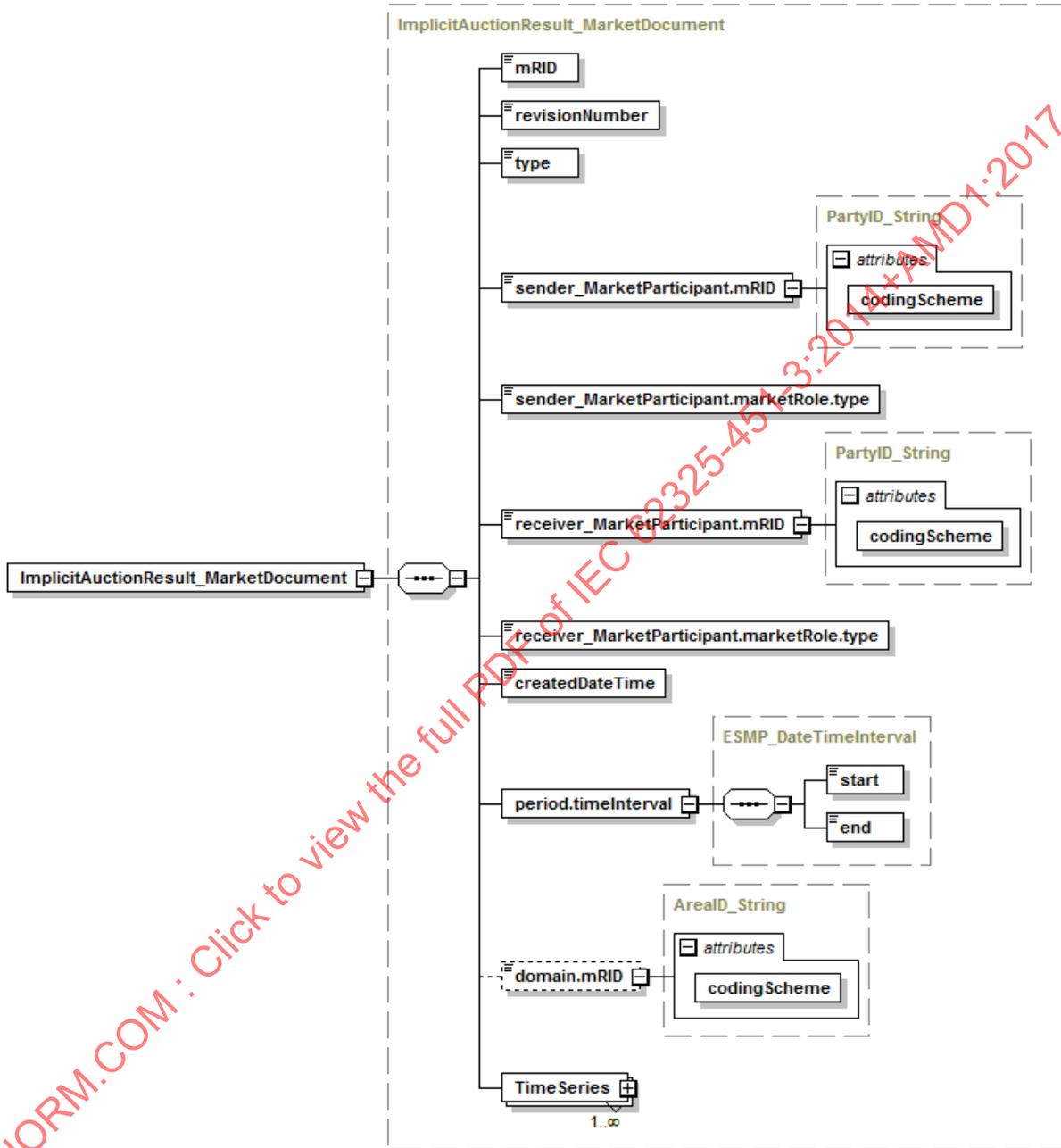


Figure 35 – ImplicitAuctionResult\_MarketDocument XML schema structure – 1/2

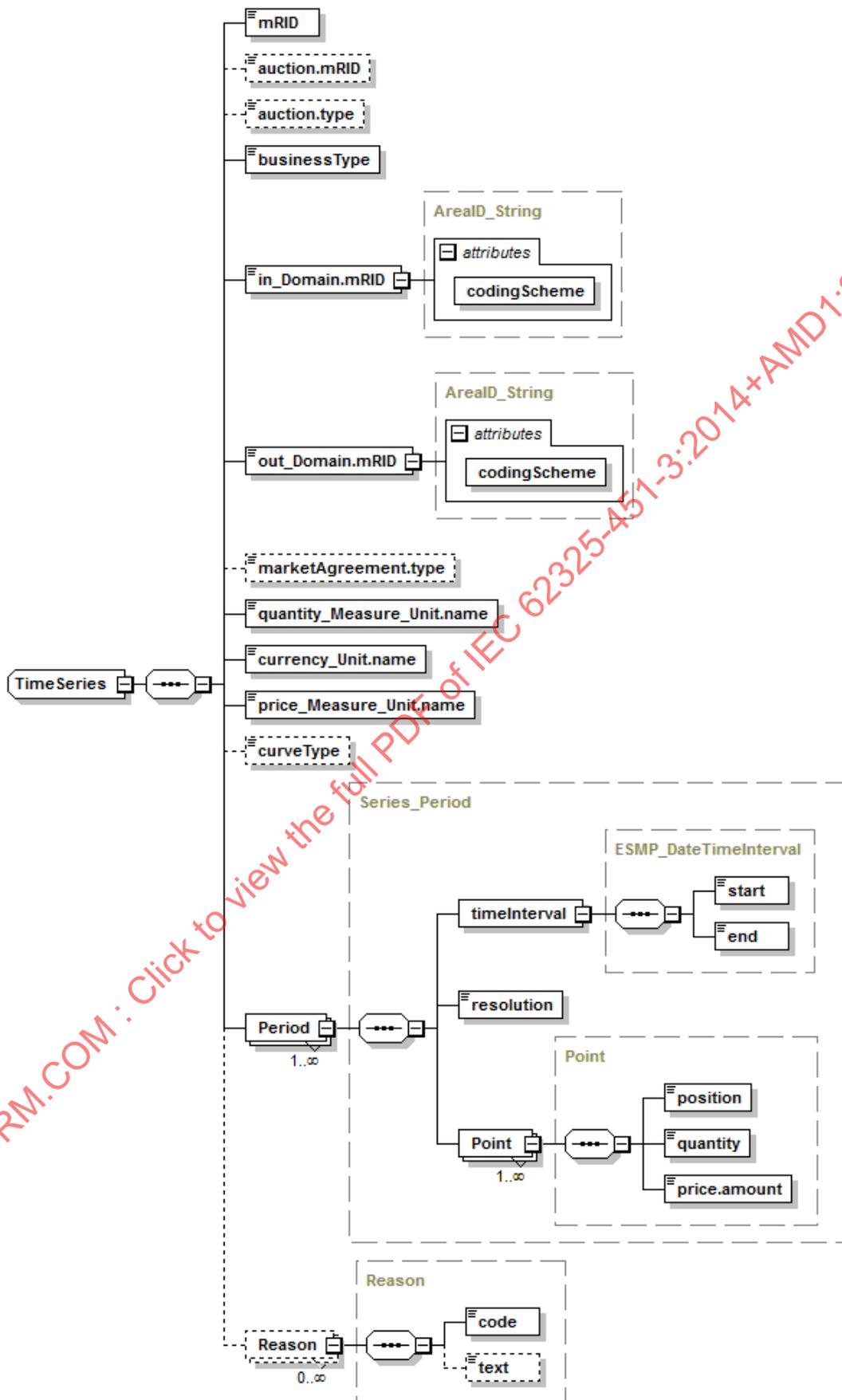


Figure 36 – ImplicitAuctionResult\_MarketDocument XML schema structure – 2/2

## 7.9.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:implicitauctiondocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:implicitauctiondocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="ImplicitAuctionResult_MarketDocument"
type="ImplicitAuctionResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) [ \ - ] ( 0 [ 1 3 5 7 8 ] | 1 [ 0 2 ] ) [ \ - ] ( 0 [ 1 -
9 ] | [ 1 2 ] [ 0 - 9 ] | 3 [ 0 1 ] ) | ( [ 0 - 9 ] { 4 } ) [ \ - ] ( ( 0 [ 4 6 9 ] ) | ( 1 1 ) ) [ \ - ] ( 0 [ 1 - 9 ] | [ 1 2 ] [ 0 - 9 ] | 3 0 ) ) T ( ( [ 0 1 ] [ 0 -
9 ] | 2 [ 0 - 3 ] ) : [ 0 - 5 ] [ 0 - 9 ] : [ 0 - 5 ] [ 0 -
9 ] ) Z ) | ( ( [ 1 3 5 7 9 ] [ 2 6 ] [ 0 2 4 6 8 ] [ 0 4 8 ] | [ 1 3 5 7 9 ] [ 0 1 3 4 5 7 8 9 ] ( 0 ) [ 4 8 ] | [ 1 3 5 7 9 ] [ 0 1 3 4 5 7 8 9 ] [ 2 4 6 8 ] [ 0 4 8 ]
| [ 0 2 4 6 8 ] [ 0 4 8 ] [ 0 2 4 6 8 ] [ 0 4 8 ] | [ 0 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] ( 0 ) [ 4 8 ] | [ 0 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] [ 2 4 6 8 ] [ 0 4 8 ] | [ 0 -
9 ] [ 0 - 9 ] [ 1 3 5 7 9 ] [ 2 6 ] ) [ \ - ] ( 0 2 ) [ \ - ] ( 0 [ 1 - 9 ] | 1 [ 0 - 9 ] | 2 [ 0 - 9 ] ) T ( ( [ 0 1 ] [ 0 - 9 ] | 2 [ 0 - 3 ] ) : [ 0 - 5 ] [ 0 -
9 ] : [ 0 - 5 ] [ 0 -
9 ] ) Z ) | ( ( [ 1 3 5 7 9 ] [ 2 6 ] [ 0 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] | [ 1 3 5 7 9 ] [ 0 1 3 4 5 7 8 9 ] ( 0 ) [ 0 1 2 3 5 6 7 9 ] | [ 1 3 5 7 9 ] [ 0 1 3 4 5 7 8 9 ] [
2 4 6 8 ] [ 1 2 3 5 6 7 9 ] | [ 0 2 4 6 8 ] [ 0 4 8 ] [ 0 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] | [ 0 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] ( 0 ) [ 0 1 2 3 5 6 7 9 ] | [ 0 2 4 6 8 ] [ 1 2
3 5 6 7 9 ] [ 2 4 6 8 ] [ 1 2 3 5 6 7 9 ] | [ 0 - 9 ] [ 0 - 9 ] [ 1 3 5 7 9 ] [ 0 1 3 4 5 7 8 9 ] ) [ \ - ] ( 0 2 ) [ \ - ] ( 0 [ 1 - 9 ] | 1 [ 0 - 9 ] | 2 [ 0 -
8 ] ) T ( ( [ 0 1 ] [ 0 - 9 ] | 2 [ 0 - 3 ] ) : [ 0 - 5 ] [ 0 - 9 ] : [ 0 - 5 ] [ 0 - 9 ] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```



```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

## 7.10 Publication\_MarketDocument schema

### 7.10.1 Schema Structure

Figure 37 and Figure 38 provide the structure of the schema.

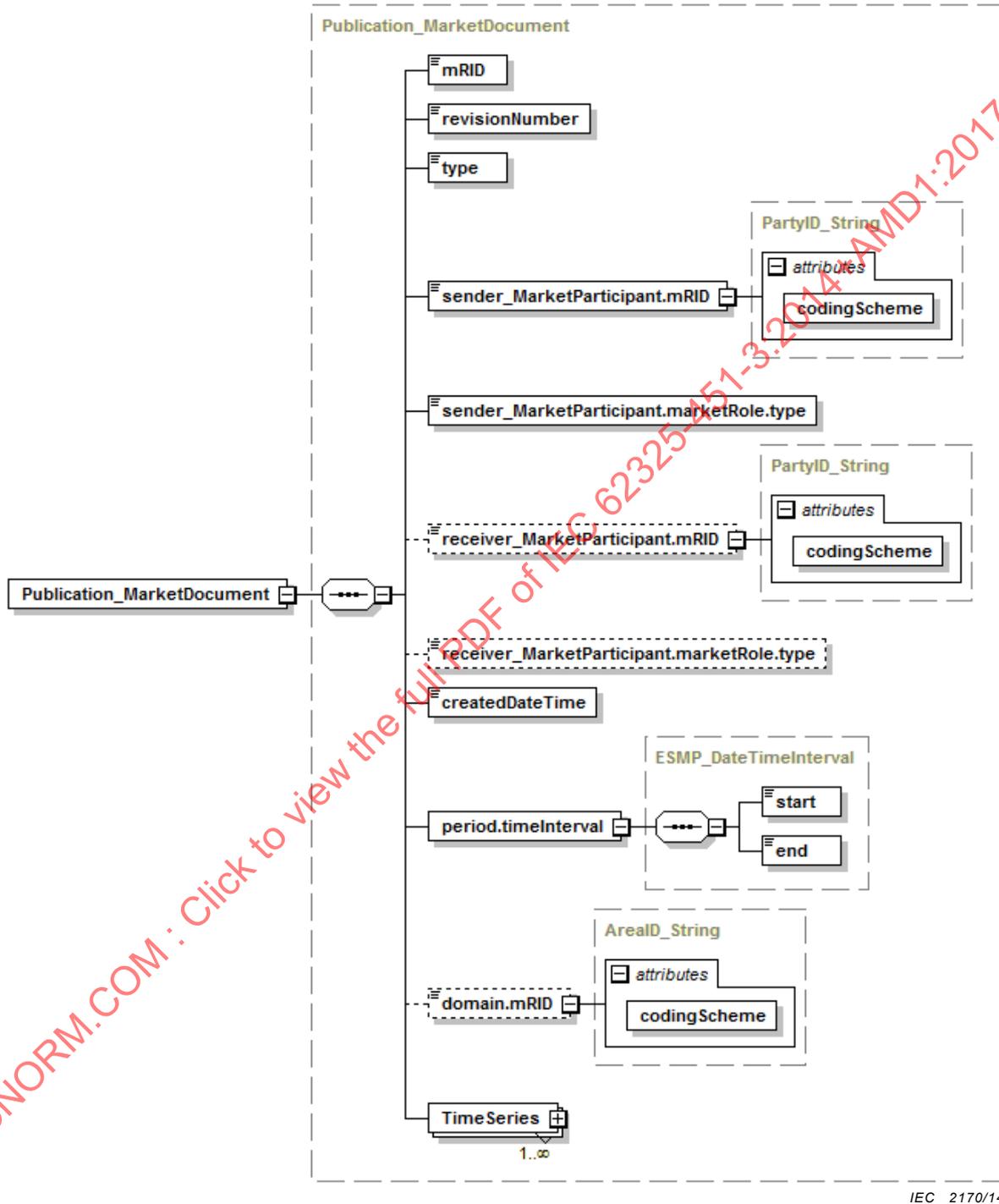
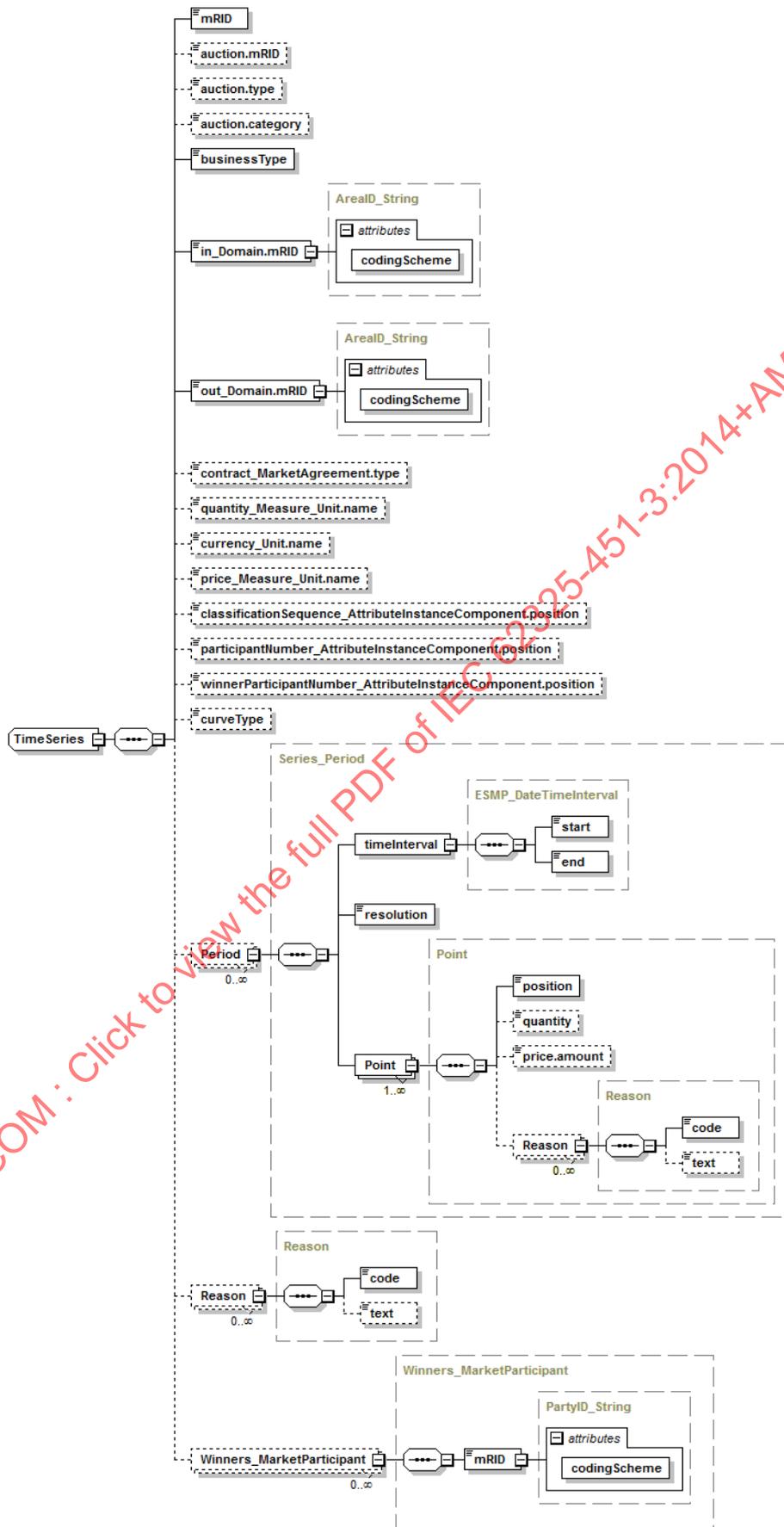


Figure 37 – Publication\_MarketDocument XML schema structure – 1/2



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Figure 38 – Publication\_MarketDocument XML schema structure – 2/2

## 7.10.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Publication_MarketDocument"
type="Publication_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
```

```
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:dateTime">
<xs:pattern value="((( [0-9]{4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-
9] | [12] [0-9] | 3 [01] ) | ( [0-9]{4} ) [ \- ] ( ( 0 [469] ) | ( 11 ) ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-
9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-
9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-
8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="18"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:simpleContent>
<xs:extension base="AreaID_String-base">
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:string">
<xs:pattern value="((( [0-9]{4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-
9] | [12] [0-9] | 3 [01] ) | ( [0-9]{4} ) [ \- ] ( ( 0 [469] ) | ( 11 ) ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-
9] | 2 [0-3] ) : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [
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8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] ) Z ) "/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
<xs:sequence>
<xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
<xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Publication_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
<xs:sequence>
```

```
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
<xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
<xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
<xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="TimeSeries" type="TimeSeries" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="512"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
<xs:sequence>
<xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>

```

```
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
```

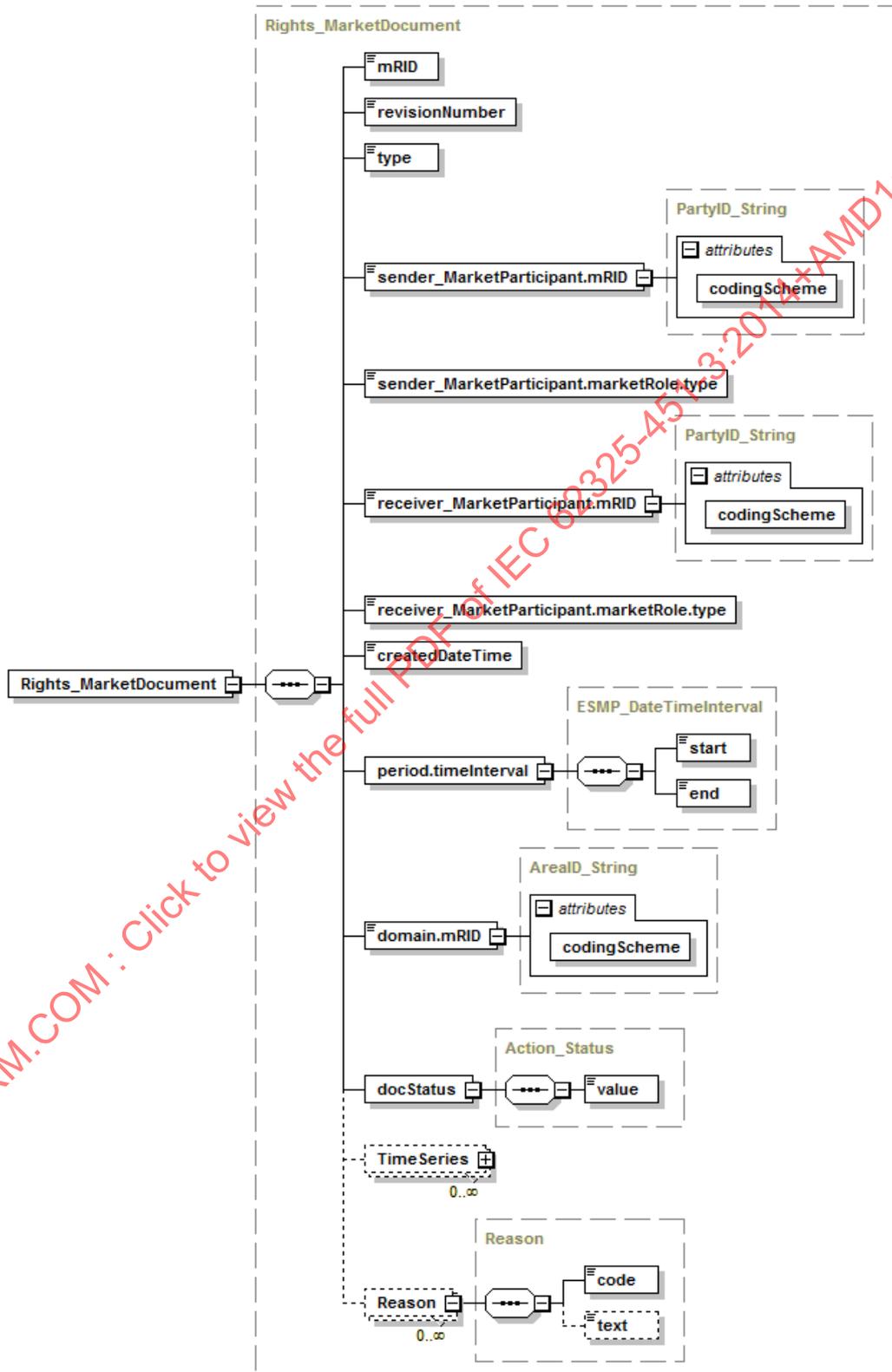
```
<xs:element
name="classificationSequence_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
  <xs:element
name="participantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
    <xs:element
name="winnerParticipantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
      <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
        <xs:element name="Period" type="Series_Period" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
          <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
            <xs:element name="Winners_MarketParticipant"
type="Winners_MarketParticipant" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Winners_MarketParticipant"/>
          </xs:sequence>
        </xs:complexType>
      <xs:complexType name="Winners_MarketParticipant"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketParticipant">
        <xs:sequence>
          <xs:element name="mRID" type="PartyID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
        </xs:sequence>
      </xs:complexType>
    </xs:schema>
```

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## 7.11 Rights\_MarketDocument schema

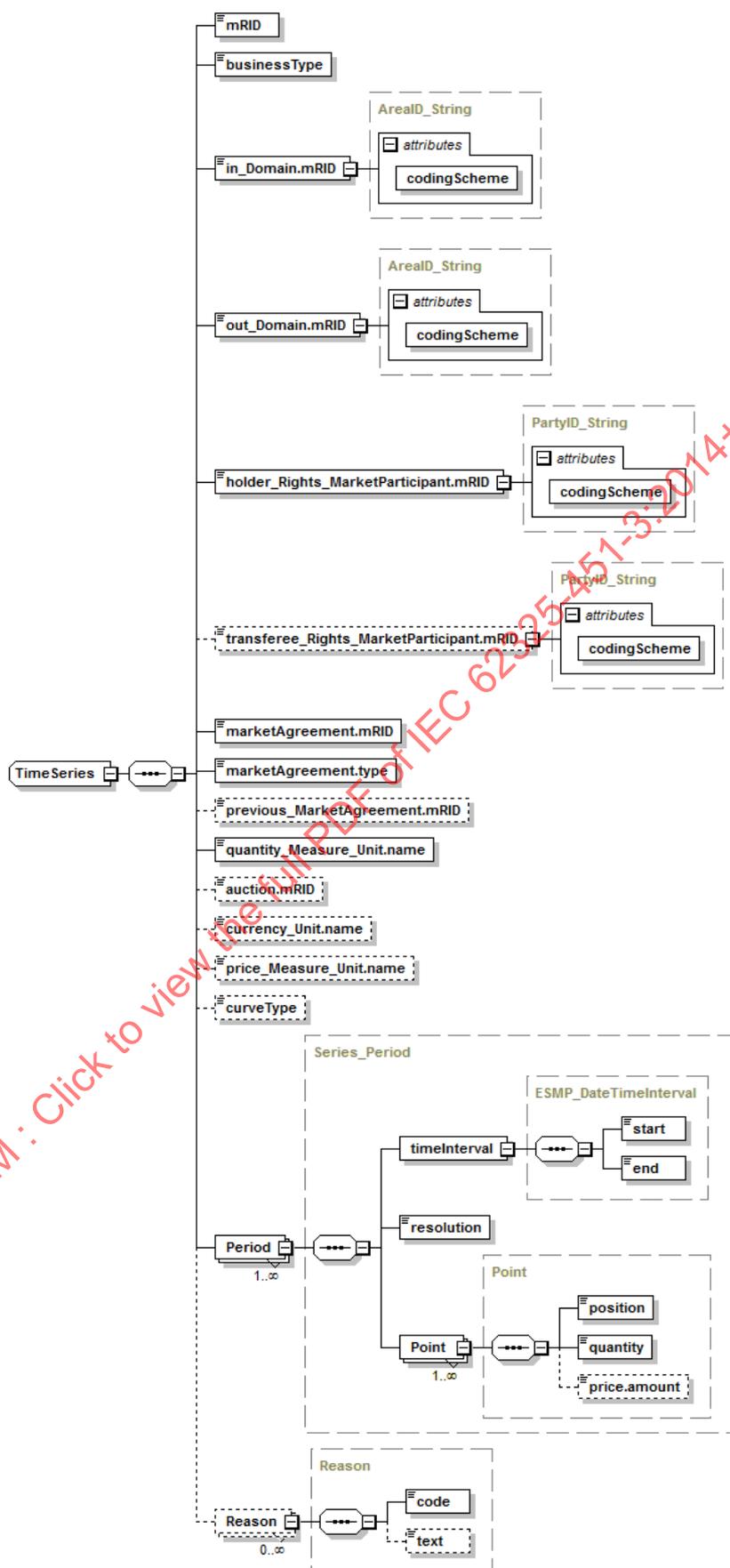
### 7.11.1 Schema Structure

Figure 39 and Figure 40 provide the structure of the schema.



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Figure 39 – Rights\_MarketDocument XML schema structure – 1/2



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Figure 40 – Rights\_MarketDocument XML schema structure – 2/2

### 7.11.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe.eu-wgedi-codelists.xsd"/>
  <xs:element name="Rights_MarketDocument" type="Rights_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.code"/>
      <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.text"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
```

```
<xs:pattern value="[1-9] ([0-9]) {0,2}"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="((( [0-9] {4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-
9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ \- ] ( ( 0 [469] ) | ( 1 [1] ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) ) T ( ( [01] [0-
9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-
9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [123
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8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z )"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="Status_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:StatusTypeList"/>
</xs:simpleType>
<xs:complexType name="Action_Status"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status">
  <xs:sequence>
    <xs:element name="value" type="Status_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Status.value"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-9]|
[12][0-9]|3[01]) | ([0-9]{4}) [\-] ((0[469]) | (11)) [\-] (0[1-9]| [12][0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9])Z) | ((([13579][26][02468][048] | [13579][01345789](0)[48] | [13579][01345789][2468][048] | [02468][048][02468][048] | [02468][1235679](0)[48] | [02468][1235679][2468][048] | [0-9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-9])Z) | ((([13579][26][02468][1235679] | [13579][01345789](0)[01235679] | [13579][01345789][2468][1235679] | [02468][048][02468][1235679] | [02468][1235679](0)[01235679] | [02468][1235679][2468][1235679] | [0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.start"/>
    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Rights_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
    <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.createdDateTime"/>
    <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.timeInterval"/>
    <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="docStatus" type="Action_Status" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.docStatus"/>
    <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.TimeSeries"/>
  </xs:sequence>
</xs:complexType>
</xs:complexType>
```

```
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="businessType" type="BusinessKind String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="holder_Rights_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="transferee_Rights_MarketParticipant.mRID"
type="PartyID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
```

```
<xs:element name="previous_MarketAgreement.mRID" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
  <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
  <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

### CADRE POUR LES COMMUNICATIONS POUR LE MARCHÉ DE L'ÉNERGIE –

#### Partie 451-3: Processus métier d'attribution de la capacité de transport (vente aux enchères explicite ou implicite) et modèles contextuels pour le marché européen

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Cette version consolidée de l'IEC 62325-451-3 porte le numéro d'édition 1.1. Elle comprend la première édition (2014-07) [documents 57/1457FDIS et 57/1480/RVD] et son amendement 1 (2017-05) [documents 57/1755/CDV et 57/1825/RVC]. Le contenu technique est identique à celui de l'édition de base et à son amendement.

**Dans cette version Redline, une ligne verticale dans la marge indique où le contenu technique est modifié par l'amendement 1. Les ajouts sont en vert, les suppressions sont en rouge, barrées. Une version Finale avec toutes les modifications acceptées est disponible dans cette publication.**

La Norme internationale IEC 62325-451-3 a été établie par le comité d'études 57 de l'IEC: Gestion des systèmes de puissance et échanges d'informations associés.

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62325, publiées sous le titre général *Cadre pour les communications pour le marché de l'énergie*, peut être consultée sur le site web de l'IEC.

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- remplacée par une édition révisée, ou
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## INTRODUCTION

La présente norme fait partie de la série de normes IEC 62325 qui définissent des protocoles pour les communications des marchés de l'énergie déréglementés.

Le principal objectif de la série de normes IEC 62325 est de produire des normes destinées à faciliter l'intégration de logiciels d'application pour le marché, développés de façon indépendante par différents fournisseurs, dans un système de gestion de marché, et entre des systèmes de gestion de marché et des systèmes participant au marché. Cela s'effectue par la définition d'échanges de messages pour permettre à ces applications ou systèmes d'accéder aux données publiques et d'échanger des informations, indépendamment de la façon dont ces informations sont représentées en interne.

Le modèle d'information commun (CIM, common information model) spécifie la base de la sémantique pour cet échange de messages.

Le Profil de marché de style européen se base sur différentes parties de la norme IEC relative au modèle CIM. Le modèle CIM est défini dans une série de normes, c'est-à-dire l'IEC 62325-301, l'IEC 61970-301 et l'IEC 61968-11.

Le présent document fournit, pour le Profil de marché de style européen, le processus métier d'attribution de la capacité de transport par vente aux enchères explicite ou implicite qui peut être utilisé dans le marché de style européen. Cette norme se basait à l'origine sur les travaux de l'Association européenne des gestionnaires de réseaux de transport d'électricité (European Transmission System Operators (ETSO)), du groupe de travail EDI (Échange de données informatisé) puis sur les travaux du Groupe de Travail EDI de l'Association des gestionnaires de réseaux électriques européens (European Network of Transmission System Operators (ENTSO-E)).

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## **CADRE POUR LES COMMUNICATIONS POUR LE MARCHÉ DE L'ÉNERGIE –**

### **Partie 451-3: Processus métier d'attribution de la capacité de transport (vente aux enchères explicite ou implicite) et modèles contextuels pour le marché européen**

#### **1 Domaine d'application**

La présente partie de l'IEC 62325-451 spécifie un paquetage pour le processus métier d'attribution de la capacité de transport par ventes aux enchères explicites ou implicites et les modèles contextuels de document, modèles d'assemblage et schéma XML associés à utiliser sur les marchés de style européen.

La présente Norme internationale est basée sur le modèle contextuel de marché de style européen (IEC 62325-351). Le processus métier de programmation couvert par la présente Norme internationale est décrit à l'Article 5.

Les composants de base agrégés (ACC – aggregate core components) pertinents définis dans l'IEC 62325-351 ont été contextualisés en entités d'information métier agrégées (ABIE – aggregated business information entities) afin de satisfaire aux exigences de ces processus métier.

Les ABIE contextualisées ont été assemblées dans les modèles contextuels de document pertinents.

Des modèles d'assemblage associés et un schéma XML pour l'échange des informations sur l'attribution de la capacité de transport entre les participants au marché sont générés automatiquement à partir des modèles contextuels de document assemblés.

#### **2 Références normatives**

Les documents suivants sont cités en référence de manière normative, en intégralité ou en partie, dans le présent document et sont indispensables pour son application. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 62325-351, *Cadre pour les communications pour le marché de l'énergie – Partie 351: Profil de modèle d'échange pour un système de gestion de marché de style européen basé sur le CIM*

IEC 62325-450:2013, *Cadre pour les communications pour le marché de l'énergie – Partie 450: Règles de modélisation de profils et de contextes*

IEC 62325-451-1, *Cadre pour les communications pour le marché de l'énergie – Partie 451-1: Processus métier d'accusé de réception et modèle contextuel pour le marché européen CIM*

IEC 62325-451-2, *Cadre pour les communications pour le marché de l'énergie – Partie 451-2: Processus métier de programmation et modèle contextuel pour le marché européen CIM*

### 3 Termes et définitions

Pour les besoins du présent document, les termes et définitions de l'IEC 61970-2 ainsi que les suivants s'appliquent.

NOTE Se référer à l'IEC 60050, Vocabulaire Electrotechnique International, pour les définitions du glossaire général.

#### 3.1

##### **capacité déjà attribuée**

##### **AAC**

quantité totale des droits de capacité de transport attribués, qu'il s'agisse de capacité ou de programmes d'échange selon la méthode d'attribution

Note 1 à l'article: L'abréviation "AAC" est dérivée du terme anglais développé correspondant "already allocated capacity".

#### 3.2

##### **entité d'information métier agrégée**

##### **ABIE**

réutilisation d'un composant de base agrégé (ACC) dans un secteur d'activité spécifié

Note 1 à l'article: L'abréviation "ABIE" est dérivée du terme anglais développé correspondant "aggregate business information entity".

[SOURCE: ISO/TS 15000-5:2005, Article 9, modifiée – modification de la définition]

#### 3.3

##### **composant de base agrégé**

##### **ACC**

collection d'informations métier connexes qui, rassemblées, expriment une signification métier particulière, indépendante de tout contexte métier spécifique

Note 1 à l'article: Exprimé en termes de modélisation, il représente une classe d'objets, indépendante de tout contexte métier spécifique.

Note 2 à l'article: L'abréviation "ACC" est dérivée du terme anglais développé correspondant "aggregate core component".

[SOURCE: ISO/TS 15000-5:2005, Article 9, modifiée – modification de la définition]

#### 3.4

##### **interface de programmation d'application**

##### **API**

ensemble des fonctions publiques qu'offre un composant exécutable d'application pour être utilisées par d'autres composants exécutables d'application

Note 1 à l'article: L'abréviation "API" est dérivée du terme anglais développé correspondant "application program interface".

#### 3.5

##### **modèle d'assemblage (assembly model)**

modèle de préparation de l'information dans un contexte métier en vue de son intégration dans des documents électroniques pour l'échange de données

---

<sup>1</sup> A l'étude.

### 3.6

#### **capacité de transport disponible**

##### **ATC**

partie de NTC qui reste disponible, après chaque phase de procédure d'attribution, pour des activités commerciales ultérieures

Note 1 à l'article: L'ATC est obtenue par l'équation suivante:  $ATC = NTC - AAC$ .

Note 2 à l'article: L'abréviation "ATC" est dérivée du terme anglais développé correspondant "available transmission capacity".

### 3.7

#### **basedOn** (*établi sur*)

#### **IsBasedOn** (*est établi sur*)

utilisation d'un artéfact restreint selon les exigences d'un contexte métier spécifique

[SOURCE: IEC 62325-450:2013, 3.4]

### 3.8

#### **offre**

demande relative à une capacité donnée à un prix donné faite par un négociant de capacité et correspondant à une seule série chronologique dans un document d'offre

### 3.9

#### **contexte métier**

description formelle d'une situation métier spécifique telle qu'identifiée par les valeurs d'un ensemble de catégories de contexte, permettant une différenciation unique de situations métier différentes

[SOURCE: ONU/Cefact, Spécification technique de méthodologie contextuelle unifiée]

### 3.10

#### **vente aux enchères explicite**

méthode de gestion de congestion dans le cadre de laquelle seuls les droits de capacité de transport d'énergie sont mis aux enchères

### 3.11

#### **profil de marché de style européen**

##### **ESMP**

profil de marché de style européen, qui fait l'objet de la présente Norme internationale

Note 1 à l'article: L'abréviation "ESMP" est dérivée du terme anglais développé correspondant "European style market profile".

### 3.12

#### **vente aux enchères implicite**

méthode de gestion de congestion dans le cadre de laquelle la capacité de transport et l'énergie électrique sont incluses de manière implicite dans l'échange commercial sur le marché

### 3.13

#### **modèle d'information**

représentation de concepts, relations, contraintes, règles et opérations permettant de spécifier une sémantique de données pour un domaine de discours donné

Note 1 à l'article: Le modèle d'information peut fournir une structure partageable, stable et organisée des exigences d'information relatives au contexte de domaine.

[SOURCE: IEC 62325-450:2013, 3.6]

### 3.14

#### **système de gestion de marché**

##### **MMS**

système informatique comprenant une plate-forme logicielle offrant les services de support de base et un ensemble d'applications qui offrent les fonctionnalités requises pour une gestion efficace du marché de l'électricité

Note 1 à l'article: Ces systèmes informatiques intégrés à un marché de l'électricité peuvent comprendre un service de support à l'attribution de la capacité, à la planification de l'énergie, aux services auxiliaires ou autres, à l'exploitation en temps réel et aux règlements en temps réel.

Note 2 à l'article: L'abréviation "MMS" est dérivée du terme anglais développé correspondant "market management system".

### 3.15

#### **entité d'information métier pour les messages**

##### **MBIE**

agrégation d'un ensemble d'ABIE qui respecte un ensemble défini de règles d'assemblage

Note 1 à l'article: L'abréviation "MBIE" est dérivée du terme anglais développé correspondant "message business information entity".

### 3.16

#### **capacité de transfert nette**

##### **NTC**

échange maximal entre deux zones, compatible avec les normes de sécurité applicables dans les deux zones, et tenant compte des incertitudes techniques sur les conditions ultérieures du réseau

Note 1 à l'article:  $NTC = TTC - TRM$ .

Note 2 à l'article: L'abréviation "NTC" est dérivée du terme anglais développé correspondant "net transfer capacity".

### 3.17

#### **nomination**

déclaration ferme des droits de capacité de transport à utiliser

### 3.18

#### **profil**

caractère de base de l'ensemble des informations exigées pour satisfaire à un environnement spécifique

[SOURCE: IEC 62325-450:2013, 3.7]

### 3.19

#### **droits de capacité de transport**

droits d'utilisation d'une certaine quantité de capacité de transport à une frontière potentiellement congestionnée entre des zones fonctionnelles de marché

### 3.20

#### **marge de fiabilité de transport**

##### **TRM**

marge de sécurité qui tient compte des incertitudes liées aux valeurs de TTC calculées dues à des écarts non prévus de flux physiques pendant l'exploitation en raison du fonctionnement du dispositif de régulation de la fréquence de charge ou à des échanges d'urgence entre gestionnaires de réseau pour compenser une situation de déséquilibre non prévue en temps réel

Note 1 à l'article: L'abréviation "TRM" est dérivée du terme anglais développé correspondant "transmission reliability margin".

### 3.21

#### **capacité de transfert totale**

#### **TTC**

programme d'échange maximal entre deux zones, compatible avec les normes de sécurité opérationnelles applicables à chaque réseau, si les modèles ultérieurs de conditions, de production et de charge du réseau sont parfaitement connus à l'avance

Note 1 à l'article: L'abréviation "TTC" est dérivée du terme anglais développé correspondant "total transfer capacity".

## **4 Concepts de base du modèle contextuel de document et du modèle d'assemblage de messages**

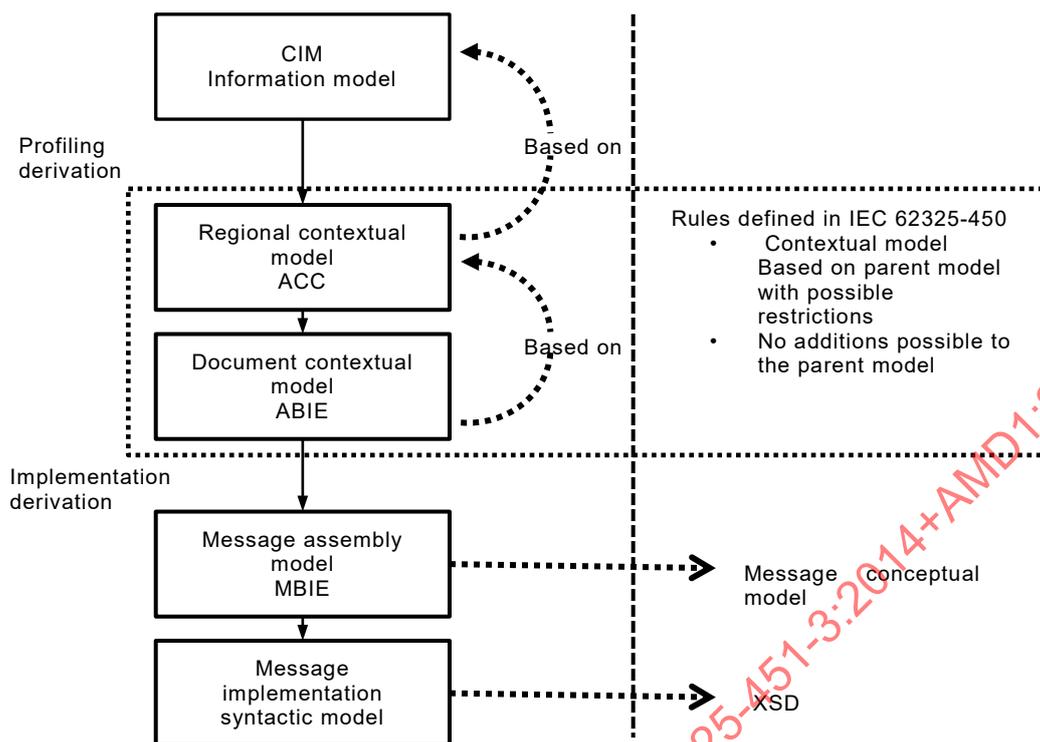
### **4.1 Présentation**

L'IEC 62325-450 définit un ensemble de profils du modèle d'information commun (CIM – common information model) qui suit un cadre de modélisation en couches comme indiqué à la Figure 1 à partir du modèle d'information commun (CIM) jusqu'aux modèles contextuels régionaux et leurs documents contextualisés ultérieurs destinés à l'échange d'information, l'étape finale étant la spécification de messages pour l'échange d'information.

Les modèles contextuels régionaux constituent les composants de base nécessaires à l'élaboration des documents électroniques pour l'échange d'informations. Ceci est défini dans le modèle contextuel de marché de style européen (IEC 62325-351). Ces composants de base sont également appelés composants de base agrégés (ACC).

Un modèle contextuel de document est basé sur une spécification particulière des exigences métier et est établi à partir de la contextualisation des ACC que l'on peut trouver dans le modèle contextuel dans un marché de style européen. Les ACC contextualisés sont appelés, à ce stade, entités d'information métier agrégées (ABIE). Ces ABIE sont les constructions regroupées dans un document électronique spécifique afin de satisfaire aux exigences informatives indiquées dans la spécification des exigences métier. La transformation d'un ACC en une ABIE doit observer les règles définies dans l'IEC 62325-450.

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IEC 2134/14

**Légende**

Anglais	Français
CIM Information model	Modèle d'information CIM
Profiling derivation	Dérivation d'établissement de profils
Based on	Etabli sur
Regional contextual model ACC	Modèle contextuel régional ACC
Document contextual model ABIE	Modèle contextuel de document ABIE
Rules defined in IEC 62325-450	Règles définies dans l'IEC 62325-450
Contextual model Based on parent model with possible restrictions	Modèle contextuel Etabli sur Modèle parent avec restrictions possibles
No additions possible to the parent model	Ajout impossible au modèle parent
Implementation derivation	Dérivation de mise en œuvre
Message assembly model MBIE	Modèle d'assemblage de messages MBIE
Message conceptual model	Modèle conceptuel de message
Message implementation syntactic model	Modèle syntaxique de mise en œuvre de message
XSD	XSD

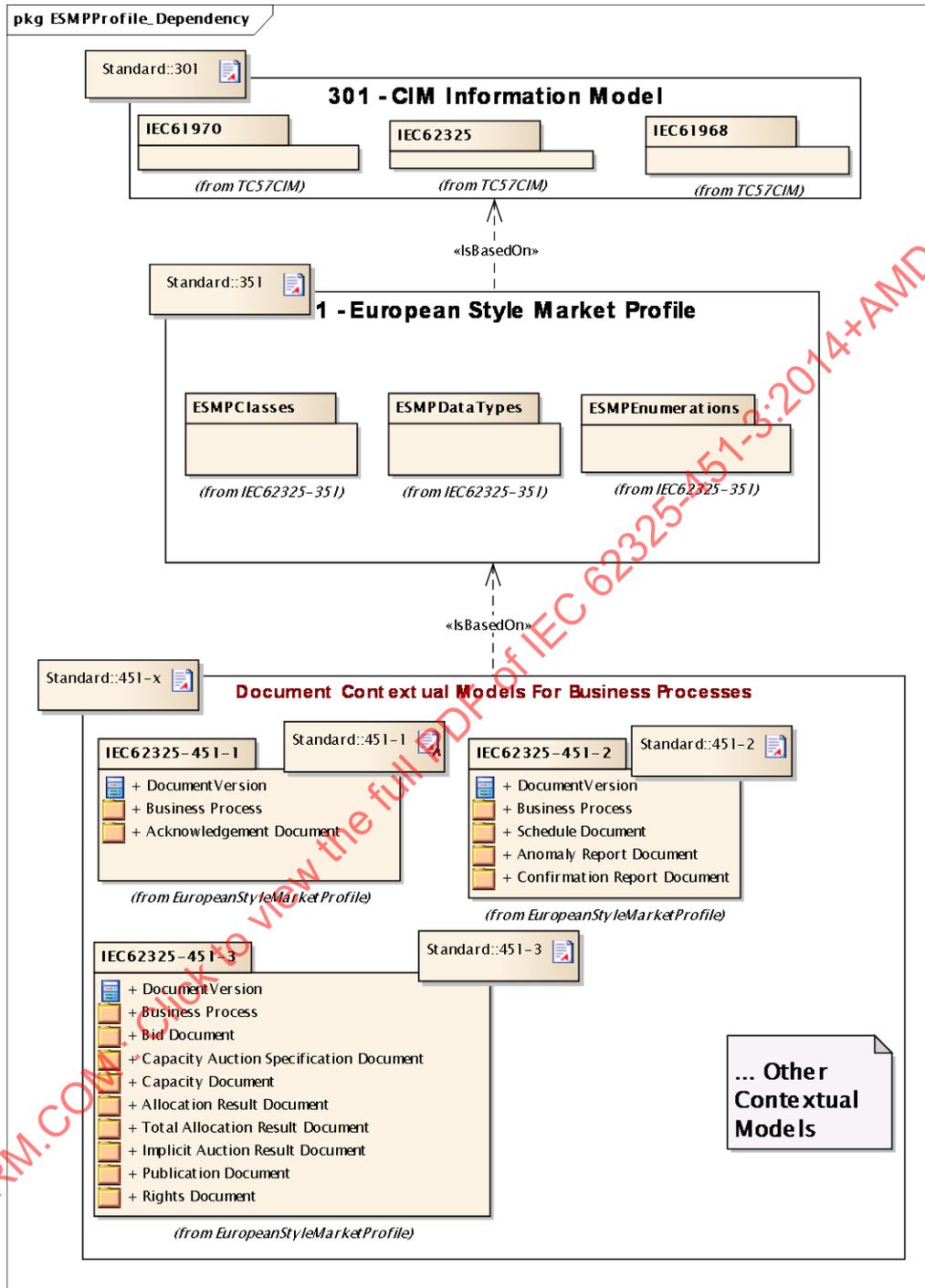
**Figure 1 – Cadre de modélisation défini dans l'IEC 62325-450**

Une fois élaboré un modèle contextuel de document, qui satisfait aux exigences métier, on peut générer automatiquement un modèle d'assemblage de messages à partir de celui-ci. La génération automatique observe les règles définies dans l'IEC 62325-450.

Le schéma XML peut alors être généré automatiquement à partir du modèle d'assemblage de messages. Si nécessaire, une mise en correspondance spécifique peut se produire à ce stade afin de transformer les noms de classes et d'attributs CIM en noms plus adaptés au marché.

#### 4.2 Structure du paquetage du marché de style européen (ESMP)

La structure principale du paquetage du profil de marché de style européen est décrite à la Figure 2.



IEC 2135/14

#### Légende

Anglais	Français
CIM Information Model	Modèle d'information CIM
European Style Market Profile	Profil de marché de style européen
Document Contextual Models For Business Processes	Modèles contextuels de document pour processus métier
From Contextual Documents	De documents contextuels

Anglais	Français
From European style market profil	De profil de marché de style européen
Other Contextual Models	Autres modèles contextuels

**Figure 2 – Présentation de la dépendance du profil de marché de style européen**

Pour chaque processus métier, un paquetage de processus métier est décrit dans une norme IEC 62325-451-x (x compris entre 1 et n). Un paquetage de processus métier contient:

- Le modèle contextuel de document (ABIE) et le modèle d'assemblage de messages (MBIE) généré automatiquement pour chaque document électronique requis pour permettre la réalisation du processus métier. Chaque document représente un sous-modèle contextuel établi par restriction à partir du profil de marché de style européen.
- Le schéma XML du document métier généré automatiquement à partir du modèle d'assemblage de messages.

Le profil de marché de style européen (ESMP), tel que défini dans l'IEC 62325-351, fournit les composants de base que l'on peut utiliser dans une norme IEC 62325-451-x. Toutes les ABIE doivent être "établies sur" (based on) les composants de base définis dans l'IEC 62325-351:

- **ESMPClasses:** Définissent toutes les classes semi-contextuelles du profil de marché de style européen établies par restriction à partir du modèle d'information CIM.
- **ESMPDataTypes:** Définissent tous les types de données (Datatypes) de base utilisés au sein des classes ESMP.

Tous les composants de base utilisés dans chaque structure de document électronique ont été harmonisés et centralisés dans le profil de marché de style européen. Ces composants de base sont par conséquent les blocs de construction de base à partir desquels sont établies les ABIE de document électronique.

#### **4.3 Du profil de marché de style européen au modèle contextuel de document**

Le modèle contextuel de document pour un processus métier donné est construit par un analyste de l'information qui identifie toutes les exigences informatives nécessaires pour satisfaire au processus métier.

Une fois les exigences informatives identifiées, l'analyste de l'information identifie les ACC associés disponibles dans le profil de marché de style européen et les contextualise afin de satisfaire aux exigences informatives. Cette étape de contextualisation génère un ensemble d'entités d'information métier agrégées (ABIE).

Dans une étape finale, l'analyste de l'information regroupe les ABIE dans un paquetage spécifique de modèles contextuels de document afin d'établir un modèle de document satisfaisant aux exigences métier.

#### **4.4 Du modèle contextuel de document au modèle d'assemblage de messages**

Une fois le modèle contextuel de document finalisé, le modèle d'assemblage de messages peut être généré automatiquement.

Tous les modèles contextuels de documents partagent les mêmes composants et types de données de base. Ceux-ci sont définis dans le profil de marché de style européen (IEC 62325-351) et sont contextualisés et affinés dans tous les modèles contextuels de document (série IEC 62325-451-x) qui observent les règles décrites dans l'IEC 62325-450.

#### 4.5 Du modèle d'assemblage au schéma XML

L'étape de modélisation finale applique un ensemble normalisé de critères afin de générer un schéma XML uniforme à partir du modèle d'assemblage. Ce processus de transformation observe les règles définies dans l'IEC 62361-100.

### 5 Processus métier d'attribution de capacité de transport

#### 5.1 Contexte métier global

Les processus métier décrits dans la présente norme s'appliquent aux ventes aux enchères de la capacité de transport et au marché des droits de capacité de transport.

Aucune hypothèse n'est formulée quant au mode de réalisation de la vente aux enchères ni pour ce qui concerne la méthode d'attribution ou les modalités de paiement.

Les ventes aux enchères peuvent être réalisées pour les produits selon la fréquence suivante:

- pluriannuelle,
- annuelle,
- mensuelle,
- hebdomadaire,
- journalière,
- intrajournalière.

L'attribution peut être réalisée selon l'une des méthodes suivantes:

- basée sur le prix avec application d'un prorata (order by price with pro rata),
- principe du premier arrivé, premier servi (first come, first served),
- proportionnelle (pro rata),
- etc.

et les modalités de paiement peuvent prendre différentes formes:

- paiement du montant de l'offre (pay as bid),
- paiement du montant approuvé (pay as cleared),
- pas de modalités de paiement,
- etc.

Il existe deux types différents de ventes aux enchères de capacité de transport, les ventes aux enchères explicites ou implicites. Elles sont présentées dans le cas d'utilisation (*use case*) de la Figure 3.

Le cas d'utilisation "Établir une capacité offerte" est commun aux ventes aux enchères explicites et implicites et concerne la détermination et la publication de la capacité offerte qui peut être attribuée. La capacité de transport disponible est à convenir dès le début entre les gestionnaires de réseau. Une fois la capacité offerte convenue, elle est publiée avec les informations pertinentes qui définissent la vente aux enchères, c'est-à-dire la spécification de vente aux enchères de la capacité de transport.

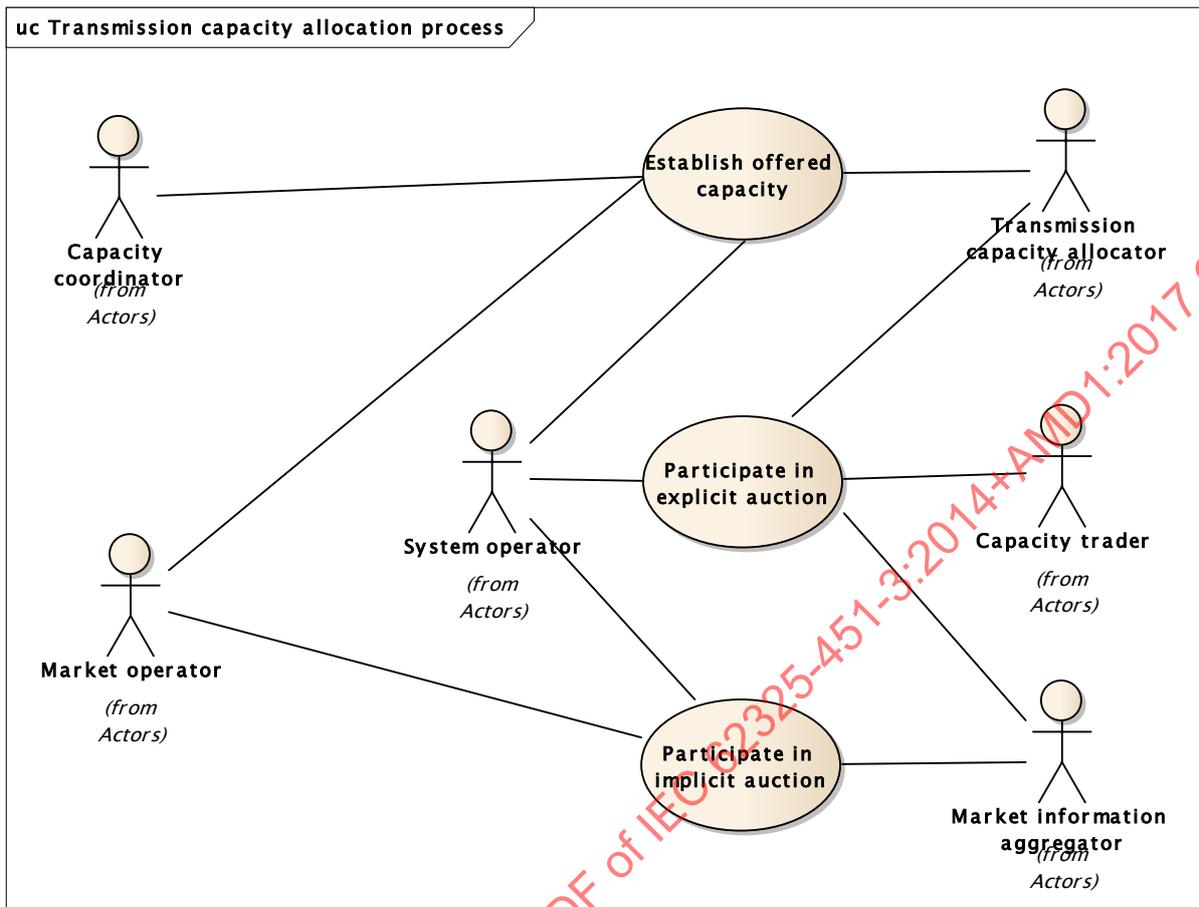
Le cas d'utilisation "Participer à des ventes aux enchères explicites" implique les étapes suivantes:

- La première étape concerne l'activité de soumission et d'attribution proprement dite. Un sous cas d'utilisation de l'activité de soumission et d'attribution peut être l'éventuel

marché secondaire et la négociation des droits de la capacité attribuée entre les négociants de capacité ou les négociants de capacité et les responsables d'échange d'interconnexion. Les principaux acteurs sont le négociant de capacité et l'allocateur de capacité de transport.

- La deuxième étape concerne la nomination, l'activité de déclaration des droits de capacité à long terme, journalière et intrajournalière à utiliser. Ceci implique le responsable d'échange d'interconnexion, le validateur de nomination et le gestionnaire de réseau. Le validateur de nomination s'assure que toutes les nominations présentées sont cohérentes. Pour réaliser ce processus de nomination, il est nécessaire d'utiliser les documents électroniques définis dans l'IEC 62325-451-2.
- La troisième et dernière étape concerne la validation et la confirmation finale de toutes les nominations. Cette étape comprend la mise en correspondance transfrontalière. Les principaux acteurs sont le validateur de nomination et les gestionnaires de réseau.

Le cas d'utilisation "Participer aux ventes à des enchères implicites" implique la publication des valeurs des échanges transfrontaliers avec ou sans prix.



IEC 2136/14

**Légende**

Anglais	Français
Transmission capacity allocation process	Processus d'attribution de la capacité de transport
Capacity coordinator	Coordinateur de capacité
Establish offered capacity	Établir une capacité offerte
Transmission capacity allocator	Allocateur d'attribution de capacité
From actors	À partir des acteurs
Participate in explicit auction	Participer à une vente aux enchères explicite
System operator	Gestionnaire de réseau
Capacity trader	Négociant de capacité
Market operator	Opérateur du marché
Participate in implicit auction	Participer à une vente aux enchères implicite
Market information aggregator	Agrégateur des informations du marché

**Figure 3 – Cas d'utilisation du processus d'attribution de la capacité de transport**

**5.2 Processus Établir une capacité offerte**

Le processus nécessaire pour constituer une spécification de vente aux enchères est déclenché par les gestionnaires de réseau qui fournissent au coordinateur de capacité toutes les informations nécessaires au calcul de la capacité offerte.

Cette capacité peut être complétée par des droits de capacité supplémentaires soumis par les négociants de capacité pour revente, pendant la période considérée, comme la revente des droits de capacité annuels à une vente aux enchères mensuelle, etc.

Cette capacité peut également être complétée par des droits de capacité supplémentaires non utilisés pour la nomination, c'est-à-dire les droits de capacité annuels, mensuels, hebdomadaires qui n'ont pas été utilisés pour la nomination journalière, et qui sont donc cédés (sous la forme "use it or lose it" – utilise la ou perd la ou "use it or get paid for it" – utilise la ou paye pour elle ou "use it or sale it" – utilise la ou vend la, etc.) à la vente aux enchères journalières.

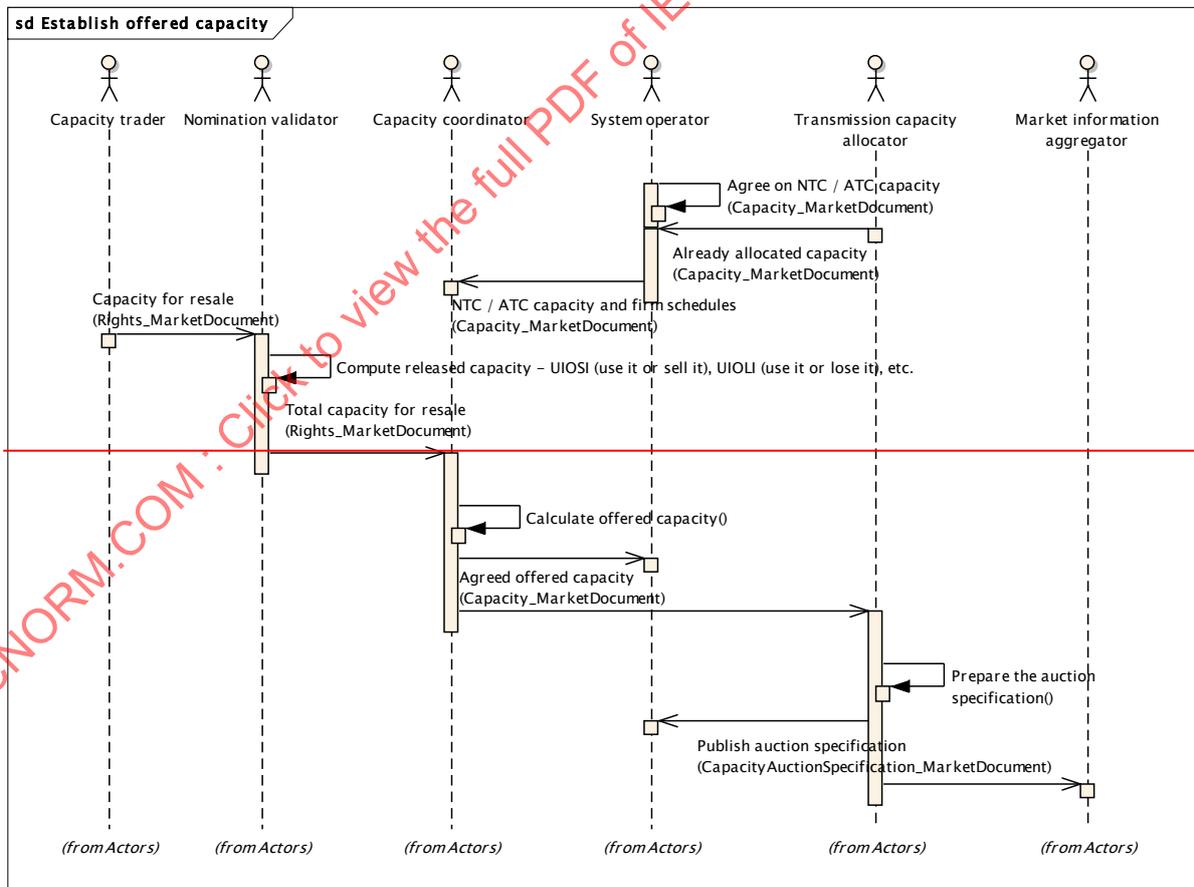
Le coordinateur de capacité calcule ensuite la capacité offerte initiale avec les informations reçues.

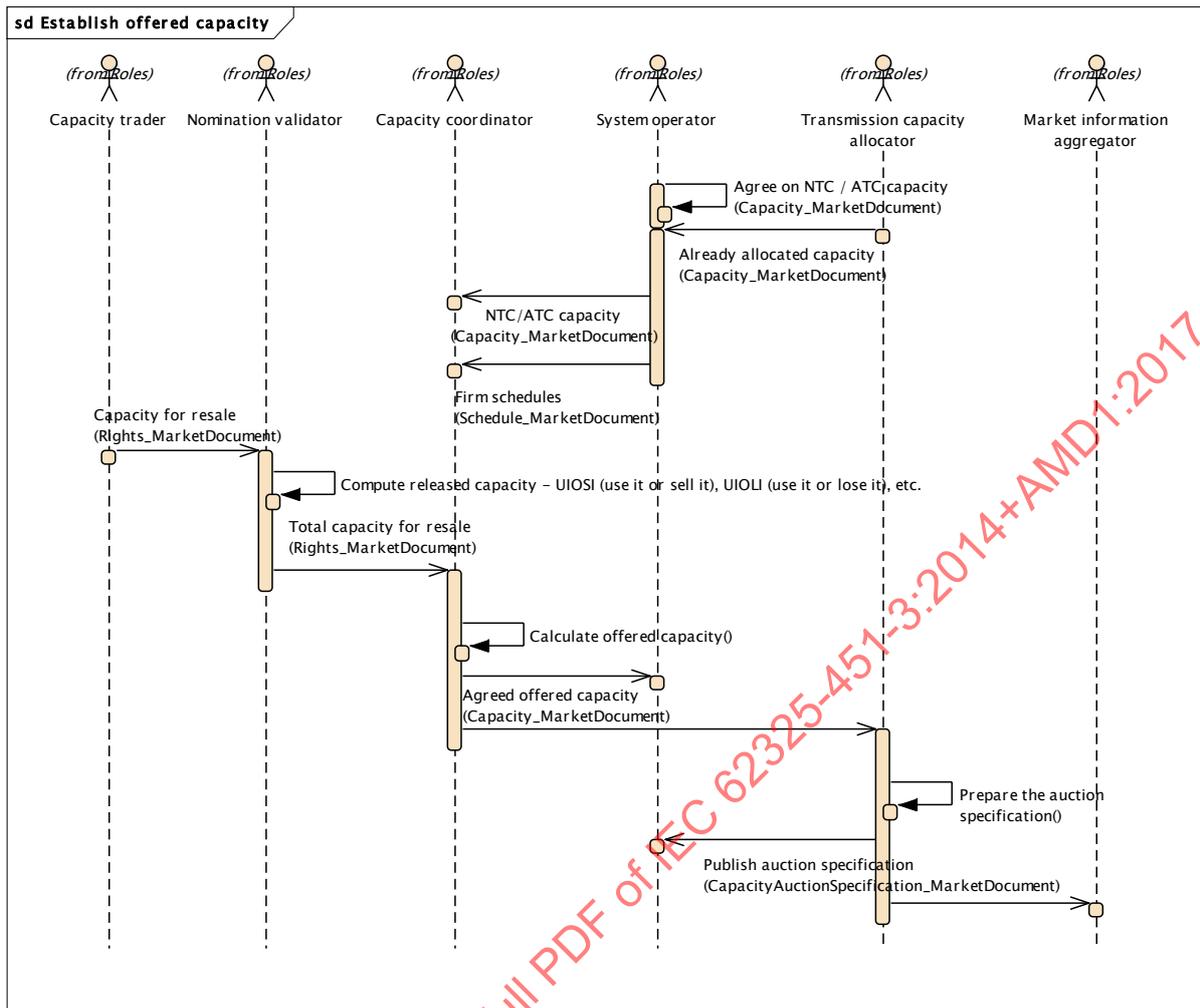
La capacité offerte est ensuite transmise à l'allocateur de capacité de transport pour lui permettre d'établir la spécification de vente aux enchères pendant la période considérée.

En dernier lieu, la spécification de vente aux enchères est publiée. Une première version du document AuctionSpecification\_MarketDocument peut être publiée avec seulement l'identification de la vente aux enchères et sa date planifiée. Une nouvelle version du document doit ensuite être émise qui comporte toutes les informations pertinentes. Il est à noter que ce document peut être mis à jour pour informer le participant au marché que la vente aux enchères est annulée.

Ce processus est décrit à la Figure 4; les documents échangés dans le cadre de ce processus sont indiqués.

L'établissement de la capacité offerte est commun au processus de ventes aux enchères explicites et implicites.





IEC

**Légende**

Anglais	Français
From roles	À partir des rôles
Establish offered capacity	Établir une capacité offerte
Capacity trader	Négociant de capacité
Nomination validator	Valdateur de nomination
Capacity coordinator	Coordinateur de capacité
System operator	Gestionnaire de réseau
Transmission capacity allocator	Allocateur d'attribution de capacité
Market information aggregator	Agrégateur des informations du marché
Agree on NTC/ATC capacity	Convenir de la capacité NTC/ATC
Already allocated capacity	Capacité déjà attribuée
Capacity for resale	Capacité pour revente
NTC/ATC capacity and firm schedules	Capacités NTC/ATC et programmes fixes
Firm schedules	Programmes fixes
Compute released capacity – UIOSI (use it or sell it), UIOLU (“use it or lose it)	Calculer la capacité cédée – UIOSI (use it or sell it), UIOLU (“use it or lose it)
Total capacity for resale	Capacité totale pour revente
Calculate offered capacity	Calculer la capacité offerte
Agreed offered capacity	Capacité offerte convenue

Anglais	Français
Prepare the auction specification	Préparer la spécification de vente aux enchères
Publish auction specification	Publier la spécification de vente aux enchères
<del>From actors</del>	<del>À partir des acteurs</del>

Figure 4 – Présentation du processus Établir une capacité offerte

### 5.3 Processus de vente aux enchères explicite

#### 5.3.1 Présentation du processus de vente aux enchères explicite

Le processus de vente aux enchères explicite se compose d'un certain nombre d'étapes décrites ci-après:

- La Figure 5 décrit la soumission des offres, le processus d'attribution des droits de capacité et la publication des droits de la capacité attribuée.
- La Figure 6 décrit la revente des droits de capacité et le processus de restriction de capacité pour des raisons de sécurité.
- La Figure 7 décrit la nomination des droits de capacité.

#### 5.3.2 Offre et attribution de capacité

Les négociants de capacité soumettent des offres pour les droits de transport à une frontière à l'allocateur de capacité de transport pendant la période de soumission.

Pendant une fenêtre de validation prédéfinie, l'allocateur de capacité de transport vérifie l'exactitude de toutes les offres pour la vente aux enchères considérée.

Après la phase de soumission, des droits de transport sont attribués aux offres considérées par l'allocateur de capacité de transport conformément aux règles de vente aux enchères publiées.

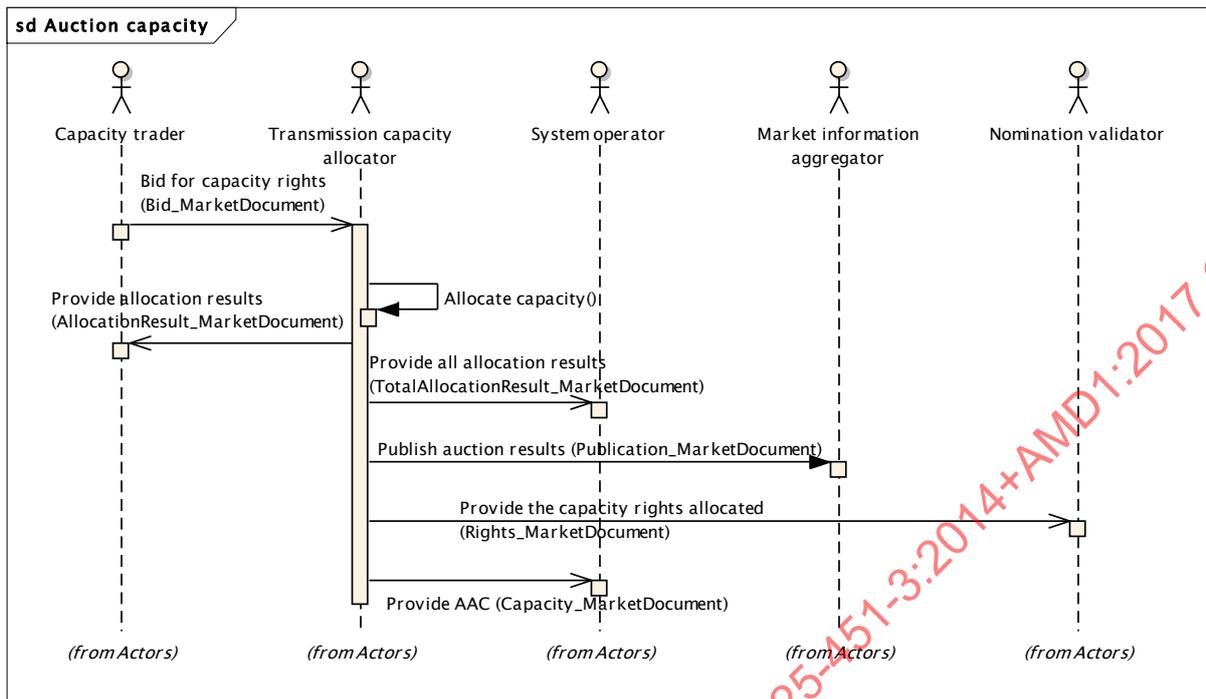
#### 5.3.3 Publication des résultats d'une vente aux enchères

A l'étape finale du processus d'attribution de capacité, l'allocateur de capacité de transport publie les résultats de la vente aux enchères comprenant ceux de toutes les offres et reventes.

Les gestionnaires de réseau impliqués sont informés de la capacité attribuée et revendue constituant le résultat de la vente aux enchères.

Chaque négociant de capacité est informé du résultat de son ou ses offres et reventes après la période de soumission conformément aux règles de vente aux enchères.

Les résultats peuvent être retransmis aux agrégateurs des informations du marché pour publication générale.



IEC 2138/14

**Légende**

Anglais	Français
auction capacity	Vente aux enchères de capacité
Capacity trader	Négociant de capacité
Transmission capacity allocator	Allocateur d'attribution de capacité
System operator	Gestionnaire de réseau
Market information aggregator	Agrégateur des informations du marché
Nomination validator	Valideur de nomination
Bid for capacity rights	Offre pour droits de capacité
Provide allocation results	Fournir les résultats d'attribution
Allocate capacity	Attribution de capacité
Provide all allocation results	Fournir tous les résultats d'attribution
Publish auction results	Publication des résultats de la vente aux enchères
Provide the capacity rights allocated	Fournir les droits de la capacité attribuée
Provide AAC	Fournir l'AAC
From actors	À partir des acteurs

**Figure 5 – Vente aux enchères de capacité**

**5.3.4 Échange et négociation de capacité attribuée**

Au cours de ce processus, les négociants de capacité échange les droits de capacité de transport entre eux et à l'issue de l'échange, ils informent l'allocateur de capacité de transport du transfert des droits.

Il s'agit d'un marché "Over The Counter (OTC)" (de gré à gré), c'est-à-dire qu'il n'existe aucune règle spécifique pour l'échange et que seules les règles convenues entre les parties impliquées dans l'échange s'appliquent. Ce marché est également appelé "marché secondaire".

L'allocateur de capacité de transport approuve le transfert en transmettant un document Rights\_MarketDocument comportant les droits de transport approuvés et transférés entre les deux parties. Ce document est transmis à l'auteur du transfert et aux destinataires du transfert.

### **5.3.5 Revente de droits de capacité**

Le négociant de capacité peut, en fonction des règles locales, céder ses droits de capacité de transport précédemment acquis avant une vente aux enchères. Si la capacité est cédée à l'allocateur de capacité de transport suffisamment à l'avance, le négociant peut bénéficier de sa revente lors de la vente aux enchères à venir.

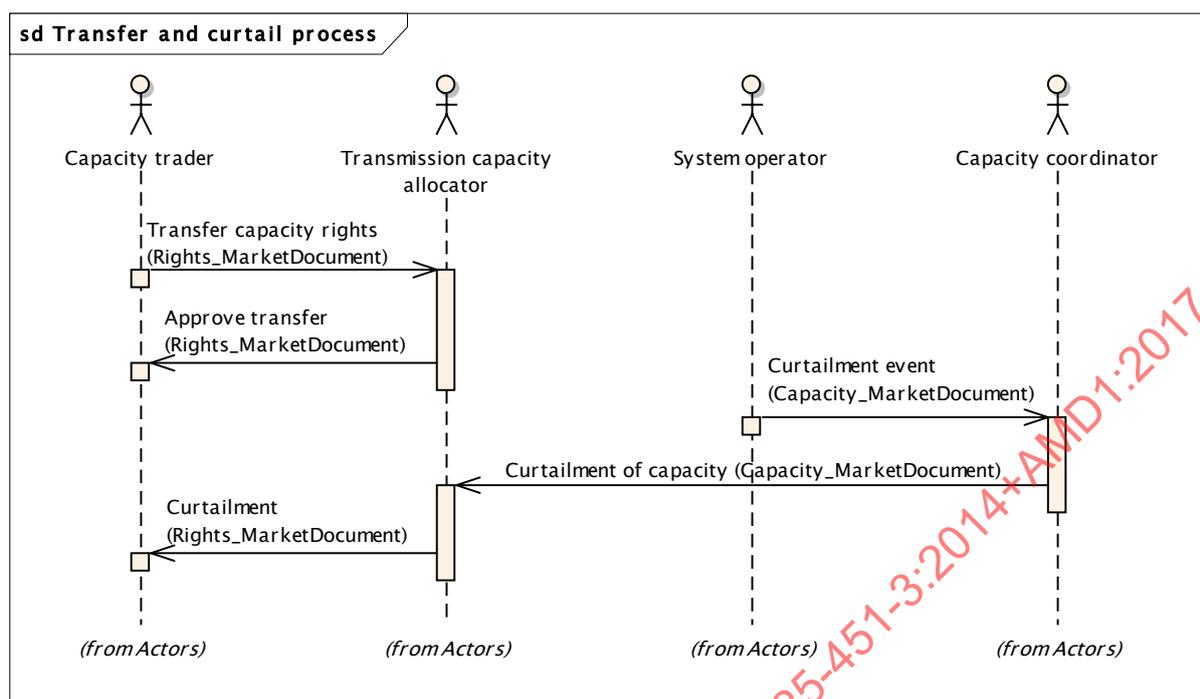
Dans un modèle "use it or sell it" (UIOSI), le négociant de capacité bénéficie de la revente des droits de capacité lors d'une ultérieure vente aux enchères pour la partie des droits de capacité n'ayant pas été préalablement nommés.

Dans un modèle "use it or lose it" (UIOLI), la capacité non nommée est généralement perdue par le négociant de capacité.

### **5.3.6 Possibilité de restriction de capacité attribuée**

Si, pour des raisons de sécurité du réseau, le gestionnaire de réseau juge nécessaire de limiter les droits de capacité de transport d'une précédente vente aux enchères, le gestionnaire de réseau informe l'allocateur de capacité de transport correspondant de la restriction qu'il est tenu d'imposer. L'allocateur de capacité de transport informe les négociants de capacité des nouveaux droits de capacité de transport limités.

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**Légende**

Anglais	Français
Transfer and curtail process	Processus de transfert et de restriction
Capacity trader	Négociant de capacité
Transmission capacity allocator	Allocateur d'attribution de capacité
System operator	Gestionnaire de réseau
Capacity coordinator	Coordinateur de capacité
Transfer capacity rights	Transfert des droits de capacité
Approve transfer	Approbation du transfert
Curtailment event	Événement de restriction
Curtailment of capacity	Restriction de capacité
Curtailment	Restriction
From actors	À partir des acteurs

**Figure 6 – Transfert et restriction**

**5.3.7 Désigner le responsable d'échange d'interconnexion pour la désignation**

Le négociant de capacité indique à l'allocateur de capacité de transport le responsable d'échange d'interconnexion qui effectuera la nomination des droits de capacité de transport en son nom.

La désignation du responsable d'échange d'interconnexion qui désignera les droits de capacité est transmise pour l'attribution de la capacité de transport avec un document Rights\_MarketDocument.

**5.3.8 Nommer l'utilisation de capacité pour une frontière**

Le validateur de nomination reçoit les attributions finales (droits de capacité) de l'allocateur de capacité de transport, qui identifie les responsables d'échange d'interconnexion autorisés

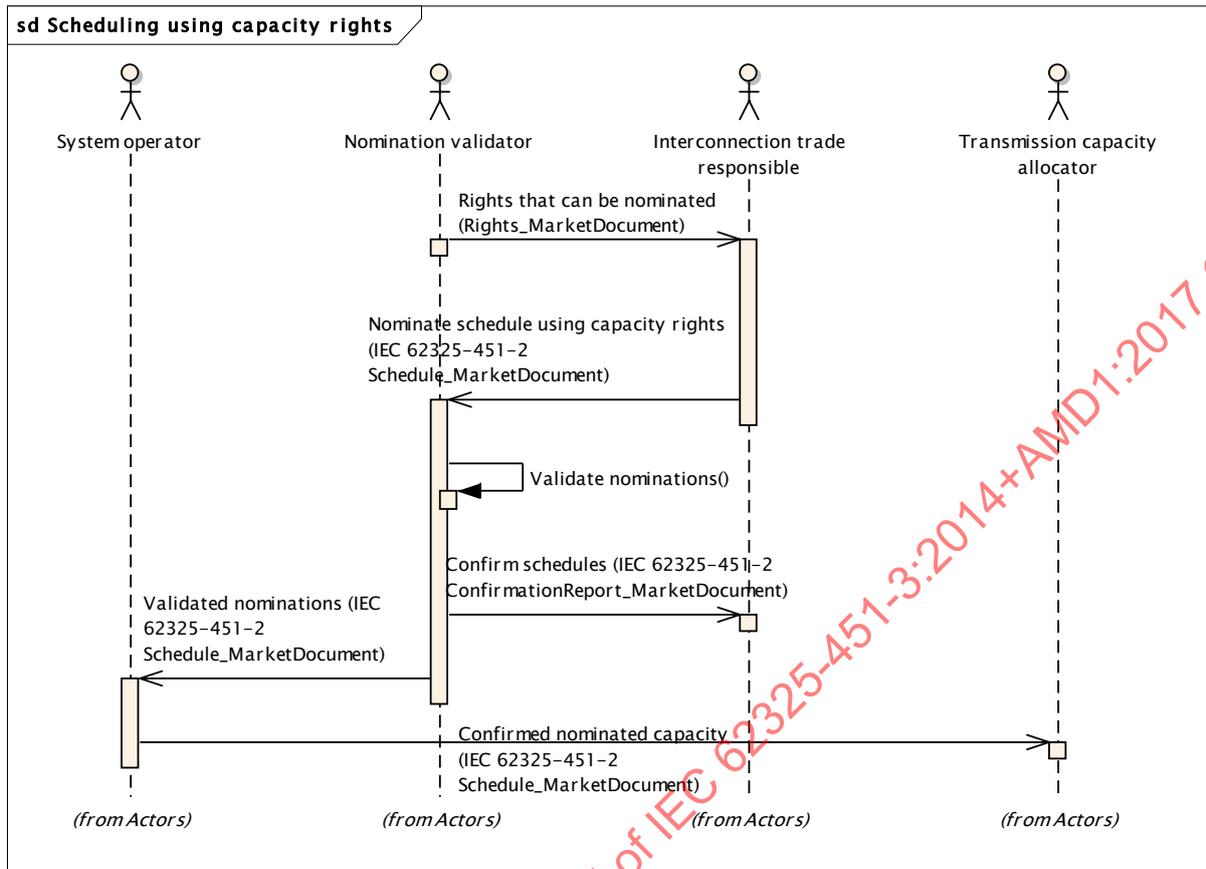
à nommer la capacité et transmet la capacité de nomination autorisée aux responsables d'échange d'interconnexion concernés.

### **5.3.9 Validation des nominations**

Le processus de validation des nominations peut être réalisé d'un côté ou des deux côtés de la frontière.

Le validateur de nomination doit vérifier que les nominations provenant des responsables d'échange d'interconnexion ne dépassent pas la quantité de capacité communiquée par l'allocateur de capacité de transport. Lorsque les nominations dépassent la quantité des droits de capacité, le validateur de nomination applique les règles locales du marché.

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**Légende**

Anglais	Français
Scheduling using capacity rights	Programmation utilisant les droits de capacité
System operator	Gestionnaire de réseau
Nomination validator	Valideur de nomination
Interconnection trade responsible	Responsable d'échange d'interconnexion
Transmission capacity allocator	Allocateur d'attribution de capacité
Rights that can be nominated	Droits pouvant être désignés
Nominate schedule using capacity rights	Nominer un programme utilisant les droits de capacité
Validate nomination	Valider de la désignation
Confirm schedules	Confirmer des programmes
Validated nomination	Nomination validée
Confirmed nominated capacity	Capacité désignée confirmée
From actors	À partir des acteurs

**Figure 7 – Nomination des droits de capacité**

**5.4 Processus de vente aux enchères implicite**

**5.4.1 Présentation du processus de vente aux enchères implicite**

La vente aux enchères implicite est caractérisée par le fait que le responsable d'échange achète la capacité de transport et l'énergie en même temps.

Ainsi, pour ce processus métier, il n'y a pas de distinction à faire entre le rôle du négociant de capacité et celui du responsable d'échange d'interconnexion.

Les règles régissant le mécanisme de vente aux enchères déterminent le prix de l'énergie sur le marché pour la zone d'équilibre du marché après application des contraintes techniques du gestionnaire de réseau.

La Figure 8 fournit une présentation du processus de vente aux enchères implicite et la liste des documents échangés.

#### **5.4.2 Soumission d'offres pour échange local**

Les responsables d'échange soumettent à leur opérateur du marché leur offre (vente ou achat) d'énergie. Le document à utiliser pour effectuer cet échange n'est pas développé plus explicitement dans le présent document.

#### **5.4.3 Vente aux enchères implicite**

L'opérateur du marché définit, sur la base des règles du marché convenues, le "point d'équilibre du marché", c'est-à-dire les flux transfrontaliers, les prix de l'énergie et les échanges mis en correspondance.

#### **5.4.4 Publication des résultats des échanges**

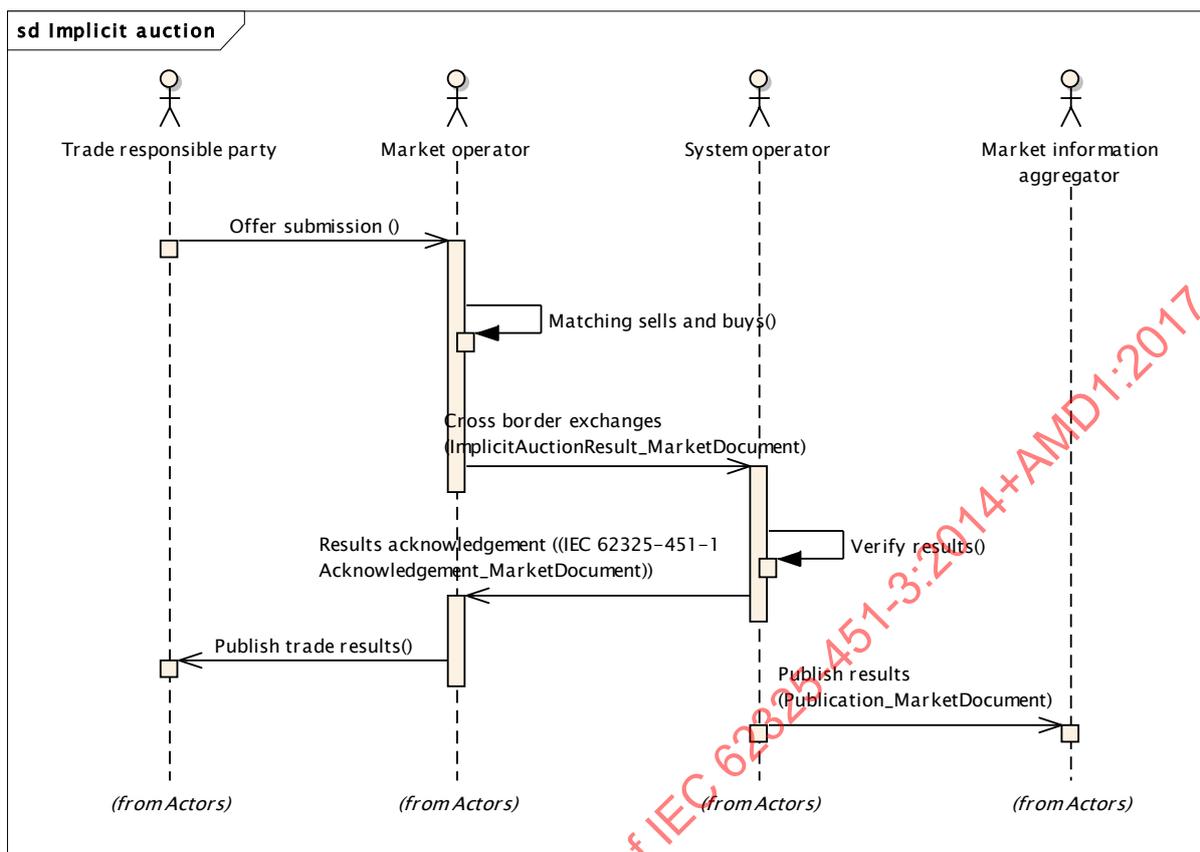
L'opérateur du marché fournit aux gestionnaires de réseau impliqués les résultats de la mise en correspondance en utilisant le document ImplicitAuctionResult\_MarketDocument.

Les gestionnaires de réseau vérifient la cohérence des résultats avec les contraintes fournies lors de la définition de la capacité offerte.

Le résultat est ensuite fourni à l'agrégateur des informations du marché en utilisant le document Publication\_MarketDocument.

#### **5.4.5 Publication des résultats des négociations**

L'opérateur du marché fournit à chaque participant au marché les résultats du marché. Le document à utiliser pour effectuer cet échange n'est pas développé plus explicitement dans le présent document.



**Légende**

Anglais	Français
Implicit auction	Vente aux enchères implicite
Trade responsible party	Responsable d'échange
Market operator	Opérateur du marché
System operator	Gestionnaire de réseau
Market information aggregator	Agrégateur des informations du marché
Offer submission	Soumission d'offre
Matching sells and buys	Mise en correspondance des ventes et des achats
Cross border exchanges	Échanges transfrontaliers
Results acknowledgement	Accusé de réception des résultats
Verify results	Vérification des résultats
publish trade results	Publication des résultats d'échange
Publish results	Publication des résultats
From actors	À partir des acteurs

**Figure 8 – Présentation de vente aux enchères implicite**

**5.5 Règles métier applicables au processus d'attribution de la capacité de transport**

**5.5.1 Règles générales**

Les règles génériques définies dans l'IEC 62325-351 s'appliquent à tous les documents décrits dans la présente partie. L'IEC 62325-351 décrit plus particulièrement le concept de type de courbe à utiliser pour définir le modèle d'une vente aux enchères.

Pour chaque échange de données électroniques défini dans ce document, un accusé de réception d'application est exigé comme défini dans l'IEC 62325-451-1, sauf pour le document transmis au négociant de capacité ou au responsable d'échange d'interconnexion en tant que receiver\_MarketParticipant.marketRole.type.

Lorsqu'un document est reçu, il doit être vérifié au niveau de l'application pour s'assurer qu'il ne contient aucune erreur susceptible d'empêcher son traitement normal. A l'issue de cette vérification, un document d'accusé de réception, tel que défini dans l'IEC 62325-451-1, doit être généré qui accepte le document considéré dans sa totalité ou le rejette.

Dans le cas d'une vente aux enchères explicite, la nomination des droits de capacité doit être réalisée en utilisant le document de programme, comme décrit dans l'IEC 62325-451-2.

### 5.5.2 Règles régissant le Bid\_MarketDocument

Les règles suivantes s'appliquent au Bid\_MarketDocument:

- Un document d'offre comprend un ensemble d'offres (une offre est représentée par une série chronologique).
- L'expéditeur peut soumettre plusieurs offres pendant la même période de soumission et pour la même partie concernée (négociant de capacité).
- Pour annuler un ensemble complet d'offres, le document d'offre est soumis de nouveau avec un nouveau numéro de version mais sans série chronologique.
- Il ne peut y avoir qu'un seul expéditeur pour une partie concernée donnée.
- Un document d'offre ne peut concerner qu'une seule partie concernée.
- Un document d'offre reçu avec la même identification et même version de document qu'un document d'offre existant doit être refusé.
- La dernière version d'un document d'offre avec la même identification de document doit constituer la dernière offre valide pour le document considéré.
- Chaque Bid\_TimeSeries dans un document est considérée comme une offre dans le cadre de cette spécification. Le mRID d'offre que le soumissionnaire attribue est l'identification unique de l'offre pour une identification de vente aux enchères donnée (auction.mRID).
- Le Tableau 1 indique la dépendance relative aux indicateurs d'offre:

**Tableau 1 – Dépendance des indicateurs d'offre**

	Cas par défaut	Autres cas			
		NON	NON	OUI	OUI
Divisible (valeurs possibles)	OUI	NON	NON	OUI	OUI
LinkedBidIdentification (attribut utilisé ou non)	Non utilisé	Utilisé	Non utilisé	Non utilisé	Non applicable
BlockedBid (valeurs possibles)	NON	OUI	OUI	NON	Non applicable

NOTE "Non utilisé" signifie que l'attribut ne peut pas être utilisé. "Non applicable" signifie que les attributs considérés ne s'appliquent pas au cas de dépendance.

Par exemple: un LinkedBidIdentification peut ne comporter qu'une identification où Divisible est "NON" et un BlockedBid est "OUI". Dans tous les autres cas, il peut ne comporter aucune identification.

### 5.5.3 Règles régissant le Capacity\_MarketDocument

Les dépendances sont énumérées ci-après:

- Le type de document "Agreed capacity» (Capacité convenue) est à utiliser avec le type de processus "Capacity determination" (Détermination de capacité) et les types de métier

“Offered capacity” (Capacité offerte), “NTC” ou “ATC”, la “Reason” (Raison) peut être “Curtaiment”(restriction);

- Le type de document “Proposed capacity” (Capacité proposée) est à utiliser avec le type de processus “Capacity determination” (Détermination de capacité) et les types de métier “Offered capacity” (Capacité offerte), “NTC” ou “ATC”, la “Reason” (Raison) peut être “Curtaiment” (restriction);
- Le type de document “Interconnection capacity” (Capacité d’interconnexion) est à utiliser avec le type de processus “Capacity determination” (Détermination de capacité) et les types de métier “AAC” ou “Released AAC” (AAC cédée);
- Le type de document “Interconnection capacity” (Capacité d’interconnexion) est à utiliser avec le type de processus “Capacity allocation” (Attribution de capacité) et le type de métier “General capacity information” (Information de capacité générale).

NOTE Le Business Type “General Capacity Information” est un type générique pour l’identification d’une série chronologique qui fournit la capacité totale disponible pour une frontière TSO.

#### 5.5.4 Règles régissant le AllocationResult\_MarketDocument

Les règles suivantes s’appliquent au AllocationResult\_MarketDocument:

- Il n’existe qu’une seule identification de contrat attribuée par l’allocateur de capacité de transport par identification de vente aux enchères, période de soumission et partie concernée.
- Il n’existe qu’un seul document de résultat de l’attribution par expéditeur et partie concernée pour une identification de vente aux enchères donnée et un intervalle de temps de soumission donné.
- Une seule des trois possibilités suivantes est autorisée dans un document de résultat de l’attribution donné:
  - a) Lorsque le document de résultat de l’attribution comporte toutes les offres et reventes validées pour traitement dans le cadre d’une vente aux enchères dans la dernière version des documents d’offres et de reventes reçus, ceci doit comprendre les offres et les reventes qui n’ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n’ont pas été réalisées doivent être égales à zéro.
  - b) Il est également possible que le document de résultat de l’attribution ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.
  - c) Une troisième possibilité consiste à ne fournir que l’agrégation des offres ayant des droits de transport de capacité et l’agrégation des droits de transport vendus. Dans ce cas, l’identification d’offre ne doit pas être spécifiée.
- Le résultat de l’offre peut refléter l’offre initiale proprement dite auquel cas le curveType ne doit pas être utilisé, ou un profil peut être fourni comme résultat pour lequel le curveType doit être utilisé.
- Le choix de refléter ou non les offres initiales doit être cohérent dans l’ensemble du document de résultat.

#### 5.5.5 Règles régissant le TotalAllocationResult\_MarketDocument

Les règles suivantes s’appliquent au TotalAllocationResult\_MarketDocument:

- Il n’existe qu’une seule identification de contrat attribuée par l’allocateur de capacité de transport par identification de vente aux enchères, période de soumission et soumissionnaire.
- Une seule des trois possibilités suivantes est autorisée dans un document de résultat de l’attribution totale donné:
  - a) Lorsque le document de résultat de l’attribution totale comporte toutes les offres et reventes validées pour traitement dans le cadre d’une vente aux enchères dans la dernière version des documents d’offres et de reventes reçus, ceci doit comprendre les

offres et les reventes qui n'ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n'ont pas été réalisées doivent être égales à zéro.

- b) Il est également possible que le document de résultat de l'attribution totale ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.
  - c) Une troisième possibilité consiste à ne fournir que l'agrégation des offres ayant des droits de transport de capacité et l'agrégation des droits de transport vendus. Dans ce cas, l'identification d'offre ne doit pas être spécifiée.
- Le résultat de l'offre peut refléter l'offre initiale proprement dite auquel cas le curveType ne doit pas être utilisé, ou un profil peut être fourni comme résultat pour lequel le curveType doit être utilisé.
  - Le choix de refléter ou non les offres initiales doit être cohérent dans l'ensemble du document de résultat.

### 5.5.6 Règles régissant le Rights\_MarketDocument

Les règles suivantes s'appliquent au Rights\_MarketDocument:

- Un Rights\_MarketDocument est utilisé dans divers contextes métier. En général, il identifie les droits de transport de capacité dont un négociant de capacité ou un responsable d'échange d'interconnexion dispose dans son portefeuille pour une frontière donnée.
- À chaque modification des droits de transport de capacité d'une partie pendant une période donnée, le négociant de capacité peut informer la partie concernée de son nouveau portefeuille en lui transmettant une nouvelle version du document de droits.
- Un document de droits peut également être utilisé pour fournir le portefeuille complet pour une frontière donnée.
- De plus, un document de droits peut être utilisé pour fournir des informations sur la compensation des droits telles que la tarification UIOSI ou la compensation de restriction des droits.
- Il ne peut y avoir qu'un seul expéditeur pour une partie concernée donnée.
- Un Rights\_MarketDocument ne peut concerner qu'une seule partie concernée.
- Un Rights\_MarketDocument reçu avec la même identification et la même version de document qu'un Rights\_MarketDocument existant doit être refusé.
- Le Tableau 2 indique la dépendance relative aux indicateurs de Rights\_MarketDocument:

**Tableau 2 – Tableau de dépendance de Rights\_MarketDocument**

Type de document	Type de métier	Détenteur des droits	Destinataire du transfert	Identification de contrat précédente	Identification de vente aux enchères
Capacité pour revente	AAC libérée	Obligatoire			Obligatoire
	Droits de capacité non nominés	Obligatoire			
Transfert approuvé	Notification de transfert de capacité	Obligatoire			
Transfert d'AAC	Notification de transfert de capacité Désignation du responsable d'échange d'interconnexion	Obligatoire	Obligatoire	Obligatoire	
Portefeuille de droits de transport	Droits de capacité	Obligatoire			
Attributions	AAC autorisée	Obligatoire			
	AAC autorisée minimum	Obligatoire			
	AAC autorisée maximum	Obligatoire			
Droits de compensation	Tarifification «Use it or sell it» (UIOSI) Compensation de revente suite à une annulation Restriction de droits Compensation «Use it or sell it» (UIOSI) Annulation de vente aux enchères	Obligatoire			

Lorsqu'on utilise le type de document "Allocations" (Attributions), le type de métier "Authorised AAC" (AAC autorisée) est généralement suffisant pour fournir la quantité maximum d'AAC disponible pour la nomination. Cependant, si le type de métier "Minimum authorized AAC" (AAC autorisée minimum) est utilisé, le type de métier "Maximum authorised AAC" (AAC autorisée maximum) doit alors être utilisé en lieu et place du type de métier "Authorised AAC" (AAC autorisée).

## 6 Modèles contextuels et modèles d'assemblage

### 6.1 Modèle contextuel d'offre

#### 6.1.1 Présentation du modèle

La Figure 9 présente le modèle.

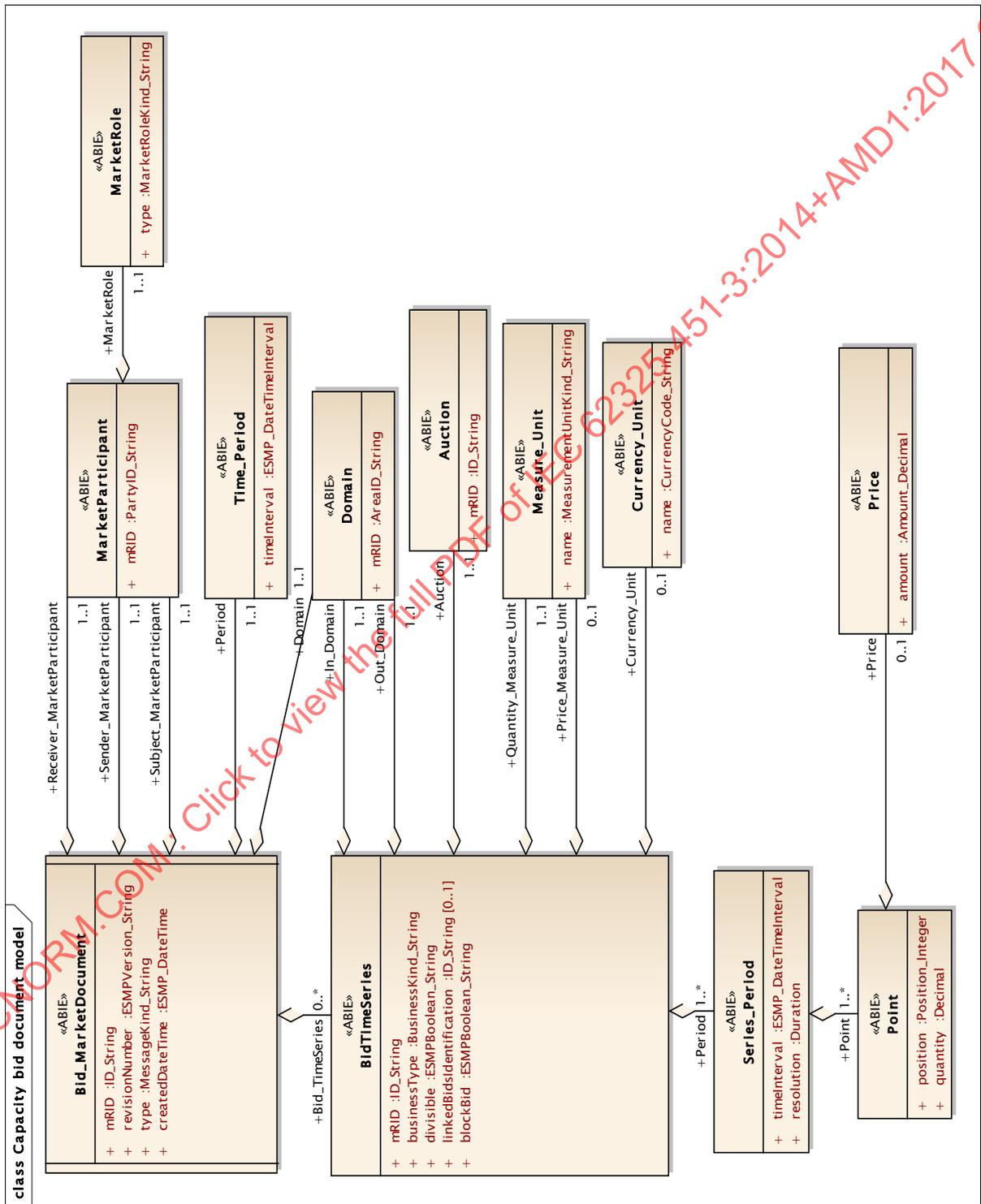


Figure 9 – Modèle contextuel d'offre

### 6.1.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 3 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 3 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Bid_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.1.3 Description détaillée du modèle contextuel d'offre

#### 6.1.3.1 Classe racine Bid\_MarketDocument

Un document d'offre comprend un ensemble d'offres (une offre est représentée par une série chronologique). L'expéditeur peut soumettre plusieurs offres pendant la même période de soumission et pour la même partie concernée.

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 4 montre tous les attributs du Bid\_MarketDocument.

**Tableau 4 – Attributs du Modèle contextuel d'offre::Bid\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 5 montre toutes les extrémités d'association de Bid\_MarketDocument avec d'autres classes.

**Tableau 5 – Extrémités d’association du Modèle contextuel d’offre::Bid\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	La timeseries (série chronologique) comprend les offres soumises dans la vente aux enchères Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document d’offre, c’est-à-dire la frontière pour laquelle la vente aux enchères est réalisée. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Subject_MarketParticipant	MarketParticipant	Partie pour laquelle l’offre est soumise. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.1.3.2 Auction

Identification d’une spécification formelle d’un produit d’énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 6 montre tous les attributs de Auction.

**Tableau 6 – Attributs du Modèle contextuel d’offre::Auction**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.1.3.3 Bid\_TimeSeries

Spécification formelle de caractéristiques spécifiques relatives à une offre.

IsBasedOn: ESMPClasses::BidTimeSeries

Le Tableau 7 montre tous les attributs de BidTimeSeries.

**Tableau 7 – Attributs du Modèle contextuel d'offre::BidTimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	blockBid	ESMPBoolean_String	Indique que les valeurs de la période sont considérées comme un ensemble. Elles ne peuvent être ni changées, ni subdivisées.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[1..1]	divisible	ESMPBoolean_String	Indique si chaque élément de l'offre peut être accepté en partie ou non.
[0..1]	linkedBidsIdentification	ID_String	Identification unique d'offres liées entre elles.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 8 montre toutes les extrémités d'association de BidTimeSeries avec d'autres classes.

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**Tableau 8 – Extrémités d’association du Modèle contextuel d’offre::  
 BidTimeSeries avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Identification associant l’offre à un ensemble de spécifications créé par l’opérateur de vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l’énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l’énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé (MW, MWh, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

#### 6.1.3.4 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 9 montre tous les attributs de Currency\_Unit.

**Tableau 9 – Attributs du Modèle contextuel d’offre::Currency\_Unit**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d’une devise (ISO 4217).

### 6.1.3.5 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 10 montre tous les attributs de Domain.

**Tableau 10 – Attributs du Modèle contextuel d'offre::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	AreaID_String	Identification unique du domaine.

### 6.1.3.6 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 11 montre tous les attributs de MarketParticipant.

**Tableau 11 – Attributs du Modèle contextuel d'offre::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 12 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 12 – Extrémités d'association du Modèle contextuel d'offre::  
MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.1.3.7 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 13 montre tous les attributs de MarketRole.

**Tableau 13 – Attributs du Modèle contextuel d’offre::MarketRole**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.1.3.8 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d’autres grandeurs similaires afin d’exprimer leur magnitude par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 14 montre tous les attributs de Measure\_Unit.

**Tableau 14 – Attributs du Modèle contextuel d’offre::Measure\_Unit**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d’une unité de mesure (Recommandation 20 de la CEE-ONU).

### 6.1.3.9 Point

Grandeur objet de l’offre pendant l’intervalle considéré.

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 15 montre tous les attributs de Point.

**Tableau 15 – Attributs du Modèle contextuel d’offre::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.

Le Tableau 16 montre toutes les extrémités d’association de Point avec d’autres classes.

**Tableau 16 – Extrémités d’association du Modèle contextuel d’offre:: Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Price	Price	Prix exprimé pour chaque unité de grandeur. Le montant est obligatoire dans le cas de ventes aux enchères de capacité et ne doit pas être fourni dans le cas d’attributions basées sur les règles selon les règles locales du marché (par exemple "premier arrivé, premier servi"). Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.1.3.10 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 17 montre tous les attributs de Price.

**Tableau 17 – Attributs du Modèle contextuel d'offre::Price**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

### 6.1.3.11 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 18 montre tous les attributs de Series\_Period.

**Tableau 18 – Attributs du Modèle contextuel d'offre::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 19 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 19 – Extrémités d'association du Modèle contextuel d'offre:: Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.1.3.12 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 20 montre tous les attributs de Time\_Period.

**Tableau 20 – Attributs du Modèle contextuel d'offre::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

## 6.2 Modèle d'assemblage d'offre

### 6.2.1 Présentation du modèle

La Figure 10 présente le modèle.

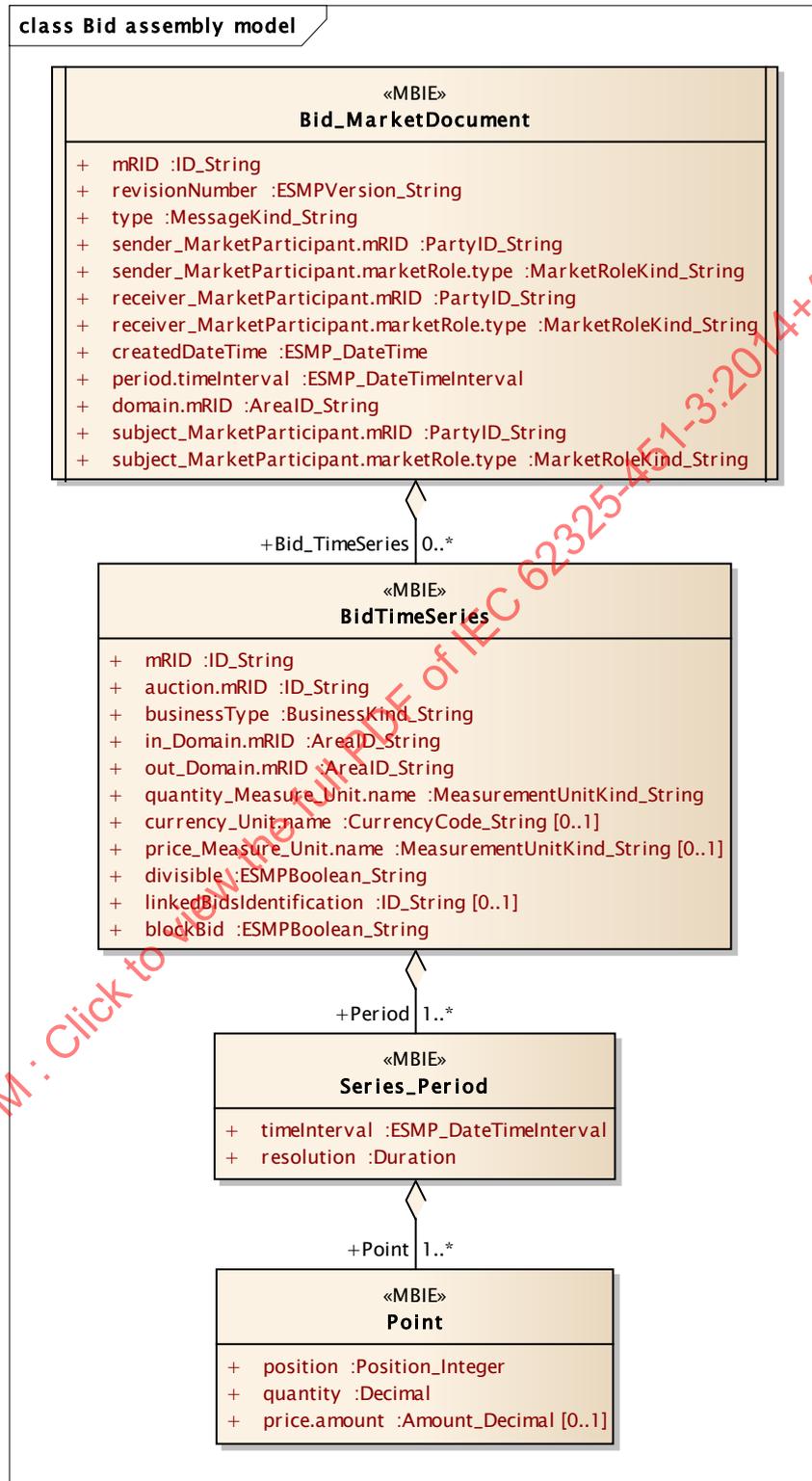


Figure 10 – Modèle d'assemblage d'offre

## 6.2.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 21 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 21 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Bid_MarketDocument	Modèle contextuel d'offre::Bid_MarketDocument	Document d'offre\Modèle contextuel d'offre
BidTimeSeries	Modèle contextuel d'offre::BidTimeSeries	Document d'offre \Modèle contextuel d'offre
Point	Modèle contextuel d'offre::Point	Document d'offre \Modèle contextuel d'offre
Series_Period	Modèle contextuel d'offre::Series_Period	Document d'offre \Modèle contextuel d'offre

## 6.2.3 Description détaillée du Modèle d'assemblage d'offre

### 6.2.3.1 Classe racine Bid\_MarketDocument

Un document d'offre comprend un ensemble d'offres (une offre est représentée par une série chronologique). L'expéditeur peut soumettre plusieurs offres pendant la même période de soumission et pour la même partie concernée.

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

IsBasedOn: Modèle contextuel d'offre::Bid\_MarketDocument

Le Tableau 22 montre tous les attributs de Bid\_MarketDocument.

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**Tableau 22 – Attributs du Modèle d'assemblage d'offre::Bid\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document d'offre, c'est-à-dire la frontière pour laquelle la vente aux enchères est réalisée.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Propriétaire du document.
[1..1]	subject_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Partie pour laquelle l'offre est soumise.
[1..1]	subject_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Partie pour laquelle l'offre est soumise.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 23 montre toutes les extrémités d'association de Bid\_MarketDocument avec d'autres classes.

**Tableau 23 – Extrémités d’association du Modèle d’assemblage d’offre::Bid\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	La timeseries (série chronologique) comprend les offres soumises dans la vente aux enchères Association Based On: Modèle contextuel d’offre::BidTimeSeries.Bid_TimeSeries[0..*] ----- Modèle contextuel d’offre::Bid_MarketDocument.[]

### 6.2.3.2 BidTimeSeries

Spécification formelle de caractéristiques spécifiques relatives à une offre.

IsBasedOn: Modèle contextuel d’offre::BidTimeSeries

Le Tableau 24 montre tous les attributs de BidTimeSeries.

**Tableau 24 – Attributs du Modèle d’assemblage d’offre::BidTimeSeries**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- identification associant l’offre à un ensemble de spécifications créé par l’opérateur de vente aux enchères.
[1..1]	blockBid	ESMPBoolean_String	Indique que les valeurs de la période sont considérées comme un ensemble. Elles ne peuvent être ni changées, ni subdivisées.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d’une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[1..1]	divisible	ESMPBoolean_String	Indique si chaque élément de l’offre peut être accepté en partie ou non.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l’énergie est à fournir.
[0..1]	linkedBidsIdentification	ID_String	Identification unique d’offres liées entre elles.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l’énergie provient.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d’une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé (MW, MWh, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d’une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW.

Le Tableau 25 montre toutes les extrémités d'association de BidTimeSeries avec d'autres classes.

**Tableau 25 – Extrémités d'association du Modèle d'assemblage d'offre:: BidTimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel d'offre::Series_Period.Period[1..*] ----- Modèle contextuel d'offre::BidTimeSeries.[]

### 6.2.3.3 Point

Grandeur objet de l'offre pendant l'intervalle considéré.

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel d'offre::Point

Le Tableau 26 montre tous les attributs de Point.

**Tableau 26 – Attributs du Modèle d'assemblage d'offre::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[0..1]	price.amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise. → Prix exprimé pour chaque unité de grandeur. Le montant est obligatoire dans le cas de ventes aux enchères de capacité et ne doit pas être fourni dans le cas d'attributions basées sur les règles selon les règles locales du marché (par exemple "premier arrivé, premier servi").
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.

### 6.2.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel d'offre::Series\_Period

Le Tableau 27 montre tous les attributs de Series\_Period.

**Tableau 27 – Attributs du Modèle d'assemblage d'offre::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 28 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 28 – Extrémités d’association du Modèle d’assemblage d’offre::  
Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel d’offre::Point.Point[1..*] ----- Modèle contextuel d’offre::Series_Period.[]

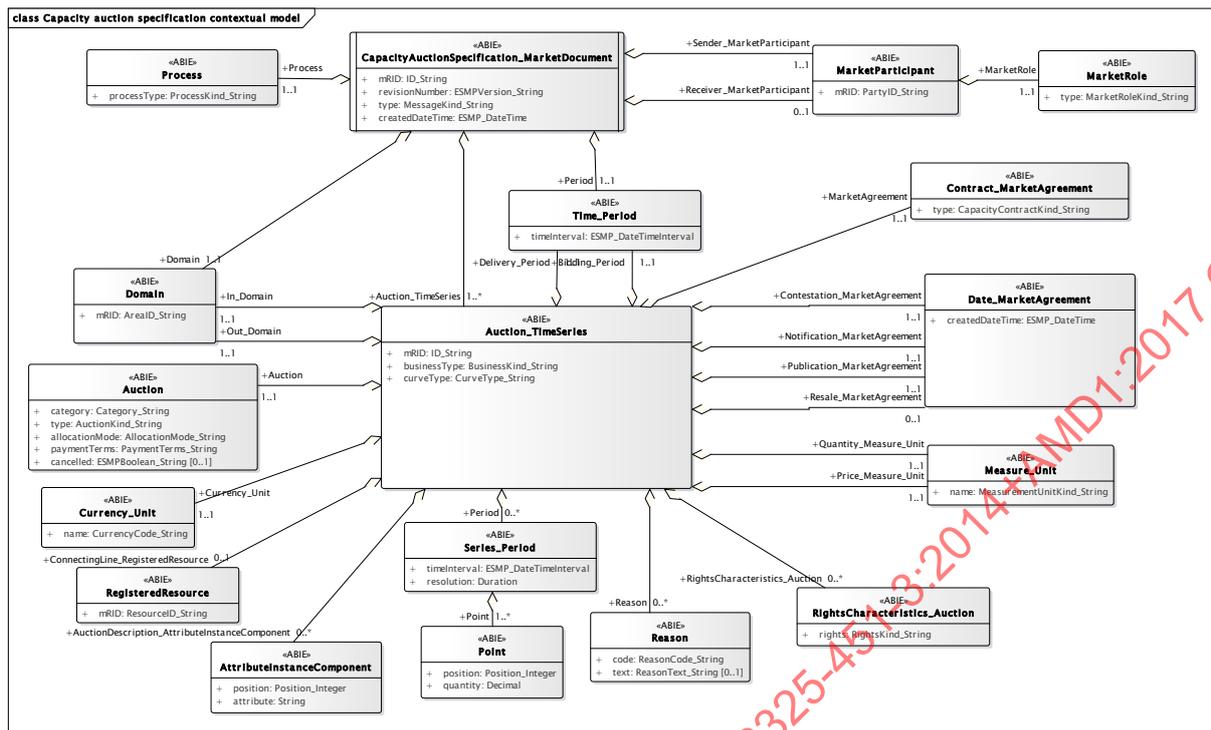
### 6.3 Modèle contextuel de spécification de vente aux enchères de capacité

#### 6.3.1 Présentation du modèle

La Figure 11 présente le modèle.

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Figure 11 – Modèle contextuel de spécification de vente aux enchères de capacité

### 6.3.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 29 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

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**Tableau 29 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Auction_TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
CapacityAuctionSpecification_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Date_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon
RightsCharacteristics_Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.3.3 Description détaillée du Modèle contextuel de spécification de vente aux enchères de capacité

#### 6.3.3.1 Classe racine CapacityAuctionSpecification\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le CapacityAuctionSpecification\_MarketDocument est émis par l'allocateur de capacité de transport à tout participant au marché désireux de recevoir ce type d'information.

Il fournit des informations sur la vente aux enchères qui sera réalisée, plus particulièrement l'identification unique de la vente aux enchères.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 30 montre tous les attributs de CapacityAuctionSpecification\_MarketDocument.

**Tableau 30 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::CapacityAuctionSpecification\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 31 montre toutes les extrémités d'association de CapacityAuctionSpecification\_MarketDocument avec d'autres classes.

**Tableau 31 – Extrémités d'association du Modèle contextuel de spécification de vente aux enchères de capacité::CapacityAuctionSpecification\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document CapacityAuctionSpecification, c'est-à-dire la frontière. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par les ventes aux enchères de capacité. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.3.3.2 AttributeInstanceComponent

Classe utilisée pour fournir des informations sur un attribut.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Le Tableau 32 montre tous les attributs de `AttributeInstanceComponent`.

**Tableau 32 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::AttributeInstanceComponent**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	attribute	String	Fournit le contenu textuel d'une ligne dans le cadre d'une description (description textuelle de la vente aux enchères et de ses règles de marché pour clarifier les informations qui ne sont pas définies de façon formelle). Identification d'un attribut pour un composant de requête donné.
[1..1]	position	Integer	La position fournit l'identification de chaque ligne dans le cadre de la description textuelle d'une vente aux enchères.. Valeur séquentielle représentant un numéro de séquence relatif.

### 6.3.3.3 Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: `ESMPClasses::Auction`

Le Tableau 33 montre tous les attributs de `Auction`.

**Tableau 33 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	allocationMode	AllocationMode_String	Identification de la méthode d'attribution dans une vente aux enchères.
[0..1]	cancelled	ESMPBoolean_String	Indicateur qui signifie que l'objet, auquel s'intéresse la <code>TimeSeries</code> , a été annulé.
[1..1]	category	Category_String	Catégorie de produit dans une vente aux enchères.
[1..1]	paymentTerms	PaymentTerms_String	Conditions régissant la détermination du prix offert.
[1..1]	type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...).

### 6.3.3.4 Auction\_TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

La `Auction_TimeSeries` fournit les informations nécessaires sur l'objet de la vente aux enchères en tant que capacité de transport.

IsBasedOn: `ESMPClasses::TimeSeries`

Le Tableau 34 montre tous les attributs de `Auction_TimeSeries`.

**Tableau 34 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Auction\_TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[1..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification attribuée par le bureau d'enchères qui identifie de manière unique la vente aux enchères. Identification unique de la série chronologique.

Le Tableau 35 montre toutes les extrémités d'association de Auction\_TimeSeries avec d'autres classes.

**Tableau 35 – Extrémités d'association du Modèle contextuel de spécification de vente aux enchères de capacité::Auction\_TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	Fournit la description textuelle de la vente aux enchères et de ses règles de marché pour clarifier les informations qui ne sont pas définies de façon formelle. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Bidding_Period	Time_Period	Date et heure de début et de fin de la période de soumission au cours de laquelle les négociants de capacité peuvent soumettre une offre à l'allocateur de capacité de transport. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	Identification d'une ressource associée à une TimeSeries. L'identification d'un ensemble de lignes qui relie deux zones; les droits de capacité de transport sont liés à cet ensemble de lignes. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Contestation_MarketAgreement	Date_MarketAgreement	La période pendant laquelle les contestations peuvent être déposées commence avec la date et l'heure de notification et se termine avec la date et l'heure de la contestation. En l'absence de toute possibilité de contestation, les dates et heures doivent être les mêmes. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]

mult.	Rôle	Nom de type de classe	Description
[1..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Delivery_Period	Time_Period	Date et heure de début et de fin de la période pendant laquelle la capacité est à utiliser. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	Le type de contrat définit les conditions dans lesquelles la capacité sera attribuée. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Notification_MarketAgreement	Date_MarketAgreement	Date et heure auxquelles les participants sont informés des résultats avant la période de contestation. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les prix dans les offres aux enchères sont à exprimer. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Publication_MarketAgreement	Date_MarketAgreement	Date et heure de publication sur le marché des résultats finaux de la vente aux enchères après la période de contestation. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Peut fournir toute information codée ou textuelle nécessaire pour totalement décrire un changement apporté à la spécification de vente aux enchères ou son éventuelle annulation. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Resale_MarketAgreement	Date_MarketAgreement	Date et heure auxquelles la revente des droits de capacité acquis dans des ventes aux enchères précédentes pour cette vente aux enchères n'est plus acceptable. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	Définition du type des droits à mettre aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]

### 6.3.3.5 Contract\_MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 36 montre tous les attributs de Contract\_MarketAgreement.

**Tableau 36 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Contract\_MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

### 6.3.3.6 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 37 montre tous les attributs de Currency\_Unit.

**Tableau 37 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

### 6.3.3.7 Date\_MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 38 montre tous les attributs de Date\_MarketAgreement.

**Tableau 38 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Date\_MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	DateTime	Date et heure associées aux conditions de l'accord. Date et heure de création de l'accord.

### 6.3.3.8 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 39 montre tous les attributs de Domain.

**Tableau 39 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ArealID_String	Identification unique du domaine.

### 6.3.3.9 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 40 montre tous les attributs de MarketParticipant.

**Tableau 40 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 41 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 41 – Extrémités d’association du Modèle contextuel de spécification de vente aux enchères de capacité::MarketParticipant avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.3.3.10 MarketRole

Identification du comportement prévu d’un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 42 montre tous les attributs de MarketRole.

**Tableau 42 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::MarketRole**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.3.3.11 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d’autres grandeurs similaires afin d’exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 43 montre tous les attributs de Measure\_Unit.

**Tableau 43 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Measure\_Unit**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d’une unité de mesure (Recommandation 20 de la CEE/ONU).

### 6.3.3.12 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 44 montre tous les attributs de Point.

**Tableau 44 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur à mettre aux enchères pendant l'intervalle considéré. Grandeur principale identifiée à un point.

### 6.3.3.13 Process

Identification formelle du processus métier dans lequel un flux d'informations est échangé.

IsBasedOn: ESMPClasses::Process

Le Tableau 45 montre tous les attributs de Process.

**Tableau 45 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Process**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	processType	ProcessKind_String	Identification de la nature du processus traité dans le document.

### 6.3.3.14 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 46 montre tous les attributs de Reason.

**Tableau 46 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.3.3.15 RightsCharacteristics\_Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 47 montre tous les attributs de RightsCharacteristics\_Auction.

**Tableau 47 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::RightsCharacteristics\_Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	rights	RightsKind_String	Droits d'utilisation liés au produit acheté dans une vente aux enchères.

### 6.3.3.16 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 48 montre tous les attributs de Series\_Period.

**Tableau 48 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 49 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 49 – Extrémités d'association du Modèle contextuel de spécification de vente aux enchères de capacité::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.3.3.17 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 50 montre tous les attributs de Time\_Period.

**Tableau 50 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

### 6.3.3.18 RegisteredResource

Une ressource qui est enregistrée par le système d'enregistrement du participant au marché. Des exemples sont l'unité de production, la charge, et le générateur ou la charge non physique.

IsBasedOn: ESMPClasses::RegisteredResource

Le Tableau 254 donne tous les attributs de RegisteredResource.

**Tableau 254 – Attributs du Modèle contextuel de spécification de vente aux enchères de capacité::RegisteredResource**

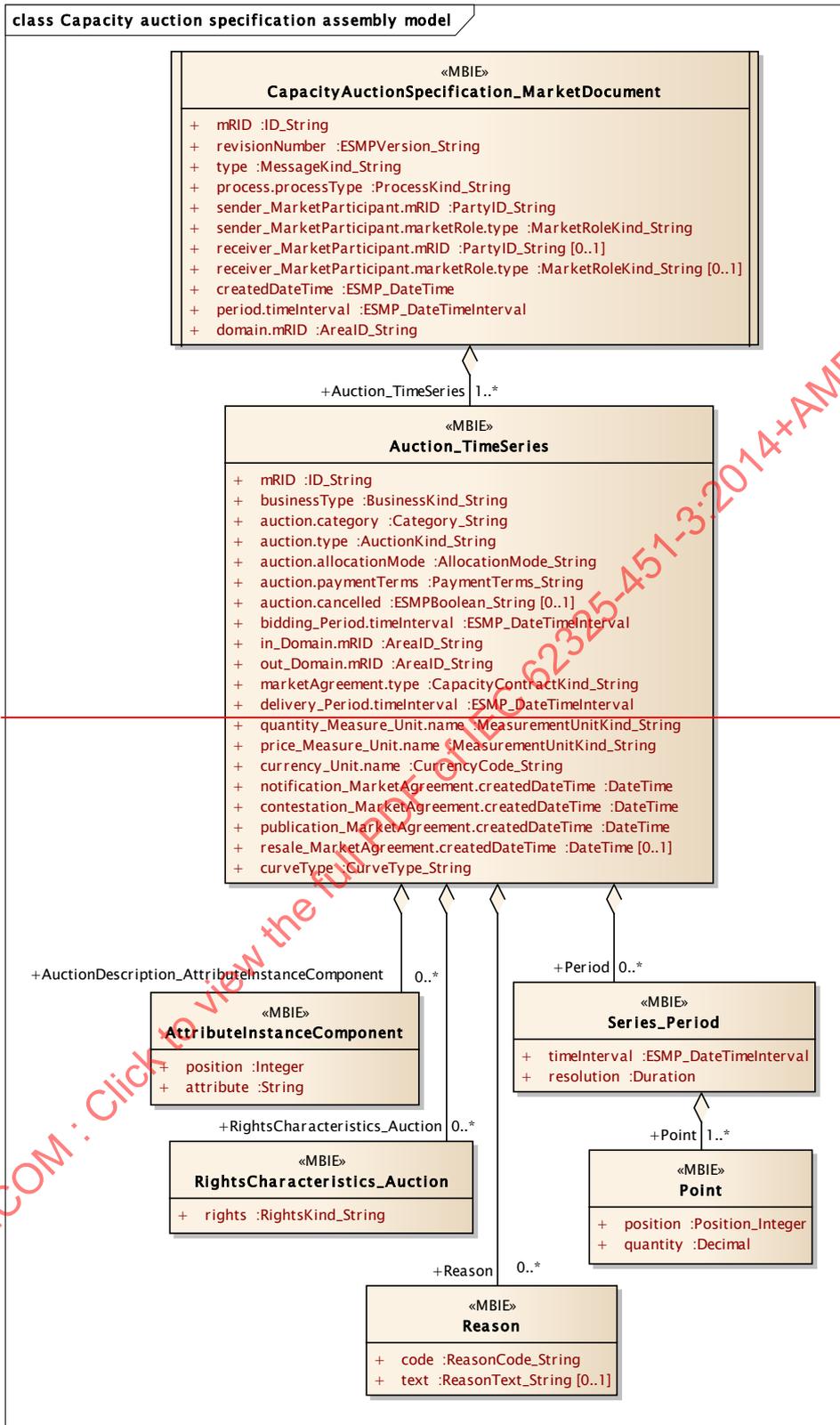
mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ResourceID_String	L'identification unique d'une ressource.

## 6.4 Modèle d'assemblage de spécification de vente aux enchères de capacité

### 6.4.1 Présentation du modèle

La Figure 12 présente le modèle.

IECNORM.COM : Click to view the full PDF of IEC 62325-451-3:2014+AMD1:2017 CSV



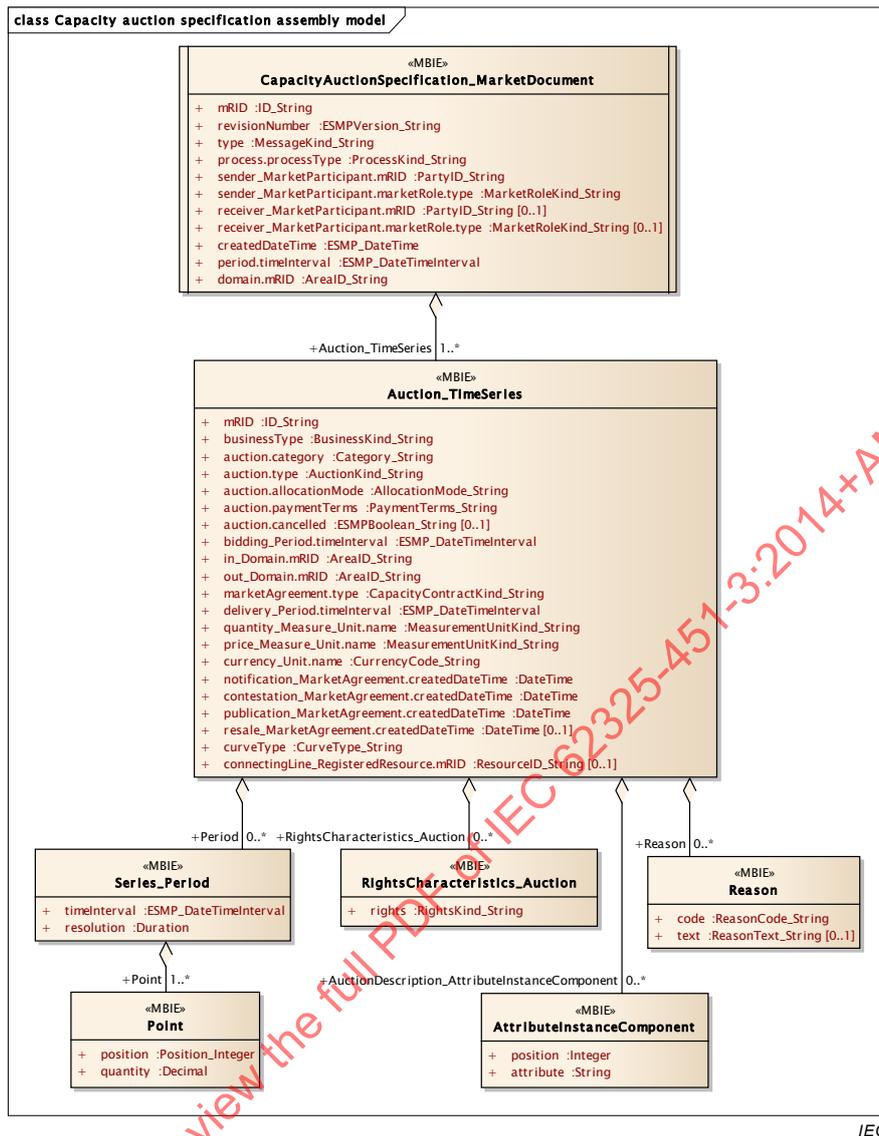


Figure 12 – Modèle d'assemblage de spécification de vente aux enchères de capacité

### 6.4.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 51 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 51 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
AttributeInstanceComponent	Modèle contextuel de spécification de vente aux enchères de capacité::AttributeInstanceComponent	Document de spécification de vente aux enchères de capacité\Modèle contextuel de spécification de vente aux enchères de capacité
Auction_TimeSeries	Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité
CapacityAuctionSpecification_MarketDocument	Modèle contextuel de spécification de vente aux enchères de capacité::CapacityAuctionSpecification_MarketDocument	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité
Point	Modèle contextuel de spécification de vente aux enchères de capacité::Point	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité
Reason	Modèle contextuel de spécification de vente aux enchères de capacité::Reason	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité
RightsCharacteristics_Auction	Modèle contextuel de spécification de vente aux enchères de capacité::RightsCharacteristics_Auction	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité
Series_Period	Modèle contextuel de spécification de vente aux enchères de capacité::Series_Period	Document de spécification de vente aux enchères de capacité \Modèle contextuel de spécification de vente aux enchères de capacité

### 6.4.3 Description détaillée du Modèle d'assemblage de spécification de vente aux enchères de capacité

#### 6.4.3.1 Classe racine CapacityAuctionSpecification\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le CapacityAuctionSpecification\_MarketDocument est émis par l'allocateur de capacité de transport à tout participant au marché désireux de recevoir ce type d'information.

Il fournit des informations sur la vente aux enchères réalisée et plus particulièrement l'identification unique de la vente aux enchères.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::CapacityAuctionSpecification\_MarketDocument

Le Tableau 52 montre tous les attributs de CapacityAuctionSpecification\_MarketDocument.

**Tableau 52 – Attributs du Modèle d’assemblage de spécification de vente aux enchères de capacité::CapacityAuctionSpecification\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document Capacity AuctionSpecification, c’est-à-dire la frontière.
[1..1]	mRID	ID_String	identification unique du document échangé dans le cadre d’un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné. --- Date et heure de début et de fin de la période couverte par les ventes aux enchères de capacité.
[1..1]	process.processType	ProcessKind_String	Identification de la nature du processus traité dans le document.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d’un document sous forme codée. Le type d’un document décrit la caractéristique principale du document.

Le Tableau 53 montre toutes les extrémités d’association de CapacityAuctionSpecification\_MarketDocument avec d’autres classes.

**Tableau 53 – Extrémités d’association du Modèle d’assemblage de spécification de vente aux enchères de capacité::CapacityAuctionSpecification\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries.Auction_TimeSeries[1..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::CapacityAuctionSpecification_MarketDocument.[]

### 6.4.3.2 AttributeInstanceComponent

Classe utilisée pour fournir des informations sur un attribut.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::AttributeInstanceComponent

Le Tableau 54 montre tous les attributs de AttributeInstanceComponent.

**Tableau 54 – Attributs du Modèle d'assemblage de spécification de vente aux enchères de capacité::AttributeInstanceComponent**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	attribute	String	Fournit le contenu textuel d'une ligne dans le cadre d'une description (description textuelle de la vente aux enchères et de ses règles de marché pour clarifier les informations qui ne sont pas définies de façon formelle). Identification d'un attribut pour un composant de requête donné.
[1..1]	position	Integer	La position fournit l'identification de chaque ligne dans le cadre de la description textuelle d'une vente aux enchères.. Valeur séquentielle représentant un numéro de séquence relatif.

### 6.4.3.3 Auction\_TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

La Auction\_TimeSeries fournit les informations nécessaires sur l'objet de la vente aux enchères en tant que capacité de transport.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::Auction\_TimeSeries

Le Tableau 55 montre tous les attributs de Auction\_TimeSeries.

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**Tableau 55 – Attributs du Modèle d'assemblage de spécification  
 de vente aux enchères de capacité::Auction\_TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	auction.allocationMode	AllocationMode_String	Identification de la méthode d'attribution dans une vente aux enchères.
[0..1]	auction.cancelled	ESMPBoolean_String	Indicateur qui signifie que l'objet, auquel s'intéresse la TimeSeries, a été annulé.
[1..1]	auction.category	Category_String	Catégorie de produit dans une vente aux enchères.
[1..1]	auction.paymentTerms	PaymentTerms_String	Conditions régissant la détermination du prix offert.
[1..1]	auction.type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...).
[1..1]	bidding_Period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné. --- Date et heure de début et de fin de la période de soumission au cours de laquelle les négociants de capacité peuvent soumettre une offre à l'allocateur de capacité de transport.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	L'identification unique d'une ressource. --- L'identification d'une ressource associée à une TimeSeries. L'identification d'un ensemble de lignes qui relie deux zones; les droits de capacité de transport sont liés à cet ensemble de lignes.
[1..1]	contestation_MarketAgreement.createdDateTime	DateTime	Date et heure associées aux conditions de l'accord. Date et heure de création de l'accord. --- La période au cours de laquelle les contestations peuvent être déposées commence aux date et heure de notification et se termine aux date et heure de la contestation. En l'absence de possibilité de contestation, les dates et heures doivent être les mêmes.
[1..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[1..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	delivery_Period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné. --- Date et heure de début et de fin de la période pendant laquelle la capacité est à utiliser.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	marketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier. --- Le type de contrat définit les conditions dans lesquelles la capacité sera attribuée.
[1..1]	mRID	ID_String	Identification attribuée par le bureau d'enchères qui identifie de manière unique la vente aux enchères. Identification unique de la série chronologique.
[1..1]	notification_MarketAgreement.createdDateTime	DateTime	Date et heure associées aux conditions de l'accord. Date et heure de création de l'accord. --- Date et heure de notification aux participants des résultats avant la période de contestation.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle les prix dans les offres aux enchères sont à exprimer.
[1..1]	publication_MarketAgreement.createdDateTime	DateTime	Date et heure associées aux conditions de l'accord. Date et heure de création de l'accord. --- Date et heure de publication des résultats finaux de la vente aux enchères sur le marché après la période de contestation.
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW.

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	resale_MarketAgreement.createdDateTime	DateTime	Date et heure associées aux conditions de l'accord. Date et heure de création de l'accord. --- Date et heure auxquelles la revente des droits de capacité acquis au cours de ventes aux enchères précédentes n'est plus acceptable.

Le Tableau 56 montre toutes les extrémités d'association de Auction\_TimeSeries avec d'autres classes.

**Tableau 56 – Extrémités d'association du Modèle d'assemblage de spécification de vente aux enchères de capacité::Auction\_TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	Fournit la description textuelle de la vente aux enchères et de ses règles de marché pour clarifier les informations qui ne sont pas définies de façon formelle. Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::AttributeInstanceComponent.AuctionDescription_AttributeInstanceComponent[0..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::Series_Period.Period[0..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries.[]
[0..*]	Reason	Reason	Peut fournir toute information codée ou textuelle nécessaire pour totalement décrire un changement apporté à la spécification de vente aux enchères ou son éventuelle annulation. Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::Reason.Reason[0..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries.[]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	Définition du type des droits à mettre aux enchères. Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::RightsCharacteristics_Auction.RightsCharacteristics_Auction[0..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::Auction_TimeSeries.[]

#### 6.4.3.4 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::Point

Le Tableau 57 montre tous les attributs de Point.

**Tableau 57 – Attributs du Modèle d’assemblage de spécification de vente aux enchères de capacité::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur à mettre aux enchères pendant l’intervalle considéré. Grandeur principale identifiée à un point.

#### 6.4.3.5 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::Reason

Le Tableau 58 montre tous les attributs de Reason.

**Tableau 58 – Attributs du Modèle d’assemblage de spécification de vente aux enchères de capacité::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

#### 6.4.3.6 RightsCharacteristics\_Auction

Identification d’une spécification formelle d’un produit d’énergie mis en vente.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::RightsCharacteristics\_Auction

Le Tableau 59 montre tous les attributs de RightsCharacteristics\_Auction.

**Tableau 59 – Attributs du Modèle d’assemblage de spécification de vente aux enchères de capacité::RightsCharacteristics\_Auction**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	rights	RightsKind_String	Droits d’utilisation liés au produit acheté dans une vente aux enchères.

#### 6.4.3.7 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de spécification de vente aux enchères de capacité::Series\_Period

Le Tableau 60 montre tous les attributs de Series\_Period.

**Tableau 60 – Attributs du Modèle d’assemblage de spécification de vente aux enchères de capacité::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 61 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 61 – Extrémités d’association du Modèle d’assemblage de spécification de vente aux enchères de capacité::Series\_Period avec d’autres classes**

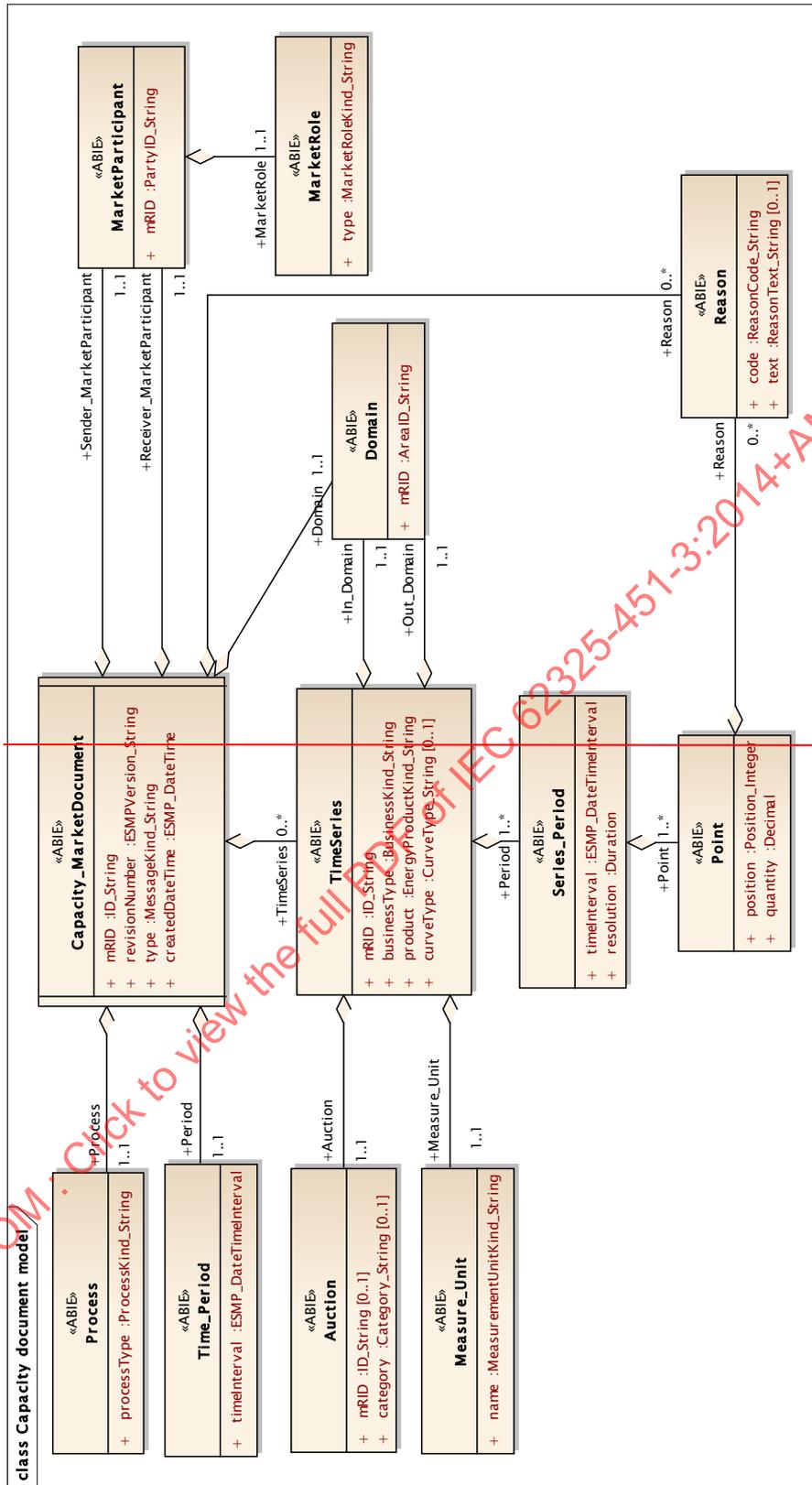
mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de spécification de vente aux enchères de capacité::Point.Point[1..*] ----- Modèle contextuel de spécification de vente aux enchères de capacité::Series_Period.[]

## 6.5 Modèle contextuel de capacité

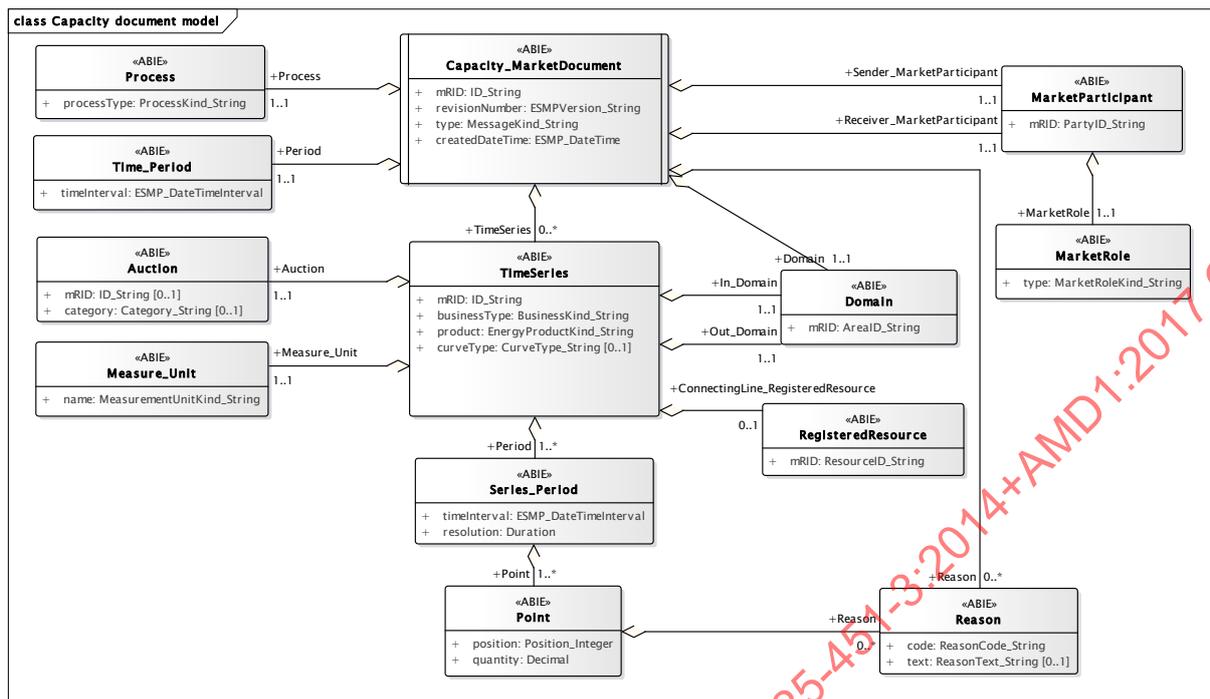
### 6.5.1 Présentation du modèle

La Figure 13 présente le modèle.

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Figure 13 – Modèle contextuel de capacité

### 6.5.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 62 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

Tableau 62 – Dépendance IsBasedOn

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Capacity_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.5.3 Description détaillée du Modèle contextuel de capacité

#### 6.5.3.1 Classe racine Capacity\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le Capacity\_MarketDocument permet d'échanger des informations relatives à la capacité de transport. Ces échanges peuvent être liés à la détermination de la capacité ou à l'attribution de la capacité. Les valeurs échangées peuvent être liées aux informations relatives à NTC, ATC, AAC, l'AAC cédée, la capacité offerte ou la capacité générale.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 63 montre tous les attributs de Capacity\_MarketDocument.

**Tableau 63 – Attributs du Modèle contextuel de capacité::Capacity\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 64 montre toutes les extrémités d'association de Capacity\_MarketDocument avec d'autres classes.

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**Tableau 64 – Extrémités d’association du Modèle contextuel de capacité::Capacity\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document Capacity_MarketDocument. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.5.3.2 Auction

Identification d’une spécification formelle d’un produit d’énergie mis en vente.

Identification unique de l’ensemble des spécifications qui identifie clairement la vente aux enchères qui concerne la capacité.

IsBasedOn: ESMPClasses::Auction

Le Tableau 65 montre tous les attributs de Auction.

**Tableau 65 – Attributs du Modèle contextuel de capacité::Auction**

mult.	Nom d’attribut	Type d’attribut	Description
[0..1]	category	Category_String	Catégorie de produit dans une vente aux enchères.
[0..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.5.3.3 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 66 montre tous les attributs de Domain.

**Tableau 66 – Attributs du Modèle contextuel de capacité::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	AreaID_String	Identification unique du domaine.

### 6.5.3.4 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 67 montre tous les attributs de MarketParticipant.

**Tableau 67 – Attributs du Modèle contextuel de capacité::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 68 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 68 – Extrémités d'association du Modèle contextuel de capacité::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.5.3.5 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 69 montre tous les attributs de MarketRole.

**Tableau 69 – Attributs du Modèle contextuel de capacité::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.5.3.6 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 70 montre tous les attributs de Measure\_Unit.

**Tableau 70 – Attributs du Modèle contextuel de capacité::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE/ONU).

### 6.5.3.7 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 71 montre tous les attributs de Point.

**Tableau 71 – Attributs du Modèle contextuel de capacité::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.

Le Tableau 72 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 72 – Extrémités d'association du Modèle contextuel de capacité::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.5.3.8 Process

Identification formelle du processus métier dans lequel un flux d'informations est échangé.

IsBasedOn: ESMPClasses::Process

Le Tableau 73 montre tous les attributs de Process.

**Tableau 73 – Attributs du Modèle contextuel de capacité::Process**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	processType	ProcessKind_String	Identification de la nature du processus traité dans le document.

### 6.5.3.9 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 74 montre tous les attributs de Reason.

**Tableau 74 – Attributs du Modèle contextuel de capacité::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.5.3.10 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 75 montre tous les attributs de Series\_Period.

**Tableau 75 – Attributs du Modèle contextuel de capacité::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 76 montre toutes les extrémités d'association de Series\_Period avec d'autres classes

**Tableau 76 – Extrémités d'association du Modèle contextuel de capacité:: Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.5.3.11 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 77 montre tous les attributs de Time\_Period.

**Tableau 77 – Attributs du Modèle contextuel de capacité::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

#### 6.5.3.12 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 78 montre tous les attributs de TimeSeries.

**Tableau 78 – Attributs du Modèle contextuel de capacité::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	product	EnergyProductKind_String	Identification de la nature d'un produit d'énergie tel que la puissance électrique, la puissance réactive, etc.

Le Tableau 79 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

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**Tableau 79 – Extrémités d'association du Modèle contextuel de capacité:  
TimeSeries avec d'autres classes**

mult	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Identification d'un ensemble de spécifications créé par l'opérateur de vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	L'identification d'une ressource associée à TimeSeries. L'identification d'un ensemble de lignes qui relient deux zones; les droits de capacité de transport sont liés à cet ensemble de lignes. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Measure_Unit	Measure_Unit	Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]

### 6.5.3.13 RegisteredResource

Une ressource qui est enregistrée par le système d'enregistrement du participant au marché. Des exemples sont l'unité de production, la charge, et le générateur ou la charge non physique.

IsBasedOn: ESMPClasses::RegisteredResource

Le Tableau 255 donne tous les attributs de RegisteredResource.

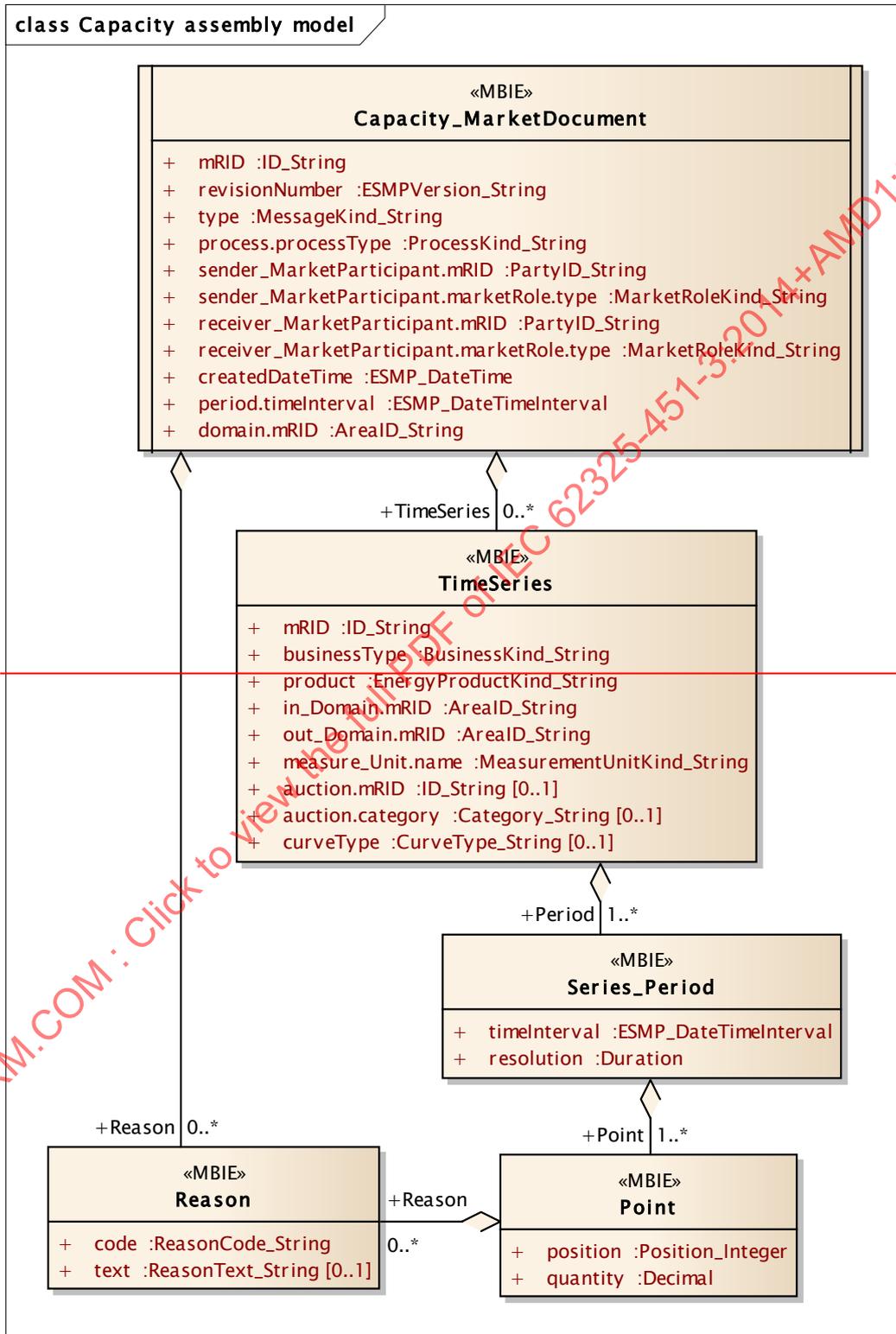
**Tableau 255 – Attributs du modèle contextuel de capacité::RegisteredResource**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ResourceID_String	L'identification unique d'une ressource.

## 6.6 Modèle d'assemblage de capacité

### 6.6.1 Présentation du modèle

La Figure 14 présente le modèle.



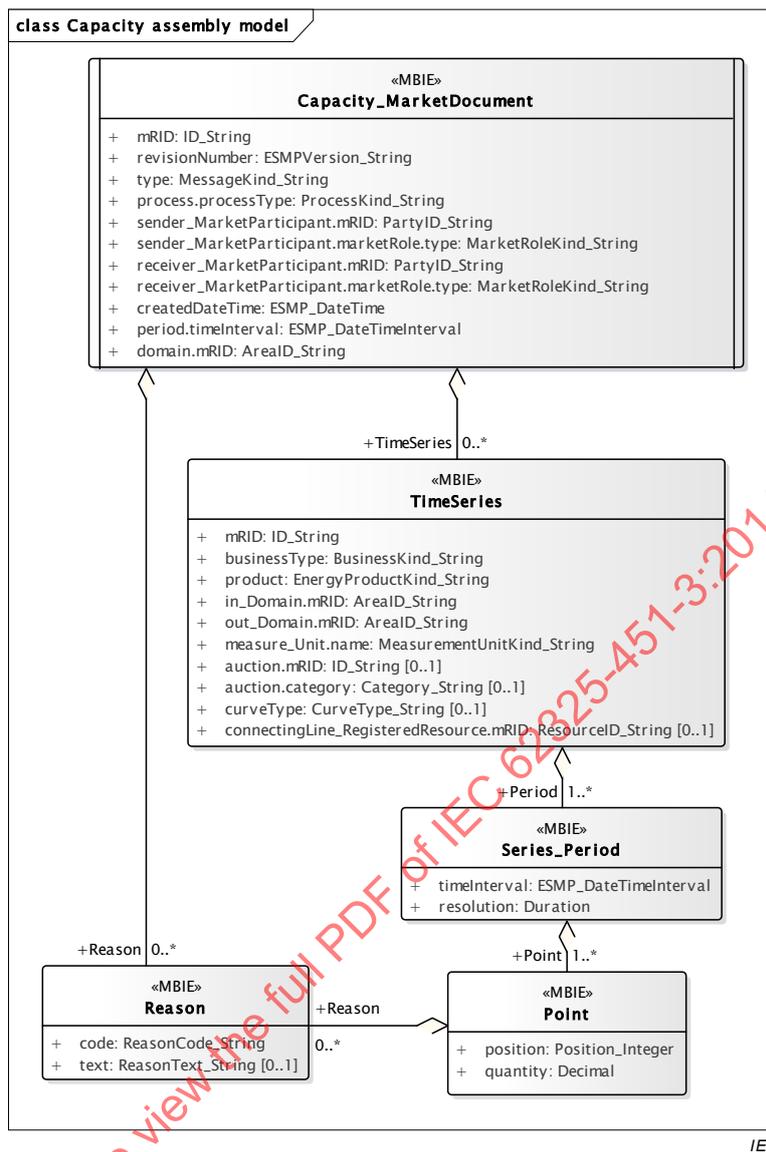


Figure 14 – Modèle d’assemblage de capacité

### 6.6.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 80 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 80 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Capacity_MarketDocument	Modèle contextuel de capacité::Capacity_MarketDocument	Document de capacité\Modèle contextuel de capacité
Point	Modèle contextuel de capacité::Point	Document de capacité \Modèle contextuel de capacité
Reason	Modèle contextuel de capacité::Reason	Document de capacité \Modèle contextuel de capacité
Series_Period	Modèle contextuel de capacité::Series_Period	Document de capacité\Modèle contextuel de capacité
TimeSeries	Modèle contextuel de capacité::TimeSeries	Document de capacité \Modèle contextuel de capacité

### 6.6.3 Description détaillée du Modèle d'assemblage de capacité

#### 6.6.3.1 Classe racine Capacity\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le Capacity\_MarketDocument permet d'échanger des informations relatives à la capacité de transport. Ces échanges peuvent être liés à la détermination de la capacité ou à l'attribution de la capacité. Les valeurs échangées peuvent être relatives aux informations de NTC, ATC, AAC, l'AAC cédée, la capacité offerte ou la capacité générale.

IsBasedOn: Modèle contextuel de capacité::Capacity\_MarketDocument

Le Tableau 81 montre tous les attributs de Capacity\_MarketDocument.

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**Tableau 81 – Attributs du Modèle d’assemblage de capacité::Capacity\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document Capacity_MarketDocument.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document.
[1..1]	process.processType	ProcessKind_String	Identification de la nature du processus traité dans le document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 82 montre toutes les extrémités d’association de Capacity\_MarketDocument avec d’autres classes.

**Tableau 82 – Extrémités d’association du Modèle d’assemblage de capacité::Capacity\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de capacité::Reason.Reason[0..*] ----- Modèle contextuel de capacité::Capacity_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel de capacité::TimeSeries.TimeSeries[0..*] ----- Modèle contextuel de capacité::Capacity_MarketDocument.[]

### 6.6.3.2 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de capacité::Point

Le Tableau 83 montre tous les attributs de Point.

**Tableau 83 – Attributs du Modèle d'assemblage de capacité::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.

Le Tableau 84 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 84 – Extrémités d'association du Modèle d'assemblage de capacité::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de capacité::Reason.Reason[0..*] ----- Modèle contextuel de capacité::Point.[]

### 6.6.3.3 Reason

Motivation d'un acte.

IsBasedOn: Modèle contextuel de capacité::Reason

Le Tableau 85 montre tous les attributs de Reason.

**Tableau 85 – Attributs du Modèle d'assemblage de capacité::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.6.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de capacité::Series\_Period

Le Tableau 86 montre tous les attributs de Series\_Period.

**Tableau 86 – Attributs du Modèle d’assemblage de capacité::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 87 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 87 – Extrémités d’association du Modèle d’assemblage de capacité::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de capacité::Point.Point[1..*] ----- Modèle contextuel de capacité::Series_Period.[]

#### 6.6.3.5 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel de capacité::TimeSeries

Le Tableau 88 montre tous les attributs de TimeSeries.

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**Tableau 88 – Attributs du Modèle d'assemblage de capacité::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	auction.category	Category_String	Catégorie de produit dans une vente aux enchères. --- Identification d'un ensemble de spécifications créé par l'opérateur de vente aux enchères.
[0..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification d'un ensemble de spécifications créé par l'opérateur de vente aux enchères.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	L'identification unique d'une ressource. --- L'identification d'une ressource associée à une TimeSeries. L'identification d'un ensemble de lignes qui relie deux zones; les droits de capacité de transport sont liés à cet ensemble de lignes.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[1..1]	product	EnergyProductKind_String	Identification de la nature d'un produit d'énergie tel que la puissance électrique, la puissance réactive, etc.

Le Tableau 89 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

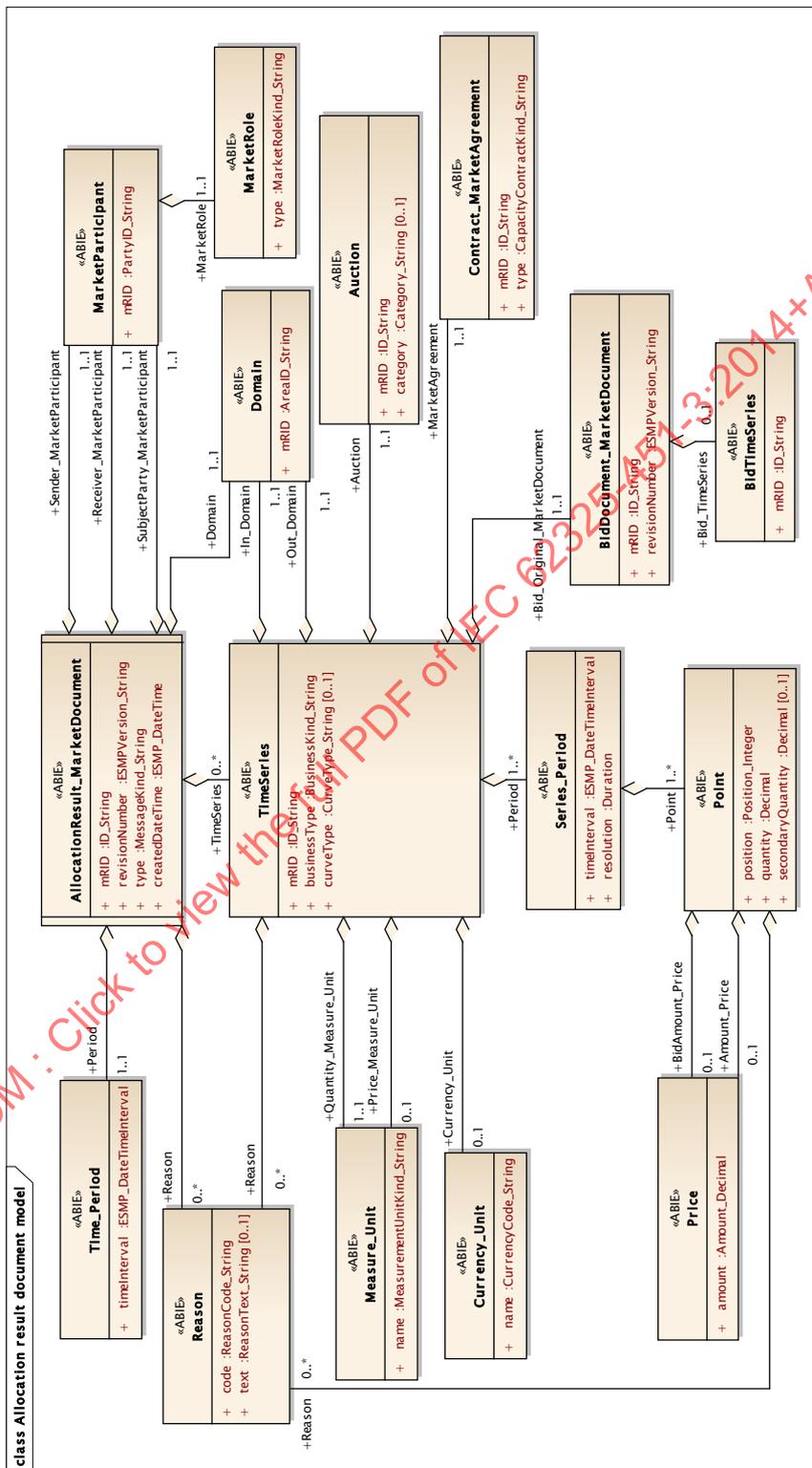
**Tableau 89 – Extrémités d'association du Modèle d'assemblage de capacité::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel de capacité::Series_Period.Period[1..*] ----- Modèle contextuel de capacité::TimeSeries.[]

## 6.7 Modèle contextuel de résultat de l'attribution

### 6.7.1 Présentation du modèle

La Figure 15 présente le modèle.



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Figure 15 – Modèle contextuel de résultat de l'attribution

## 6.7.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 90 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 90 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
AllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

## 6.7.3 Description détaillée du Modèle contextuel de résultat de l'attribution

### 6.7.3.1 Classe racine AllocationResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Il n'existe qu'un seul document de résultat de l'attribution par expéditeur et partie concernée pour une identification de vente aux enchères donnée et un intervalle de temps de soumission donné.

Lorsque le document de résultat de l'attribution comporte toutes les offres et reventes validées pour traitement dans le cadre d'une vente aux enchères dans la dernière version des documents d'offres et de reventes reçus, ceci doit comprendre les offres et les reventes qui n'ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n'ont pas été réalisées doivent être égales à zéro.

Il est également possible que le document de résultat de l'attribution ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.

Une troisième possibilité consiste à ne fournir que l'agrégation des offres ayant des droits de transport de capacité et l'agrégation des droits de transport vendus. Dans ce cas, l'identification d'offre ne doit pas être spécifiée.

Une seule de ces trois possibilités est autorisée dans un document de résultat de l'attribution donné.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 91 montre tous les attributs de AllocationResult\_MarketDocument.

**Tableau 91 – Attributs du Modèle contextuel de résultat de l'attribution::AllocationResult\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 92 montre toutes les extrémités d'association de AllocationResult\_MarketDocument avec d'autres classes.

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**Tableau 92 – Extrémités d’association du Modèle contextuel de résultat de l’attribution::AllocationResult\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	SubjectParty_MarketParticipant	MarketParticipant	Partie à laquelle l’offre est attribuée. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.7.3.2 Auction

Identification d’une spécification formelle d’un produit d’énergie mis en vente.

Identification unique de l’ensemble de spécifications qui définit clairement la vente aux enchères qui concerne l’offre.

IsBasedOn: ESMPClasses::Auction

Le Tableau 93 montre tous les attributs de Auction.

**Tableau 93 – Attributs du Modèle contextuel de résultat de l’attribution::Auction**

mult.	Nom d’attribut	Type d’attribut	Description
[0..1]	category	Category_String	Catégorie de produit dans une vente aux enchères.
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.7.3.3 BidDocument\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Chaque offre attribuée est comprise dans le document d'offre transmis par l'utilisateur.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 94 montre tous les attributs de BidDocument\_MarketDocument.

**Tableau 94 – Attributs du Modèle contextuel de résultat de l'attribution::BidDocument\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.

Le Tableau 95 montre toutes les extrémités d'association de BidDocument\_MarketDocument avec d'autres classes.

**Tableau 95 – Extrémités d'association du Modèle contextuel de résultat de l'attribution::BidDocument\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	BidTimeSeries	BidTimeSeries	Identification de la série chronologique utilisée dans l'offre d'origine ou la revente. Il s'agit du numéro unique attribué par le soumissionnaire pour son offre d'origine ou revente. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.7.3.4 BidTimeSeries

Spécification formelle de caractéristiques spécifiques relatives à une offre.

IsBasedOn: ESMPClasses::BidTimeSeries

Le Tableau 96 montre tous les attributs de BidTimeSeries.

**Tableau 96 – Attributs du Modèle contextuel de résultat de l'attribution::BidTimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

### 6.7.3.5 Contract\_MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 97 montre tous les attributs de Contract\_MarketAgreement.

**Tableau 97 – Attributs du Modèle contextuel de résultat de l'attribution::Contract\_MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de l'accord.
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

### 6.7.3.6 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 98 montre tous les attributs de Currency\_Unit.

**Tableau 98 – Attributs du Modèle contextuel de résultat de l'attribution::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

### 6.7.3.7 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 99 montre tous les attributs de Domain.

**Tableau 99 – Attributs du Modèle contextuel de résultat de l'attribution::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	AreaID_String	Identification unique du domaine.

### 6.7.3.8 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 100 montre tous les attributs de MarketParticipant.

**Tableau 100 – Attributs du Modèle contextuel de résultat de l'attribution::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 101 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 101 – Extrémités d'association du Modèle contextuel de résultat de l'attribution::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

#### 6.7.3.9 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 102 montre tous les attributs de MarketRole.

**Tableau 102 – Attributs du Modèle contextuel de résultat de l'attribution::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

#### 6.7.3.10 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 103 montre tous les attributs de Measure\_Unit.

**Tableau 103 – Attributs du Modèle contextuel de résultat de l'attribution::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE/ONU).

#### 6.7.3.11 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 104 montre tous les attributs de Point.

**Tableau 104 – Attributs du Modèle contextuel de résultat de l'attribution::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur ayant été attribuée ou revendue au cours de la vente aux enchères. Grandeur principale identifiée à un point.
[0..1]	secondaryQuantity	Decimal	Grandeur qui figurait dans l'offre d'origine ou le document de revente. Grandeur secondaire identifiée à un point.

Le Tableau 105 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 105 – Extrémités d'association du Modèle contextuel de résultat de l'attribution::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Amount_Price	Price	Prix exprimé pour chaque unité de grandeur attribuée. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	Prix initial exprimé dans l'offre d'origine ou revente pour chaque unité de grandeur demandée. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.7.3.12 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 106 montre tous les attributs de Price.

**Tableau 106 – Attributs du Modèle contextuel de résultat de l'attribution::Price**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

### 6.7.3.13 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 107 montre tous les attributs de Reason.

**Tableau 107 – Attributs du Modèle contextuel de résultat de l'attribution::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.7.3.14 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 108 montre tous les attributs de Series\_Period.

**Tableau 108 – Attributs du Modèle contextuel de résultat de l'attribution::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 109 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 109 – Extrémités d'association du Modèle contextuel de résultat de l'attribution::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.7.3.15 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 110 montre tous les attributs de Time\_Period.

**Tableau 110 – Attributs du Modèle contextuel  
de résultat de l'attribution::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

### 6.7.3.16 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

Pour chaque série chronologique dans le document, l'identification doit être un numéro unique attribué par le bureau de vente aux enchères.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 111 montre tous les attributs de TimeSeries.

**Tableau 111 – Attributs du Modèle contextuel  
de résultat de l'attribution::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 112 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

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**Tableau 112 – Extrémités d'association du Modèle contextuel de résultat de l'attribution::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Identification associant l'attribution à un ensemble de spécifications créé par l'opérateur de vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	BidDocument_MarketDocument	BidDocument_MarketDocument	Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. L'allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

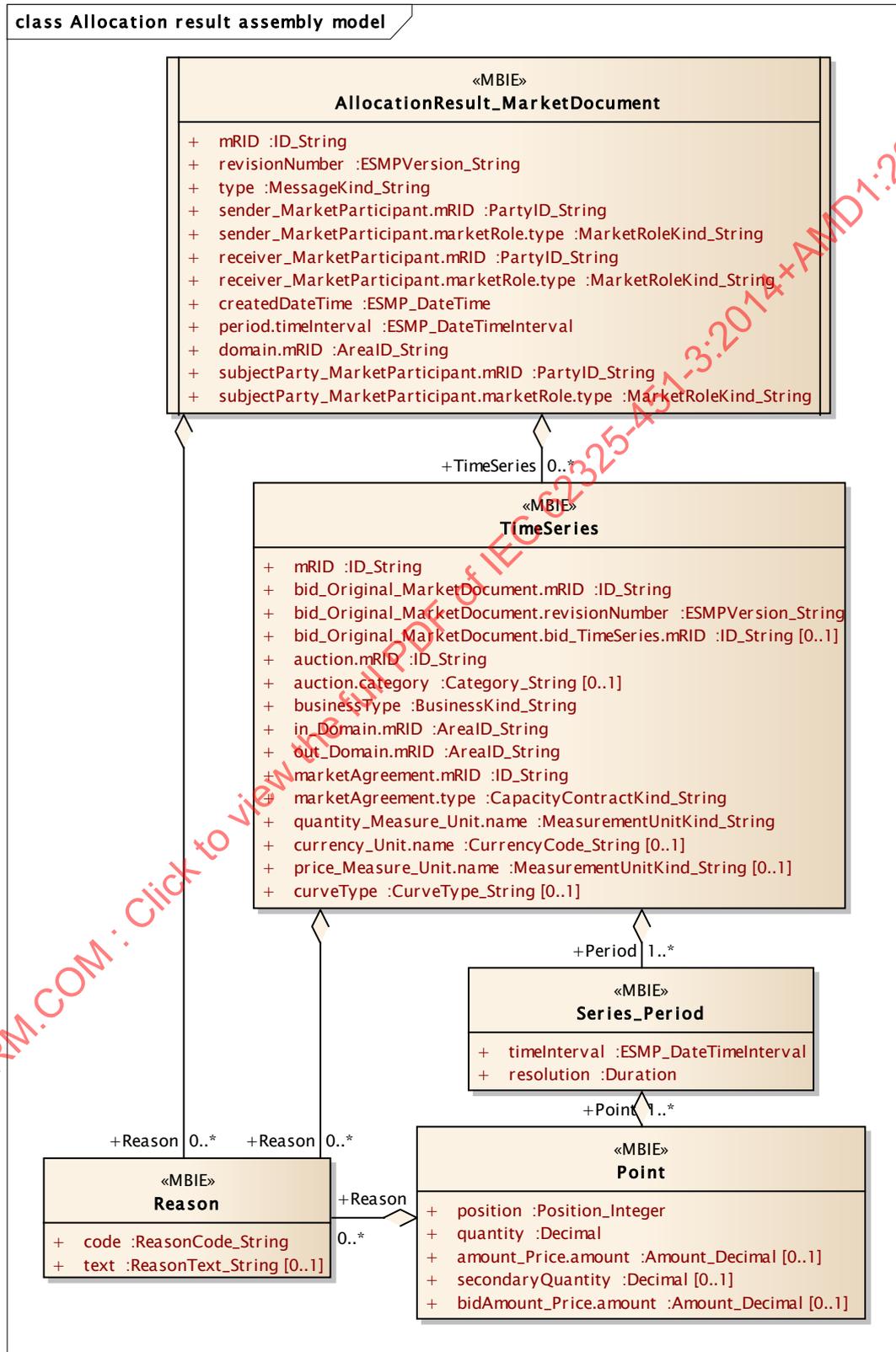
mult.	Rôle	Nom de type de classe	Description
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

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## 6.8 Modèle d'assemblage de résultat de l'attribution

### 6.8.1 Présentation du modèle

La Figure 16 présente le modèle.



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Figure 16 – Modèle d'assemblage de résultat de l'attribution

## 6.8.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 113 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 113 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
AllocationResult_MarketDocument	Modèle contextuel de résultat de l'attribution::AllocationResult_MarketDocument	Document de résultat de l'attribution\Modèle contextuel de résultat de l'attribution
Point	Modèle contextuel de résultat de l'attribution::Point	Document de résultat de l'attribution\Modèle contextuel de résultat de l'attribution
Reason	Modèle contextuel de résultat de l'attribution::Reason	Document de résultat de l'attribution\Modèle contextuel de résultat de l'attribution
Series_Period	Modèle contextuel de résultat de l'attribution::Series_Period	Document de résultat de l'attribution\Modèle contextuel de résultat de l'attribution
TimeSeries	Modèle contextuel de résultat de l'attribution::TimeSeries	Document de résultat de l'attribution\Modèle contextuel de résultat de l'attribution

## 6.8.3 Description détaillée du Modèle d'assemblage de résultat de l'attribution

### 6.8.3.1 Classe racine AllocationResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Il n'existe qu'un seul document de résultat de l'attribution par expéditeur et partie concernée pour une identification de vente aux enchères donnée et un intervalle de temps de soumission donné.

Lorsque le document de résultat de l'attribution comporte toutes les offres et reventes validées pour traitement dans le cadre d'une vente aux enchères dans la dernière version des documents d'offres et de reventes reçus, ceci doit comprendre les offres et les reventes qui n'ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n'ont pas été réalisées doivent être égales à zéro.

Il est également possible que le document de résultat de l'attribution ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.

Une troisième possibilité consiste à ne fournir que l'agrégation des offres ayant des droits de transport de capacité et l'agrégation des droits de transport vendus. Dans ce cas, l'identification d'offre ne doit pas être spécifiée.

Une seule de ces trois possibilités est autorisée dans un document de résultat de l'attribution donné.

IsBasedOn: Modèle contextuel de résultat de l'attribution::AllocationResult\_MarketDocument

Le Tableau 114 montre tous les attributs de AllocationResult\_MarketDocument.

**Tableau 114 – Attributs du Modèle d’assemblage de résultat  
de l’attribution::AllocationResult\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d’un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Propriétaire du document.
[1..1]	subjectParty_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Partie à laquelle l’offre est attribuée.
[1..1]	subjectParty_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Partie à laquelle l’offre est attribuée.
[1..1]	type	MessageKind_String	Type d’un document sous forme codée. Le type d’un document décrit la caractéristique principale du document.

Le Tableau 115 montre toutes les extrémités d’association de AllocationResult\_MarketDocument avec d’autres classes.

**Tableau 115 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution::AllocationResult\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l’attribution::AllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel de résultat de l’attribution::TimeSeries.TimeSeries[0..*] ----- Modèle contextuel de résultat de l’attribution::AllocationResult_MarketDocument.[]

### 6.8.3.2 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de résultat de l’attribution::Point

Le Tableau 116 montre tous les attributs de Point.

**Tableau 116 – Attributs du Modèle d’assemblage de résultat de l’attribution::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[0..1]	amount_Price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix exprimé pour chaque unité de grandeur attribuée.
[0..1]	bidAmount_Price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix initial exprimé dans l’offre d’origine ou revente pour chaque unité de grandeur demandée.
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur ayant été attribuée ou revendue au cours de la vente aux enchères. Grandeur principale identifiée à un point.
[0..1]	secondaryQuantity	Decimal	Grandeur qui figurait dans l’offre d’origine ou le document de revente. Grandeur secondaire identifiée à un point.

Le Tableau 117 montre toutes les extrémités d’association de Point avec d’autres classes.

**Tableau 117 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution::Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l’attribution::Point.[]

### 6.8.3.3 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel de résultat de l’attribution::Reason

Le Tableau 118 montre tous les attributs de Reason.

**Tableau 118 – Attributs du Modèle d’assemblage de résultat de l’attribution::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.8.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de résultat de l’attribution::Series\_Period

Le Tableau 119 montre tous les attributs de Series\_Period.

**Tableau 119 – Attributs du Modèle d’assemblage de résultat de l’attribution::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 120 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 120 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de résultat de l’attribution::Point.Point[1..*] ----- Modèle contextuel de résultat de l’attribution::Series_Period.[]

### 6.8.3.5 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

Pour chaque série chronologique dans le document, l’identification doit être un numéro unique attribué par le bureau de vente aux enchères.

IsBasedOn: Modèle contextuel de résultat de l’attribution::TimeSeries

Le Tableau 121 montre tous les attributs de TimeSeries.

**Tableau 121 – Attributs du Modèle d’assemblage de résultat de l’attribution::TimeSeries.**

mult.	Nom d’attribut	Type d’attribut	Description
[0..1]	auction.category	Category_String	Catégorie de produit dans une vente aux enchères. --- Identification associant l’attribution à un ensemble de spécifications créé par l’opérateur de vente aux enchères.
[1..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification associant l’attribution à un ensemble de spécifications créé par l’opérateur de vente aux enchères.
[0..1]	bid_Original_MarketDocument.bid_TimeSeries.mRID	ID_String	Identification unique de la série chronologique. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries. --- Identification de la série chronologique utilisée dans l’offre d’origine ou la revente. Il s’agit du numéro unique attribué par le soumissionnaire pour son offre d’origine ou revente.
[1..1]	bid_Original_MarketDocument.mRID	ID_String	Identification unique du document échangé dans le cadre d’un flux de processus métier. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries.
[1..1]	Bid_Original_MarketDocument.revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	marketAgreement.mRID	ID_String	Identification unique de l'accord. --- Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. L'allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser.
[1..1]	marketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier. --- Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. L'allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW.

Le Tableau 122 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 122 – Extrémités d'association du Modèle d'assemblage de résultat de l'attribution::TimeSeries avec d'autres classes**

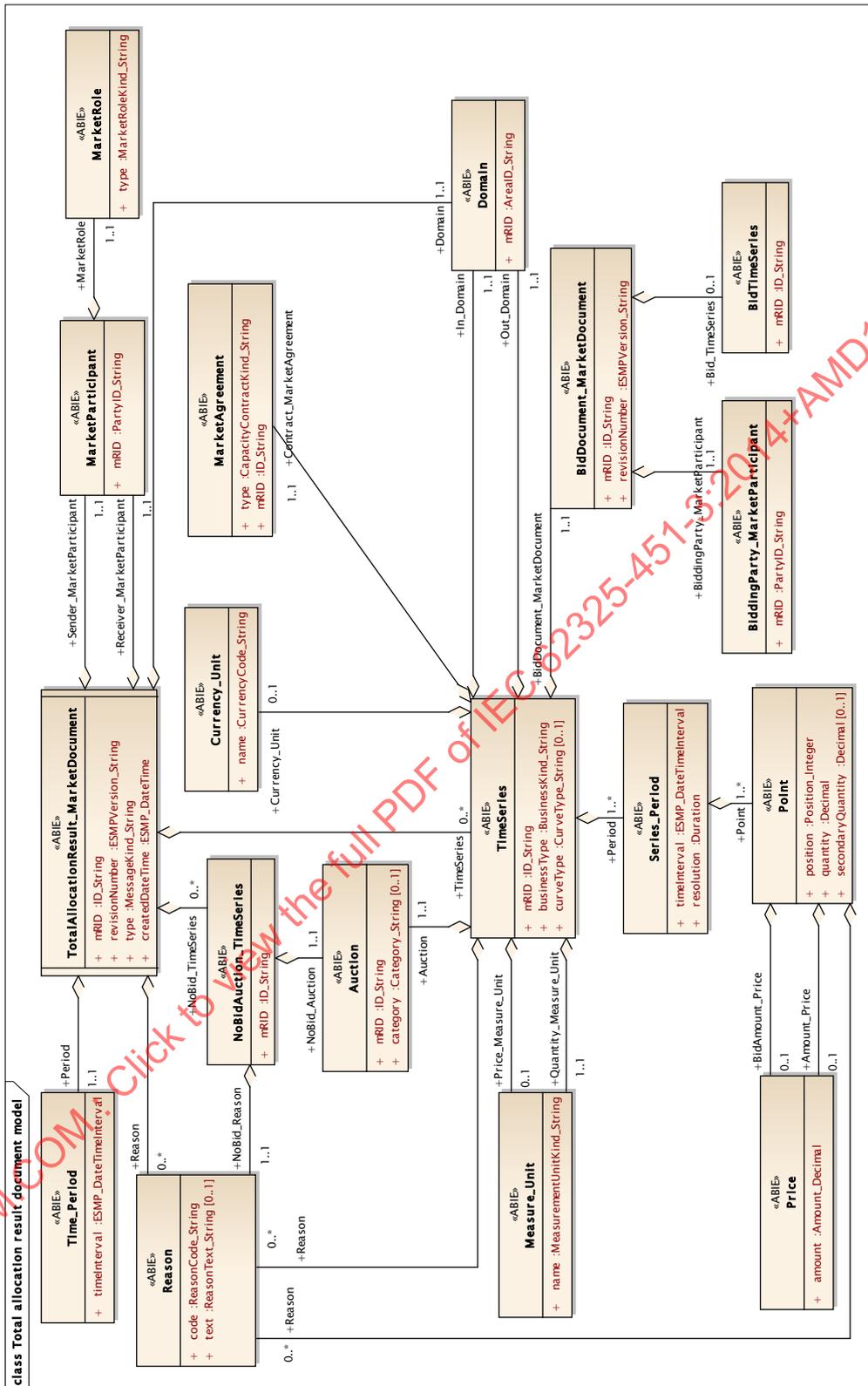
mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel de résultat de l'attribution::Series_Period.Period[1..*] ----- Modèle contextuel de résultat de l'attribution::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l'attribution::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l'attribution::TimeSeries.[]

## 6.9 Modèle contextuel de résultat de l'attribution totale

### 6.9.1 Présentation du modèle

La Figure 17 présente le modèle.

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Figure 17 – Modèle contextuel de résultat de l'attribution totale

### 6.9.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 123 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 123 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BiddingParty_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
NoBidAuction_TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
TotalAllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses

### 6.9.3 Description détaillée du Modèle contextuel de résultat de l'attribution totale

#### 6.9.3.1 Classe racine TotalAllocationResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le document de résultat de l'attribution totale comprend les résultats de la vente aux enchères pour tous les soumissionnaires avec les mêmes informations de granularité que le document de résultat de l'attribution.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 124 montre tous les attributs de TotalAllocationResult\_MarketDocument.

**Tableau 124 – Attributs du Modèle contextuel de résultat de l'attribution totale::TotalAllocationResult\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 125 montre toutes les extrémités d'association de TotalAllocationResult\_MarketDocument avec d'autres classes.

**Tableau 125 – Extrémités d'association du Modèle contextuel de résultat de l'attribution totale::TotalAllocationResult\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document, c'est-à-dire la frontière. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	Cette série chronologique spécifique est à utiliser lorsqu'aucune offre n'est soumise au cours d'une vente aux enchères. Dans ce cas, la série chronologique fournit l'identification de la vente aux enchères annulée. Une classe Reason est à fournir avec la valeur correspondant à l'information "pas d'offre". Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

mult.	Rôle	Nom de type de classe	Description
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.9.3.2 Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 126 montre tous les attributs de Auction.

**Tableau 126 – Attributs du Modèle contextuel de résultat de l'attribution totale::Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	category	Category_String	Catégorie de produit dans une vente aux enchères.
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.9.3.3 BiddingParty\_MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 127 montre tous les attributs de BiddingParty\_MarketParticipant.

**Tableau 127 – Attributs du Modèle contextuel de résultat de l'attribution totale::BiddingParty\_MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

### 6.9.3.4 BidDocument\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 128 montre tous les attributs de BidDocument\_MarketDocument.

**Tableau 128 – Attributs du Modèle contextuel de résultat de l'attribution totale::BidDocument\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.

Le Tableau 129 montre toutes les extrémités d'association de BidDocument\_MarketDocument avec d'autres classes.

**Tableau 129 – Extrémités d'association du Modèle contextuel de résultat de l'attribution totale::BidDocument\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Bid_TimeSeries BiddingParty_MarketParticipant	BidTimeSeries BiddingParty_MarketParticipant	Identification de la série chronologique utilisée dans l'offre d'origine ou la revente. Il s'agit du numéro unique attribué par le soumissionnaire pour son offre d'origine ou revente. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	BiddingParty_MarketParticipant	BiddingParty_MarketParticipant	Identification du soumissionnaire pour la capacité ou sa revente. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.9.3.5 BidTimeSeries

Spécification formelle de caractéristiques spécifiques relatives à une offre.

IsBasedOn: ESMPClasses::BidTimeSeries

Le Tableau 130 montre tous les attributs de BidTimeSeries.

**Tableau 130 – Attributs du Modèle contextuel de résultat de l'attribution totale::BidTimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

### 6.9.3.6 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 131 montre tous les attributs de Currency\_Unit.

**Tableau 131 – Attributs du Modèle contextuel de résultat de l'attribution totale::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

#### 6.9.3.7 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 132 montre tous les attributs de Domain.

**Tableau 132 – Attributs du Modèle contextuel de résultat de l'attribution totale::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ArealD_String	Identification unique du domaine.

#### 6.9.3.8 MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 133 montre tous les attributs de MarketAgreement.

**Tableau 133 – Attributs du Modèle contextuel de résultat de l'attribution totale::MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de l'accord.
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

#### 6.9.3.9 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 134 montre tous les attributs de MarketParticipant.

**Tableau 134 – Attributs du Modèle contextuel de résultat de l'attribution totale::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 135 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 135 – Extrémités d'association du Modèle contextuel de résultat de l'attribution totale::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant [ ] ----- ESMPClasses::MarketRole.MarketRole[0..1]

#### 6.9.3.10 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 136 montre tous les attributs de MarketRole.

**Tableau 136 – Attributs du Modèle contextuel de résultat de l'attribution totale::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

#### 6.9.3.11 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 137 montre tous les attributs de Measure\_Unit.

**Tableau 137 – Attributs du Modèle contextuel de résultat de l'attribution totale::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU).

#### 6.9.3.12 NoBidAuction\_TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 138 montre tous les attributs de NoBidAuction\_TimeSeries.

**Tableau 138 – Attributs du Modèle contextuel de résultat de l'attribution totale::NoBidAuction\_TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 139 montre toutes les extrémités d'association de NoBidAuction\_TimeSeries avec d'autres classes.

**Tableau 139 – Extrémités d'association du Modèle contextuel de résultat de l'attribution totale::NoBidAuction\_TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	NoBid_Auction	Auction	Fournit l'identification de vente aux enchères en l'absence de soumission d'offre. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	NoBid_Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.9.3.13 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 140 montre tous les attributs de Point.

**Tableau 140 – Attributs du Modèle contextuel de résultat de l'attribution totale::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.
[0..1]	secondaryQuantity	Decimal	Grandeur qui figurait dans le document d'offre d'origine. Grandeur secondaire identifiée à un point.

Le Tableau 141 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 141 – Extrémités d’association du Modèle contextuel de résultat de l’attribution totale::Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Amount_Price	Price	Prix exprimé pour chaque unité de grandeur attribuée. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	Prix initial exprimé dans l’offre d’origine ou revente pour chaque unité de grandeur demandée. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

#### 6.9.3.14 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 142 montre tous les attributs de Price.

**Tableau 142 – Attributs du Modèle contextuel de résultat de l’attribution totale::Price**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise.

#### 6.9.3.15 Reason

Motivation d’un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 143 montre tous les attributs de Reason.

**Tableau 143 – Attributs du Modèle contextuel de résultat de l’attribution totale::Reason.**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.9.3.16 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 144 montre tous les attributs de Series\_Period.

**Tableau 144 – Attributs du Modèle contextuel de résultat de l’attribution totale::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 145 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 145 – Extrémités d’association du Modèle contextuel de résultat de l’attribution totale::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.9.3.17 Time\_Period

Identification d’un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 146 montre tous les attributs de Time\_Period.

**Tableau 146 – Attributs du Modèle contextuel de résultat de l’attribution totale::Time\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné.

### 6.9.3.18 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 147 montre tous les attributs de TimeSeries.

**Tableau 147 – Attributs du Modèle contextuel de résultat de l’attribution totale::TimeSeries**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 148 montre toutes les extrémités d’association de TimeSeries avec d’autres classes.

**Tableau 148 – Extrémités d’association du Modèle contextuel de résultat de l’attribution totale::TimeSeries avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Identification associant l’attribution à un ensemble de spécifications créé par l’opérateur de vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	BidDocument_MarketDocument	BidDocument_MarketDocument	Identification du document comportant les offres ou ventes référencées dans la BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[1..1]	Contract_MarketAgreement	MarketAgreement	Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L’importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. L’allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l’énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l’énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

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## 6.10 Modèle d'assemblage de résultat de l'attribution totale

### 6.10.1 Présentation du modèle

La Figure 18 présente le modèle.

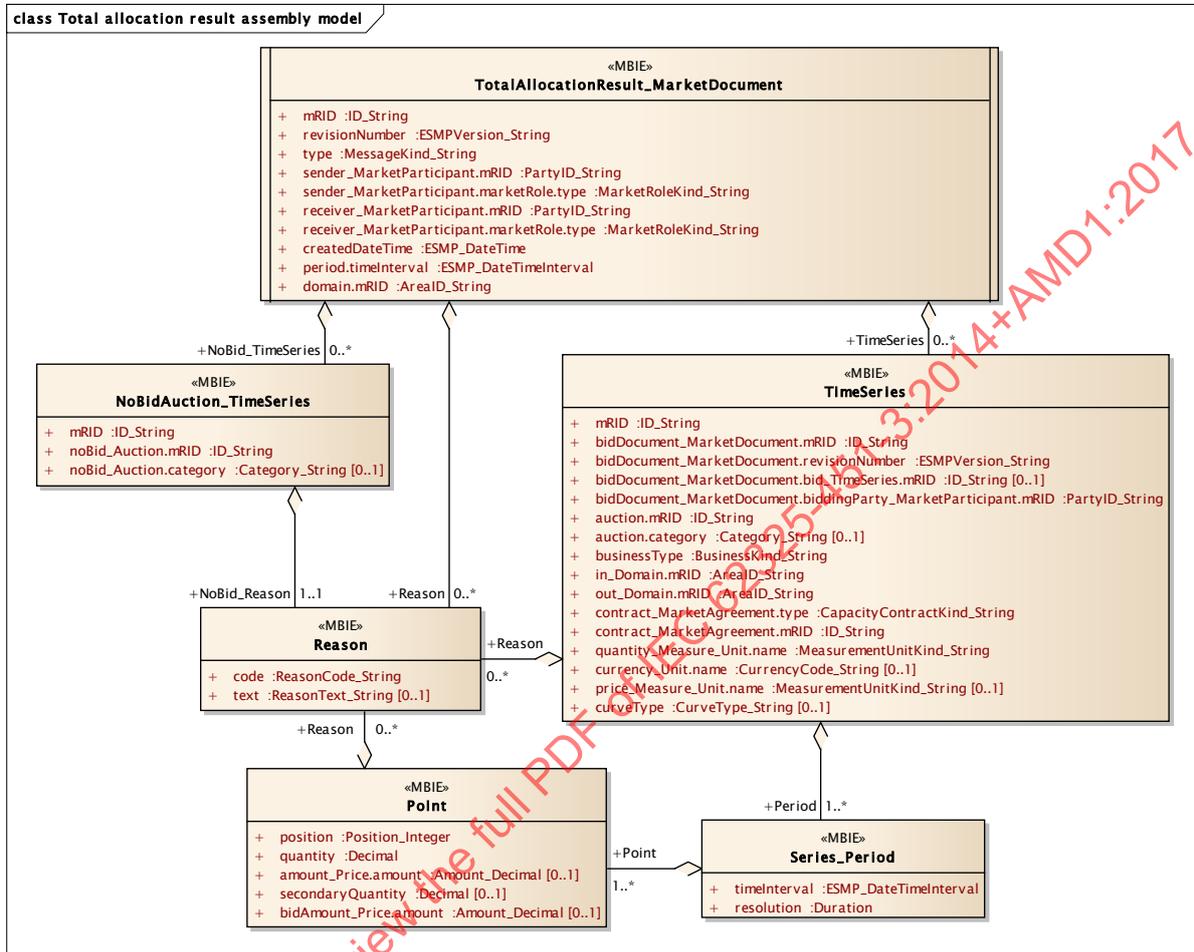


Figure 18 – Modèle d'assemblage de résultat de l'attribution totale

### 6.10.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 149 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 149 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
NoBidAuction_TimeSeries	Modèle contextuel de résultat de l'attribution totale::NoBidAuction_TimeSeries	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale
Point	Modèle contextuel de résultat de l'attribution totale::Point	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale
Reason	Modèle contextuel de résultat de l'attribution totale::Reason	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale
Series_Period	Modèle contextuel de résultat de l'attribution totale::Series_Period	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale
TimeSeries	Modèle contextuel de résultat de l'attribution totale::TimeSeries	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale
TotalAllocationResult_MarketDocument	Modèle contextuel de résultat de l'attribution totale::TotalAllocationResult_MarketDocument	Document de résultat de l'attribution totale\Modèle contextuel de résultat de l'attribution totale

### 6.10.3 Description détaillée du Modèle d'assemblage de résultat de l'attribution totale

#### 6.10.3.1 Classe racine TotalAllocationResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le document de résultat de l'attribution totale comprend les résultats de la vente aux enchères pour tous les soumissionnaires avec les mêmes informations de granularité que dans le document de résultat de l'attribution.

IsBasedOn: Modèle contextuel de résultat de l'attribution totale::TotalAllocationResult\_MarketDocument

Le Tableau 150 montre tous les attributs de TotalAllocationResult\_MarketDocument.

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**Tableau 150 – Attributs du Modèle d’assemblage de résultat de l’attribution totale::TotalAllocationResult\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	domain.mRID	ArealID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document, c’est-à-dire la frontière.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d’un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d’un document sous forme codée. Le type d’un document décrit la caractéristique principale du document.

Le Tableau 151 montre toutes les extrémités d’association de TotalAllocationResult\_MarketDocument avec d’autres classes

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**Tableau 151 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution totale::TotalAllocationResult\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	Cette série chronologique spécifique est à utiliser lorsqu’aucune offre n’est soumise au cours d’une vente aux enchères. Dans ce cas, la série chronologique fournit l’identification de la vente aux enchères annulée. Une classe Reason est à fournir avec la valeur correspondant à l’information "pas d’offre". Association Based On: Modèle contextuel de résultat de l’attribution totale::NoBidAuction_TimeSeries.NoBid_TimeSeries[0..*] ----- Modèle contextuel de résultat de l’attribution totale::TotalAllocationResult_MarketDocument.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution totale::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l’attribution totale::TotalAllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel de résultat de l’attribution totale::TimeSeries.TimeSeries[0..*] ----- Modèle contextuel de résultat de l’attribution totale::TotalAllocationResult_MarketDocument.[]

### 6.10.3.2 NoBidAuction\_TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel de résultat de l’attribution totale::NoBidAuction\_TimeSeries

Le Tableau 152 montre tous les attributs de NoBidAuction\_TimeSeries.

**Tableau 152 – Attributs du Modèle d’assemblage de résultat de l’attribution totale::NoBidAuction\_TimeSeries**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[0..1]	noBid_Auction.category	Category_String	Catégorie de produit dans une vente aux enchères. --- Fournit l’identification de vente aux enchères en l’absence de soumission d’offre.
[1..1]	noBid_Auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Fournit l’identification de vente aux enchères en l’absence de soumission d’offre.

Le Tableau 153 montre toutes les extrémités d’association de NoBidAuction\_TimeSeries avec d’autres classes.

**Tableau 153 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution totale::NoBidAuction\_TimeSeries avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	NoBid_Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution totale::Reason.NoBid_Reason[1..1] ----- Modèle contextuel de résultat de l’attribution totale::NoBidAuction_TimeSeries.[]

### 6.10.3.3 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de résultat de l’attribution totale::Point

Le Tableau 154 montre tous les attributs de Point.

**Tableau 154 – Attributs du Modèle d’assemblage de résultat de l’attribution totale::Point.**

mult.	Nom d’attribut	Type d’attribut	Description
[0..1]	amount_Price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix exprimé pour chaque unité de grandeur attribuée.
[0..1]	bidAmount_Price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix initial exprimé dans l’offre d’origine ou revente pour chaque unité de grandeur demandée.
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.
[0..1]	secondaryQuantity	Decimal	Grandeur qui figurait dans le document d’offre d’origine. Grandeur secondaire identifiée à un point.

Le Tableau 155 montre toutes les extrémités d’association de Point avec d’autres classes.

**Tableau 155 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution totale::Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution totale::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l’attribution totale::Point.[]

### 6.10.3.4 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel de résultat de l’attribution totale::Reason

Le Tableau 156 montre tous les attributs de Reason.

**Tableau 156 – Attributs du Modèle d’assemblage de résultat de l’attribution totale::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.10.3.5 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de résultat de l’attribution totale::Series\_Period

Le Tableau 157 montre tous les attributs de Series\_Period.

**Tableau 157 – Attributs du Modèle d’assemblage de résultat de l’attribution totale::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 158 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 158 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution totale::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de résultat de l’attribution totale::Point.Point[1..*] ----- Modèle contextuel de résultat de l’attribution totale::Series_Period.[]

### 6.10.3.6 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel de résultat de l’attribution totale::TimeSeries

Le Tableau 159 montre tous les attributs de TimeSeries.

**Tableau 159 – Attributs du Modèle d'assemblage de résultat de l'attribution totale::TimeSeries.**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	auction.category	Category_String	Catégorie de produit dans une vente aux enchères. --- Identification associant l'attribution à un ensemble de spécifications créé par l'opérateur de vente aux enchères.
[1..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification associant l'attribution à un ensemble de spécifications créé par l'opérateur de vente aux enchères.
[0..1]	bidDocument_MarketDocument.bidTimeSeries.mRID	ID_String	Identification unique de la série chronologique. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries. --- Identification de la série chronologique utilisée dans l'offre d'origine ou la revente. Il s'agit du numéro unique attribué par le soumissionnaire pour son offre d'origine ou revente.
[1..1]	bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries. --- Identification du soumissionnaire pour la capacité ou sa revente.
[1..1]	bidDocument_MarketDocument.mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries.
[1..1]	bidDocument_MarketDocument.revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre. --- Identification du document comportant les offres ou reventes référencées dans la BidTimeSeries.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[1..1]	contract_MarketAgreement.mRID	ID_String	Identification unique de l'accord. --- Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. L'allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser.

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	contract_MarketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier. --- Le type de contrat définit les conditions dans lesquelles la capacité de transport a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées, spécifiques aux zones intérieure et extérieure. L'allocateur de capacité de transport responsable de la zone des ventes aux enchères définit le type de contrat à utiliser.
[0..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW.

Le Tableau 160 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 160 – Extrémités d’association du Modèle d’assemblage de résultat de l’attribution totale::TimeSeries avec d’autres classes**

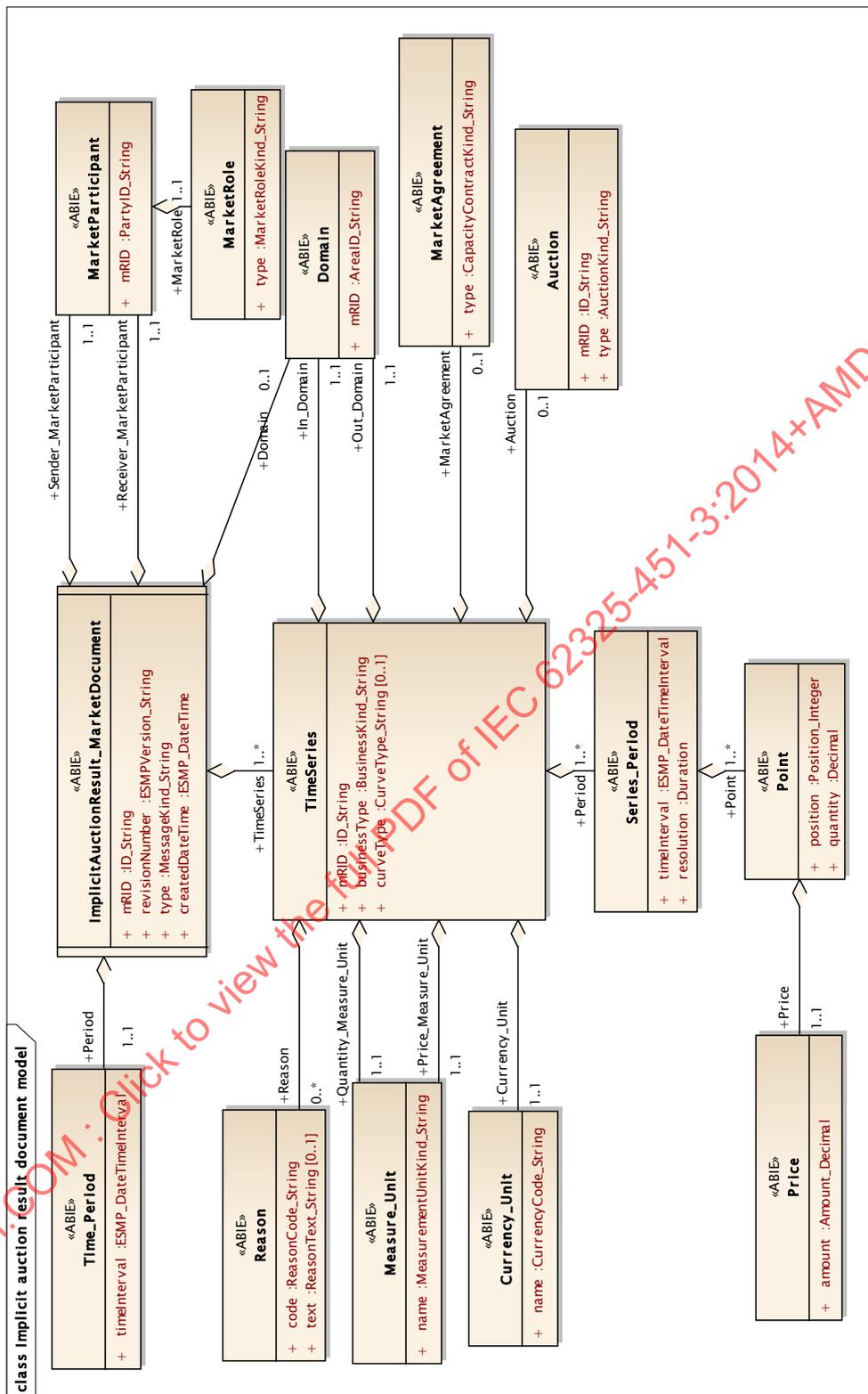
mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel de résultat de l’attribution totale::Series_Period.Period[1..*] ----- Modèle contextuel de résultat de l’attribution totale::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de l’attribution totale::Reason.Reason[0..*] ----- Modèle contextuel de résultat de l’attribution totale::TimeSeries.[]

## 6.11 Modèle contextuel de résultat de vente aux enchères implicite

### 6.11.1 Présentation du modèle

La Figure 19 présente le modèle.

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Figure 19 – Modèle contextuel de résultat de vente aux enchères implicite

### 6.11.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 161 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 161 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
ImplicitAuctionResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.11.3 Description détaillée du Modèle contextuel de résultat de vente aux enchères implicite

#### 6.11.3.1 Classe racine ImplicitAuctionResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Un document de résultat de vente aux enchères implicite est émis par l'opérateur du marché à la fin d'un cycle de mise aux enchères spécifique ou par le gestionnaire de réseau une fois les valeurs NTC convenues. Il peut s'agir de ventes aux enchères annuelles, mensuelles ou journalières, en plus des ventes aux enchères intrajournalières.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 162 montre tous les attributs de ImplicitAuctionResult\_MarketDocument.

**Tableau 162 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::ImplicitAuctionResult\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 163 montre toutes les extrémités d'association de ImplicitAuctionResult\_MarketDocument avec d'autres classes.

**Tableau 163 – Extrémités d'association du Modèle contextuel de résultat de vente aux enchères implicite::ImplicitAuctionResult\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Domain	Domain	Domaine couvert dans le cadre du document de résultat de vente aux enchères implicite. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document de résultat de vente aux enchères implicite. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.11.3.2 Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 164 montre tous les attributs de Auction.

**Tableau 164 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.
[1..1]	type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...).

### 6.11.3.3 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 165 montre tous les attributs de Currency\_Unit.

**Tableau 165 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

#### 6.11.3.4 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 166 montre tous les attributs de Domain.

**Tableau 166 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	AreaID_String	Identification unique du domaine.

#### 6.11.3.5 MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 167 montre tous les attributs de MarketAgreement.

**Tableau 167 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

#### 6.11.3.6 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 168 montre tous les attributs de MarketParticipant.

**Tableau 168 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 169 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 169 – Extrémités d'association du Modèle contextuel de résultat de vente aux enchères implicite::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.11.3.7 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 170 montre tous les attributs de MarketRole.

**Tableau 170 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.11.3.8 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 171 montre tous les attributs de Measure\_Unit.

**Tableau 171 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU).

### 6.11.3.9 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 172 montre tous les attributs de Point.

**Tableau 172 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Cette information définit la grandeur mise aux enchères pendant l'intervalle considéré et qui est exprimée dans la grandeur de l'unité de mesure. Grandeur principale identifiée à un point.

Le Tableau 173 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 173 – Extrémités d'association du Modèle contextuel de résultat de vente aux enchères implicite::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Price	Price	Cette information définit le prix exprimé dans l'unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Pour les prix du marché, le prix fourni est toujours le prix InArea Un prix peut être négatif lorsqu'il indique la différence entre les prix du marché de la zone intérieure et de la zone extérieure. Différence de prix calculée selon la formule suivante: InArea – OutArea. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.11.3.10 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 174 montre tous les attributs de Price.

**Tableau 174 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Price**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

### 6.11.3.11 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 175 montre tous les attributs de Reason.

**Tableau 175 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.11.3.12 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 176 montre tous les attributs de Series\_Period.

**Tableau 176 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 177 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 177 – Extrémités d'association du Modèle contextuel de résultat de vente aux enchères implicite::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.11.3.13 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 178 montre tous les attributs de Time\_Period.

**Tableau 178 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

#### 6.11.3.14 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 179 montre tous les attributs de TimeSeries.

**Tableau 179 – Attributs du Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 180 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

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**Tableau 180 – Extrémités d'association du Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Auction	Auction	Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..1]	MarketAgreement	MarketAgreement	Le type de contrat définit les conditions dans lesquelles la capacité a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, Contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé par unité de devise (MW par unité, MWh par unité, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.12 Modèle d'assemblage de résultat de vente aux enchères implicite

### 6.12.1 Présentation du modèle

La Figure 20 présente le modèle.

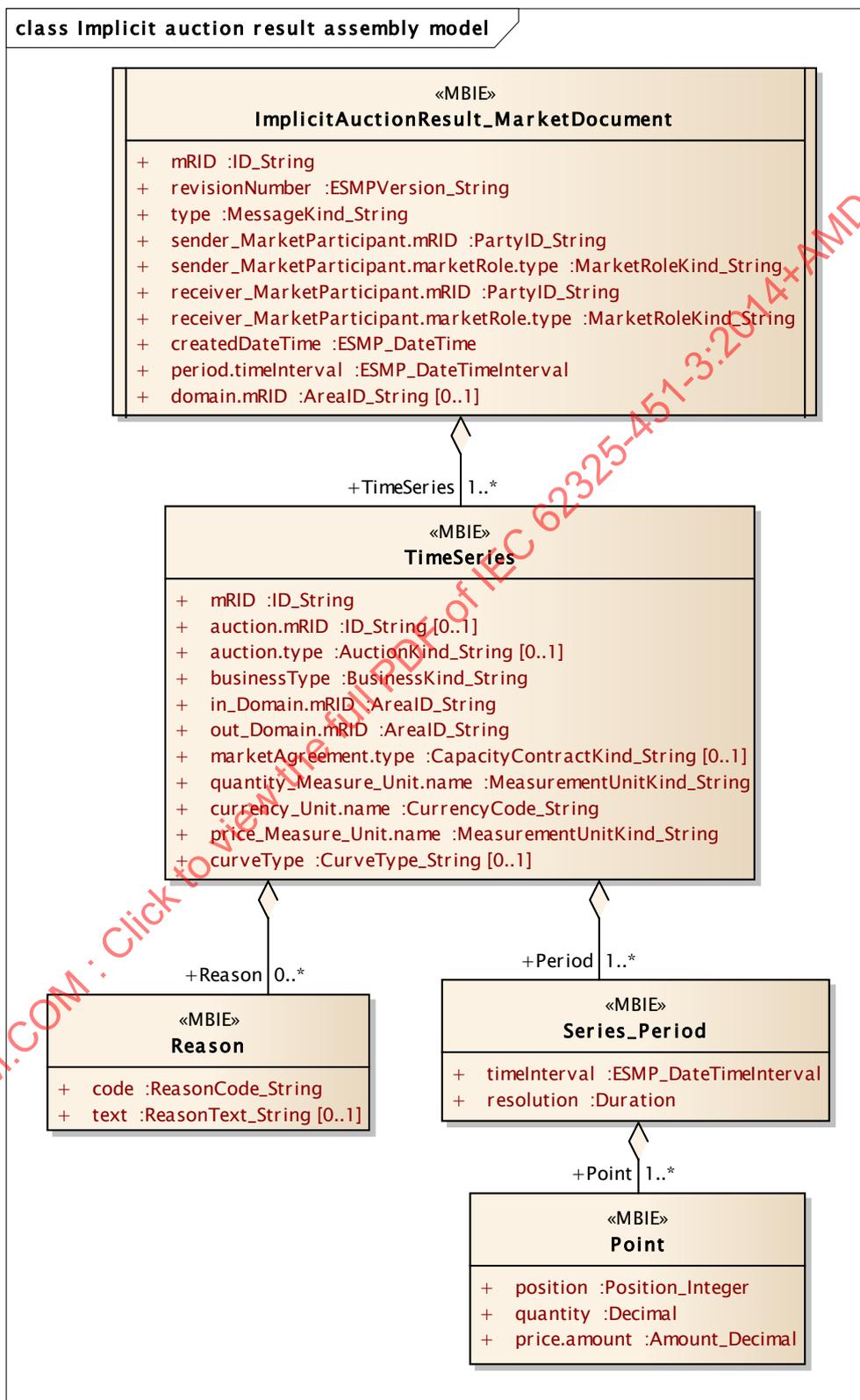


Figure 20 – Modèle d'assemblage de résultat de vente aux enchères implicite

## 6.12.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 181 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 181 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
ImplicitAuctionResult_MarketDocument	Modèle contextuel de résultat de vente aux enchères implicite::ImplicitAuctionResult_MarketDocument	Document de résultat de vente aux enchères implicite\Modèle contextuel de résultat de vente aux enchères implicite
Point	Modèle contextuel de résultat de vente aux enchères implicite::Point	Document de résultat de vente aux enchères implicite \Modèle contextuel de résultat de vente aux enchères implicite
Reason	Modèle contextuel de résultat de vente aux enchères implicite::Reason	Document de résultat de vente aux enchères implicite \Modèle contextuel de résultat de vente aux enchères implicite
Series_Period	Modèle contextuel de résultat de vente aux enchères implicite::Series_Period	Document de résultat de vente aux enchères implicite \Modèle contextuel de résultat de vente aux enchères implicite
TimeSeries	Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries	Document de résultat de vente aux enchères implicite \Modèle contextuel de résultat de vente aux enchères implicite

## 6.12.3 Description détaillée du Modèle d'assemblage de résultat de vente aux enchères implicite

### 6.12.3.1 Classe racine ImplicitAuctionResult\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Un document de résultat de vente aux enchères implicite est émis par l'opérateur du marché à la fin d'un cycle de mise aux enchères spécifique ou par le gestionnaire de réseau une fois les valeurs NTC convenues. Il peut s'agir de ventes aux enchères annuelles, mensuelles ou journalières, en plus des ventes aux enchères intrajournalières.

IsBasedOn: Modèle contextuel de résultat de vente aux enchères implicite::ImplicitAuctionResult\_MarketDocument

Le Tableau 182 montre tous les attributs de ImplicitAuctionResult\_MarketDocument.

**Tableau 182 – Attributs du Modèle d’assemblage de résultat de vente aux enchères implicite::ImplicitAuctionResult\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[0..1]	domain.mRID	ArealID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document de résultat de vente aux enchères implicite.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d’un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document de résultat de vente aux enchères implicite.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d’un document sous forme codée. Le type d’un document décrit la caractéristique principale du document.

Le Tableau 183 montre toutes les extrémités d’association de ImplicitAuctionResult\_MarketDocument avec d’autres classes.

**Tableau 183 – Extrémités d’association du Modèle d’assemblage de résultat de vente aux enchères implicite::ImplicitAuctionResult\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries.TimeSeries[1..*] ----- Modèle contextuel de résultat de vente aux enchères implicite::ImplicitAuctionResult_MarketDocument.[]

### 6.12.3.2 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de résultat de vente aux enchères implicite::Point

Le Tableau 184 montre tous les attributs de Point.

**Tableau 184 – Attributs du Modèle d’assemblage de résultat de vente aux enchères implicite::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Cette information définit le prix exprimé dans l’unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Pour les prix du marché, le prix fourni est toujours le prix InArea Un prix peut être négatif lorsqu’il indique la différence entre les prix du marché de la zone intérieure et de la zone extérieure. Différence de prix calculée selon la formule suivante: InArea – OutArea.
[1..1]	quantity	Decimal	Cette information définit la grandeur mise aux enchères pendant l’intervalle considéré et qui est exprimée dans la grandeur de l’unité de mesure. Grandeur principale identifiée à un point.

### 6.12.3.3 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel de résultat de vente aux enchères implicite::Reason

Le Tableau 185 montre tous les attributs de Reason.

**Tableau 185 – Attributs du Modèle d’assemblage de résultat de vente aux enchères implicite::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.12.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de résultat de vente aux enchères implicite::Series\_Period

Le Tableau 186 montre tous les attributs de Series\_Period.

**Tableau 186 – Attributs du Modèle d’assemblage de résultat de vente aux enchères implicite::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 187 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 187 – Extrémités d’association du Modèle d’assemblage de résultat de vente aux enchères implicite::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de résultat de vente aux enchères implicite::Point.Point[1..*] ----- Modèle contextuel de résultat de vente aux enchères implicite::Series_Period.[]

#### 6.12.3.5 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries

Le Tableau 188 montre tous les attributs de TimeSeries.

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**Tableau 188 – Attributs du Modèle d'assemblage de résultat de vente aux enchères implicite::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique.
[0..1]	auction.type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...). --- Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[1..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[0..1]	marketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier. --- Le type de contrat définit les conditions dans lesquelles la capacité a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, Contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé par unité de devise (MW par unité, MWh par unité, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW.

Le Tableau 189 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 189 – Extrémités d’association du Modèle d’assemblage de résultat de vente aux enchères implicite::TimeSeries avec d’autres classes**

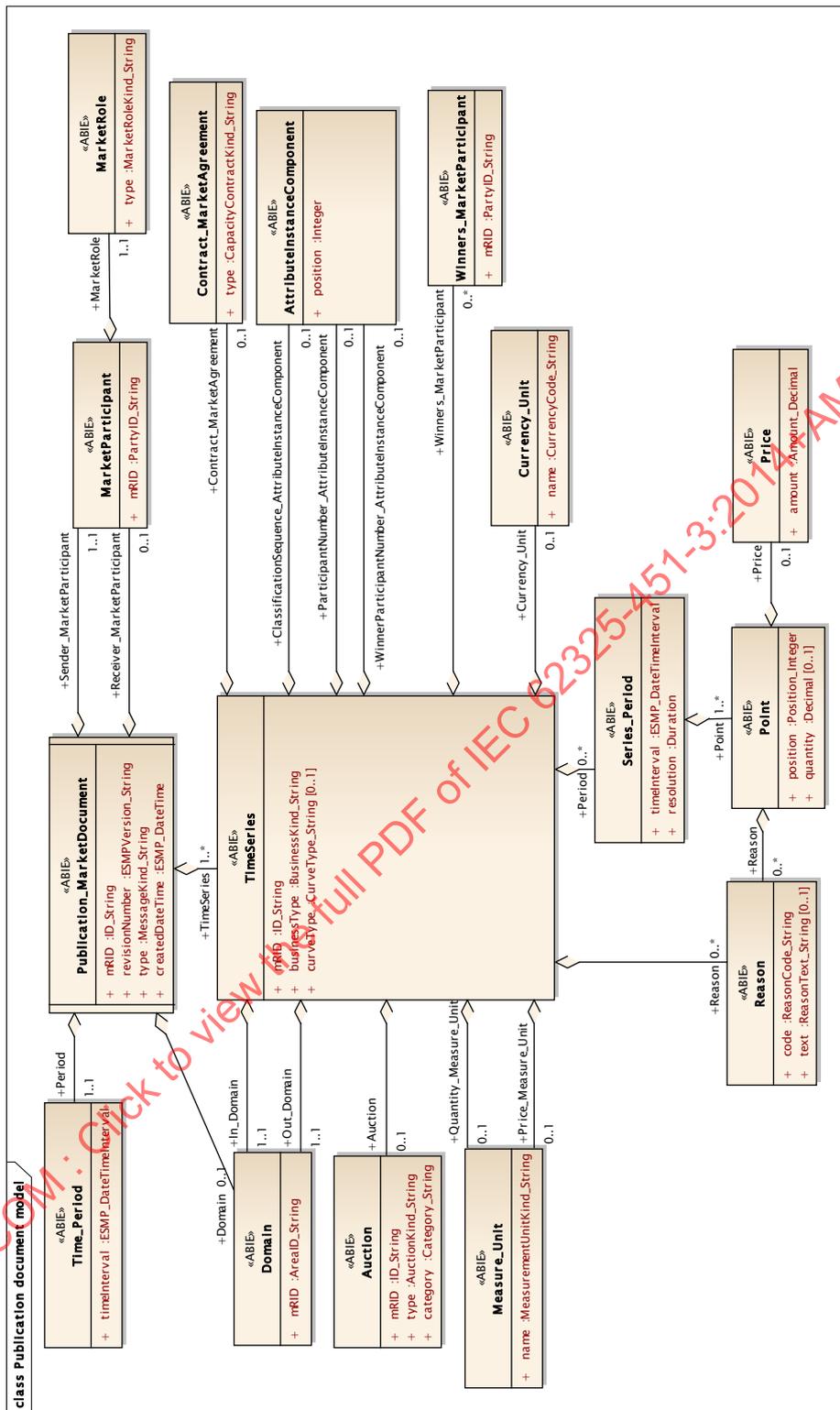
mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel de résultat de vente aux enchères implicite::Series_Period.Period[1..*] ----- Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de résultat de vente aux enchères implicite::Reason.Reason[0..*] ----- Modèle contextuel de résultat de vente aux enchères implicite::TimeSeries.[]

### 6.13 Modèle contextuel de publication

#### 6.13.1 Présentation du modèle

La Figure 21 présente le modèle.

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Figure 21 – Modèle contextuel de publication

### 6.13.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 190 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 190 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Publication_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Winners_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses

### 6.13.3 Description détaillée du Modèle contextuel de publication

#### 6.13.3.1 Classe racine Publication\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Un document de publication est émis par l'allocateur de capacité de transport à la fin d'un cycle de mise aux enchères spécifique ou par le gestionnaire de réseau une fois les valeurs NTC convenues.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 191 montre tous les attributs de Publication\_MarketDocument.

**Tableau 191 – Attributs du Modèle contextuel de publication::Publication\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 192 montre toutes les extrémités d'association de Publication\_MarketDocument avec d'autres classes.

**Tableau 192 – Extrémités d'association du Modèle contextuel de publication::Publication\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Domain	Domain	Domaine couvert dans le cadre du document de publication Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document de publication. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.13.3.2 AttributeInstanceComponent

Classe utilisée pour fournir des informations sur un attribut.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Le Tableau 193 montre tous les attributs de AttributeInstanceComponent.

**Tableau 193 – Attributs du Modèle contextuel de publication::AttributeInstanceComponent**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Integer	Valeur séquentielle représentant un numéro de séquence relatif.

### 6.13.3.3 Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 194 montre tous les attributs de Auction.

**Tableau 194 – Attributs du Modèle contextuel de publication::Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	category	Category_String	Catégorie de produit dans une vente aux enchères.
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.
[1..1]	type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...).

#### 6.13.3.4 Contract\_MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 195 montre tous les attributs de Contract\_MarketAgreement.

**Tableau 195 – Attributs du Modèle contextuel de publication::Contract\_MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

#### 6.13.3.5 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 196 montre tous les attributs de Currency\_Unit.

**Tableau 196 – Attributs du Modèle contextuel de publication::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

#### 6.13.3.6 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 197 montre tous les attributs de Domain.

**Tableau 197 – Attributs du Modèle contextuel de publication::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ArealID_String	Identification unique du domaine.

### 6.13.3.7 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 198 montre tous les attributs de MarketParticipant.

**Tableau 198 – Attributs du Modèle contextuel de publication::  
 MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 199 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 199 – Extrémités d'association du Modèle contextuel de  
 publication::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.13.3.8 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 200 montre tous les attributs de MarketRole.

**Tableau 200 – Attributs du Modèle contextuel de publication::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.13.3.9 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 201 montre tous les attributs de Measure\_Unit.

**Tableau 201 – Attributs du Modèle contextuel de publication::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU).

### 6.13.3.10 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 202 montre tous les attributs de Point.

**Tableau 202 – Attributs du Modèle contextuel de publication::Point**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[0..1]	quantity	Decimal	Grandeur mise aux enchères pendant l'intervalle considéré. Grandeur principale identifiée à un point.

Le Tableau 203 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 203 – Extrémités d'association du Modèle contextuel de publication::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Price	Price	Prix exprimé en devise par unité de mesure de prix. Cette information définit le prix exprimé dans l'unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Un prix peut être négatif lorsqu'il indique la différence entre les prix du marché de la zone intérieure et de la zone extérieure. Le prix est obligatoire dans le cas de ventes aux enchères de capacité et ne doit pas être fourni dans le cas d'attributions basées sur les règles selon les règles locales du marché. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.13.3.11 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 204 montre tous les attributs de Price.

**Tableau 204 – Attributs du Modèle contextuel de publication::Price**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

### 6.13.3.12 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 205 montre tous les attributs de Reason.

**Tableau 205 – Attributs du Modèle contextuel de publication::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.13.3.13 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 206 montre tous les attributs de Series\_Period.

**Tableau 206 – Attributs du Modèle contextuel de publication::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 207 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 207 – Extrémités d'association du Modèle contextuel de publication::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.13.3.14 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 208 montre tous les attributs de Time\_Period.

**Tableau 208 – Attributs du Modèle contextuel de publication::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

### 6.13.3.15 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 209 montre tous les attributs de TimeSeries.

**Tableau 209 – Attributs du Modèle contextuel de publication::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 210 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 210 – Extrémités d'association du Modèle contextuel de publication::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Auction	Auction	Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ClassificationSequence_AttributeInstanceComponent	AttributeInstanceComponent	Séquence d'une série chronologique dans une catégorie de vente aux enchères et un type de contrat donnés. Une séquence de classification n'est fournie que dans le cas de plusieurs ventes aux enchères dans la même catégorie et le même type de contrat. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]

mult.	Rôle	Nom de type de classe	Description
[0..1]	Contract_MarketAgreement	Contract_MarketAgreement	Le type de contrat définit les conditions dans lesquelles la capacité a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..1]	ParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	Nombre de participants à la vente aux enchères. N'est fourni que si les règles de vente aux enchères l'autorisent. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé par unité de devise (MW par unité, MWh par unité, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les grandeurs de la série chronologique sont exprimées, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

mult.	Rôle	Nom de type de classe	Description
[0..1]	WinnerParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	Nombre de soumissionnaires retenus dans la vente aux enchères. Cette information n'est fournie que si les règles de vente aux enchères l'autorisent. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	Identification des participants au marché ayant obtenu quelque chose à la vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.13.3.16 Winners\_MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 211 montre tous les attributs de Winners\_MarketParticipant.

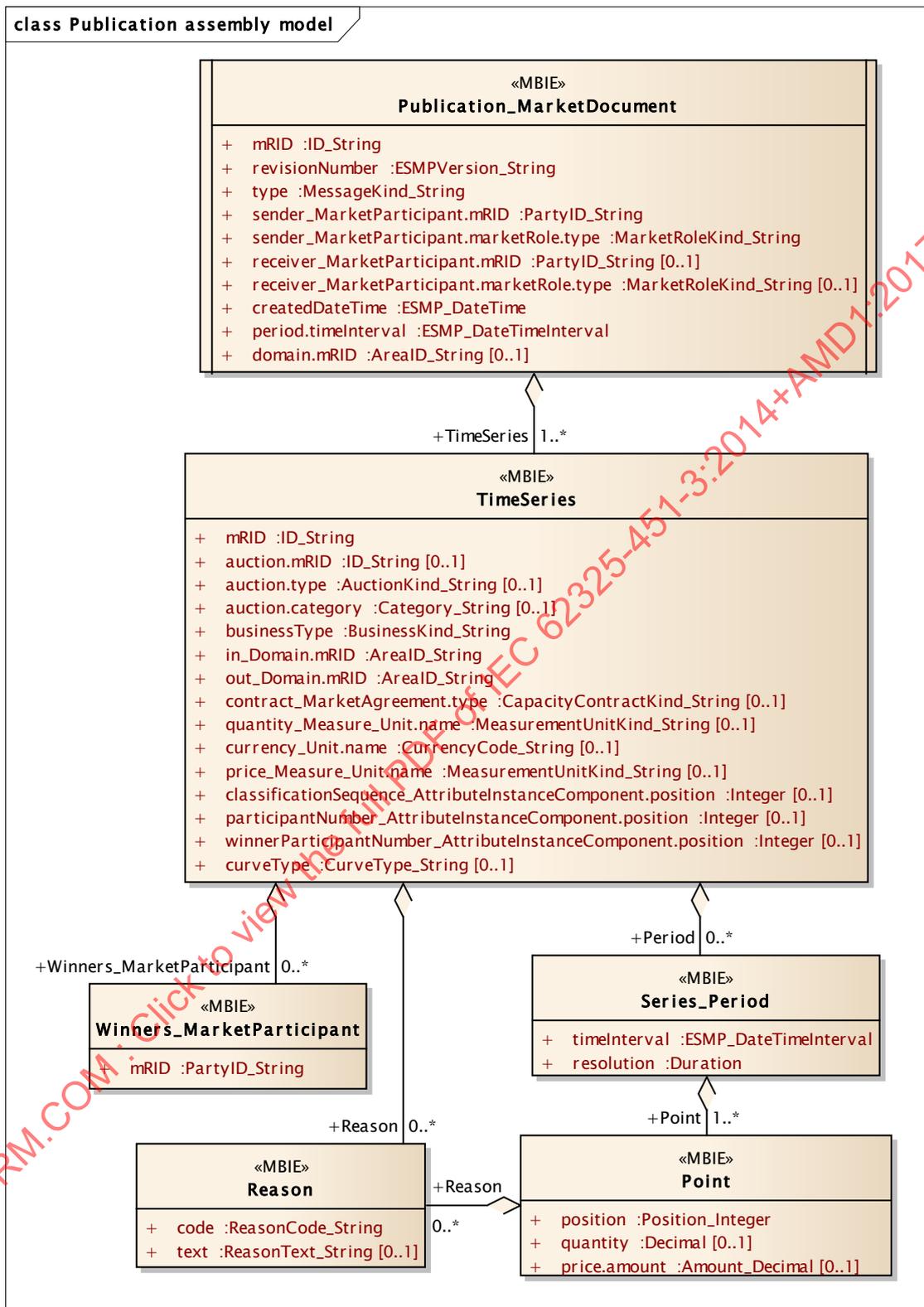
**Tableau 211 – Attributs du Modèle contextuel de publication::Winners\_MarketParticipant.**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

## 6.14 Modèle d'assemblage de publication

### 6.14.1 Présentation du modèle

La Figure 22 présente le modèle.



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Figure 22 – Modèle d'assemblage de publication

### 6.14.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 212 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 212 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Point	Modèle contextuel de publication::Point	Document de publication\Modèle contextuel de publication
Publication_MarketDocument	Modèle contextuel de publication::Publication_MarketDocument	Document de publication \Modèle contextuel de publication
Reason	Modèle contextuel de publication::Reason	Document de publication \Modèle contextuel de publication
Series_Period	Modèle contextuel de publication::Series_Period	Document de publication \Modèle contextuel de publication
TimeSeries	Modèle contextuel de publication::TimeSeries	Document de publication \Modèle contextuel de publication
Winners_MarketParticipant	Modèle contextuel de publication::Winners_MarketParticipant	Document de publication \Modèle contextuel de publication

### 6.14.3 Description détaillée du Modèle d'assemblage de publication

#### 6.14.3.1 Classe racine Publication\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Un document de publication est émis par l'allocateur de capacité de transport à la fin d'un cycle de mise aux enchères spécifique ou par le gestionnaire de réseau une fois les valeurs NTC convenues.

IsBasedOn: Modèle contextuel de publication::Publication\_MarketDocument

Le Tableau 213 montre tous les attributs de Publication\_MarketDocument.

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**Tableau 213 – Attributs du Modèle d’assemblage de publication::Publication\_MarketDocument**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[0..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document de publication
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d’un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d’un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document de publication.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d’un acteur du marché de l’énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d’un document sous forme codée. Le type d’un document décrit la caractéristique principale du document.

Le Tableau 214 montre toutes les extrémités d’association de Publication\_MarketDocument avec d’autres classes.

**Tableau 214 – Extrémités d’association du Modèle d’assemblage de publication::Publication\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel de publication::TimeSeries.TimeSeries[1..*] ----- Modèle contextuel de publication::Publication_MarketDocument.[]

### 6.14.3.2 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel de publication::Point

Le Tableau 215 montre tous les attributs de Point.

**Tableau 215 – Attributs du Modèle d’assemblage de publication::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[0..1]	price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix exprimé en devise par unité de mesure de prix. Cette information définit le prix exprimé dans l’unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Un prix peut être négatif lorsqu’il indique la différence entre les prix du marché de la zone intérieure et de la zone extérieure. Le prix est obligatoire dans le cas de ventes aux enchères de capacité et ne doit pas être fourni dans le cas d’attributions basées sur les règles selon les règles locales du marché.
[0..1]	quantity	Decimal	Grandeur mise aux enchères pendant l’intervalle considéré. Grandeur principale identifiée à un point.

Le Tableau 216 montre toutes les extrémités d’association de Point avec d’autres classes.

**Tableau 216 – Extrémités d’association du Modèle d’assemblage de publication::Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de publication::Reason.Reason[0..*] ----- Modèle contextuel de publication::Point.[]

### 6.14.3.3 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel de publication::Reason

Le Tableau 217 montre tous les attributs de Reason.

**Tableau 217 – Attributs du Modèle d’assemblage de publication::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.14.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel de publication::Series\_Period

Le Tableau 218 montre tous les attributs de Series\_Period.

**Tableau 218 – Attributs du Modèle d’assemblage de publication::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 219 montre toutes les extrémités d’association de Series\_Period avec d’autres classes.

**Tableau 219 – Extrémités d’association du Modèle d’assemblage de publication::Series\_Period avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel de publication::Point.Point[1..*] ----- Modèle contextuel de publication::Series_Period.[]

#### 6.14.3.5 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel de publication::TimeSeries

Le Tableau 220 montre tous les attributs de TimeSeries.

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**Tableau 220 – Attributs du Modèle d'assemblage de publication::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	auction.category	Category_String	Catégorie de produit dans une vente aux enchères. --- Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique.
[0..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique.
[0..1]	auction.type	AuctionKind_String	Type de vente aux enchères (par exemple, implicite, explicite, ...). --- Identification unique de l'ensemble de spécifications qui définit clairement le processus d'attribution correspondant à la série chronologique.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	classificationSequence_AttributeInstanceComponent.position	Integer	Valeur séquentielle représentant un numéro de séquence relatif. --- Séquence d'une série chronologique dans une catégorie de vente aux enchères et un type de contrat donnés. Une séquence de classification n'est fournie que dans le cas de plusieurs ventes aux enchères dans la même catégorie et le même type de contrat.
[0..1]	contract_MarketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier. --- Le type de contrat définit les conditions dans lesquelles la capacité a été attribuée et traitée, par exemple: vente aux enchères journalière, vente aux enchères hebdomadaire, vente aux enchères mensuelle, vente aux enchères annuelle, contrat à long terme, etc. L'importance de ce type dépend des méthodes de travail codées spécifiques aux zones intérieure et extérieure.
[0..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[0..1]	participantNumber_AttributeInstanceComponent.position	Integer	Valeur séquentielle représentant un numéro de séquence relatif. --- Nombre de participants à la vente aux enchères. N'est fourni que si les règles de vente aux enchères l'autorisent.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé par unité de devise (MW par unité, MWh par unité, etc.).
[0..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle les grandeurs de la série chronologique sont exprimées, par exemple MAW.
[0..1]	winnerParticipantNumber_AttributeInstanceComponent.position	Integer	Valeur séquentielle représentant un numéro de séquence relatif. --- Nombre de soumissionnaires retenus dans la vente aux enchères. Cette information n'est fournie que si les règles de vente aux enchères l'autorisent.

Le Tableau 221 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 221 – Extrémités d'association du Modèle d'assemblage de publication::TimeSeries avec d'autres classes**

mult	Rôle	Nom de type de classe	Description
[0..*]	Period	Series_Period	Association Based On: Modèle contextuel de publication::Series_Period.Period[0..*] ----- Modèle contextuel de publication::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel de publication::Reason.Reason[0..*] ----- Modèle contextuel de publication::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	Identification des participants au marché ayant obtenu quelque chose à la vente aux enchères. Association Based On: Publication contextuel modèle::Winners_MarketParticipant.Winners_MarketParticipant[0..*] ----- Modèle contextuel de publication::TimeSeries.[]

### 6.14.3.6 Winners\_MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: Modèle contextuel de publication:: Winners\_MarketParticipant

Le Tableau 222 montre tous les attributs de Winners\_MarketParticipant.

**Tableau 222 – Attributs du Modèle d'assemblage de publication::Winners\_MarketParticipant.**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

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## 6.15 Modèle contextuel des droits

### 6.15.1 Présentation du modèle

La Figure 23 présente le modèle.

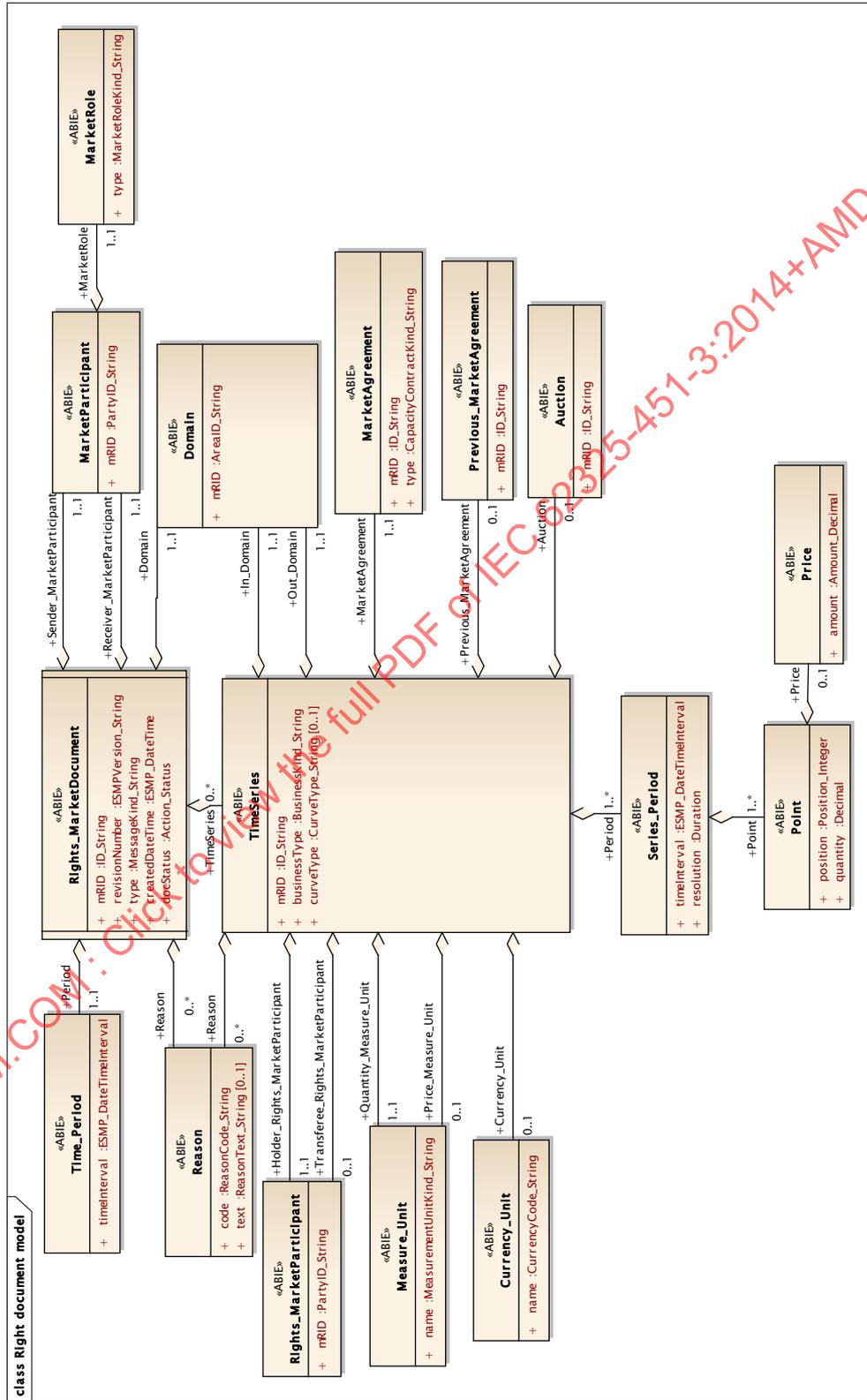


Figure 23 – Modèle contextuel des droits

### 6.15.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 223 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 223 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Previous_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Rights_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Rights_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.15.3 Description détaillée du Modèle contextuel des droits

#### 6.15.3.1 Classe racine Rights\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le document de droits peut être transmis par un négociant de capacité pour informer le bureau d'enchères d'un transfert de droits.

Il peut également être transmis par le bureau d'enchères pour informer le validateur de nomination des parties détenant des droits de transport pendant une période donnée.

Le validateur de nomination peut également utiliser ce document pour informer un responsable d'échange d'interconnexion des droits qu'il peut utiliser pour la nomination.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 224 montre tous les attributs de Rights\_MarketDocument.

**Tableau 224 – Attributs du Modèle contextuel des droits::Rights\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	docStatus	Action_Status	Identification de la condition ou de la position du document par rapport à son statut.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 225 montre toutes les extrémités d'association de Rights\_MarketDocument avec d'autres classes.

**Tableau 225 – Extrémités d'association du Modèle contextuel des droits::Rights\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document de droits. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.15.3.2 Auction

Identification d'une spécification formelle d'un produit d'énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 226 montre tous les attributs de Auction.

**Tableau 226 – Attributs du Modèle contextuel des droits::Auction**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.15.3.3 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 227 montre tous les attributs de Currency\_Unit.

**Tableau 227 – Attributs du Modèle contextuel des droits::Currency\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217).

### 6.15.3.4 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 228 montre tous les attributs de Domain.

**Tableau 228 – Attributs du Modèle contextuel des droits::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ArealID_String	Identification unique du domaine.

### 6.15.3.5 MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 229 montre tous les attributs de MarketAgreement.

**Tableau 229 – Attributs du Modèle contextuel des droits::MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de l'accord.
[1..1]	type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

### 6.15.3.6 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 230 montre tous les attributs de MarketParticipant.

**Tableau 230 – Attributs du Modèle contextuel des droits::MarketParticipant.**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 231 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 231 – Extrémités d'association du Modèle contextuel des droits::MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.15.3.7 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 232 montre tous les attributs de MarketRole.

**Tableau 232 – Attributs du Modèle contextuel des droits::MarketRole**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.15.3.8 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d'autres grandeurs similaires afin d'exprimer leur importance par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 233 montre tous les attributs de Measure\_Unit.

**Tableau 233 – Attributs du Modèle contextuel des droits::Measure\_Unit**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU).

### 6.15.3.9 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 234 montre tous les attributs de Point.

**Tableau 234 – Attributs du Modèle contextuel des droits::Point.**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Cette information définit la grandeur qui a été attribuée à la partie de nomination pendant l'intervalle considéré et qui est exprimée dans l'unité de mesure. Grandeur principale identifiée à un point.

Le Tableau 235 montre toutes les extrémités d'association de Point avec d'autres classes.

**Tableau 235 – Extrémités d'association du Modèle contextuel des droits::Point avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Price	Price	Prix exprimé pour chaque unité de grandeur comme le prix minimal vente. Prix indiqué dans un document de revente égal ou supérieur à la valeur à laquelle la grandeur peut être vendue. Cette information définit le prix exprimé dans l'unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Le montant est obligatoire dans le cas de la revente de capacité à un prix minimal selon les règles locales du marché. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.15.3.10 Previous\_MarketAgreement

Accord formel entre deux parties définissant les termes et conditions pour un ensemble de services. Les spécificités des services sont à leur tour définies par un ou plusieurs accords de service.

IsBasedOn: ESMPClasses::MarketAgreement

Le Tableau 236 montre tous les attributs de Previous\_MarketAgreement.

**Tableau 236 – Attributs du Modèle contextuel des droits::Previous\_MarketAgreement**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de l'accord.

#### 6.15.3.11 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 237 montre tous les attributs de Price.

**Tableau 237 – Attributs du Modèle contextuel des droits::Price.**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

#### 6.15.3.12 Reason

Motivation d'un acte.

IsBasedOn: ESMPClasses::Reason

Le Tableau 238 montre tous les attributs de Reason.

**Tableau 238 – Attributs du Modèle contextuel des droits::Reason**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	code	ReasonCode_String	Motivation d'un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

#### 6.15.3.13 Rights\_MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 239 montre tous les attributs de Rights\_MarketParticipant.

**Tableau 239 – Attributs du Modèle contextuel des droits::Rights\_MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

### 6.15.3.14 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 240 montre tous les attributs de Series\_Period.

**Tableau 240 – Attributs du Modèle contextuel des droits::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 241 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 241 – Extrémités d'association du Modèle contextuel des droits::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.15.3.15 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 242 montre tous les attributs de Time\_Period.

**Tableau 242 – Attributs du Modèle contextuel des droits::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

### 6.15.3.16 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: ESMPClasses::TimeSeries

Le Tableau 243 montre tous les attributs de TimeSeries.

**Tableau 243 – Attributs du Modèle contextuel des droits::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 244 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 244 – Extrémités d'association du Modèle contextuel des droits::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Auction	Auction	Identification associant les droits de capacité à un ensemble de spécifications créé par l'allocateur de capacité de transport. Identification unique de l'ensemble de spécifications qui définit clairement la vente aux enchères pour laquelle les droits de capacité soumis par le négociant de capacité sont à remettre aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Holder_Rights_MarketParticipant	Rights_MarketParticipant	Identification de la partie qui détient ou qui dispose du droit d'utiliser les droits de transport considérés. Si les droits sont transférés, le détenteur des droits est l'auteur du transfert des droits. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	In_Domain	Domain	Zone dans laquelle l'énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	MarketAgreement	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l'énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Previous_MarketAgreement	Previous_MarketAgreement	Identification d'un précédent contrat utilisé pour identifier les droits de transfert. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé (MW par unité, MWh par unité, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Transferee_Rights_MarketParticipant	Rights_MarketParticipant	Identification de la partie à laquelle les droits sont transférés ou du Responsable d'échange d'interconnexion désigné par l'auteur du transfert (tel que désigné par l'attribut RightsHolder) pour utiliser les droits. Dans certains cas, le destinataire du transfert agit également comme Responsable d'échange d'interconnexion. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

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## 6.16 Modèle d'assemblage de droits

### 6.16.1 Présentation du modèle

La Figure 24 présente le modèle.

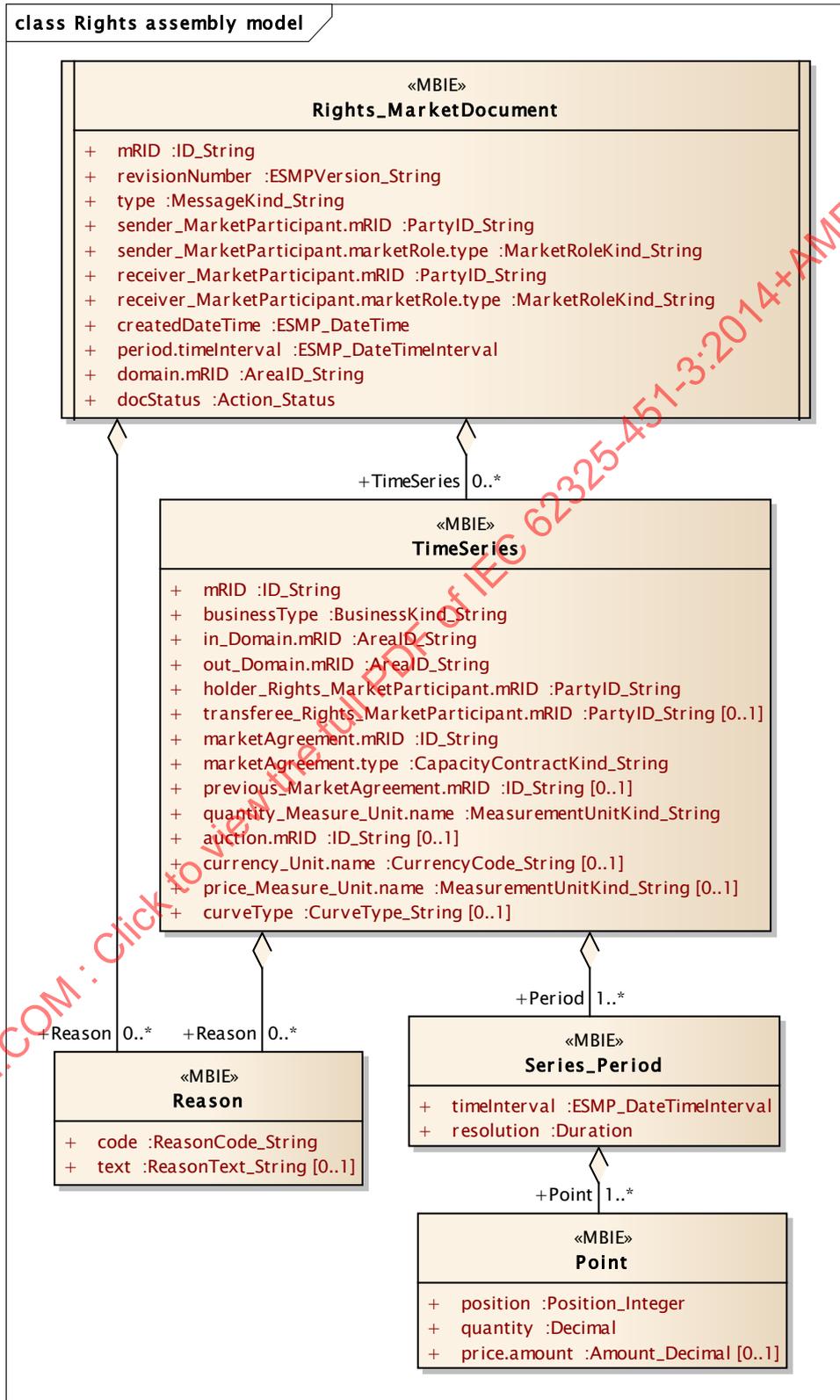


Figure 24 – Modèle d'assemblage de droits

### 6.16.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 245 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 245 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Point	Modèle contextuel des droits::Point	Document de droits\Modèle contextuel des droits
Reason	Modèle contextuel des droits::Reason	Document de droits \Modèle contextuel des droits
Rights_MarketDocument	Modèle contextuel des droits::Rights_MarketDocument	Document de droits \Modèle contextuel des droits
Series_Period	Modèle contextuel des droits::Series_Period	Document de droits \Modèle contextuel des droits
TimeSeries	Modèle contextuel des droits::TimeSeries	Document de droits \Modèle contextuel des droits

### 6.16.3 Description détaillée du Modèle d'assemblage de droits

#### 6.16.3.1 Classe racine Rights\_MarketDocument

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

Le document de droits peut être transmis par un négociant de capacité pour informer le bureau d'enchères d'un transfert de droits.

Il peut également être transmis par le bureau d'enchères pour informer le validateur de nomination des parties détenant des droits de transport pendant une période donnée.

Le validateur de nomination peut également utiliser ce document pour informer un responsable d'échange d'interconnexion des droits qu'il peut utiliser pour la nomination.

IsBasedOn: Modèle contextuel des droits::Rights\_MarketDocument

Le Tableau 246 montre tous les attributs de Rights\_MarketDocument.

**Tableau 246 – Attributs du Modèle d'assemblage de droits::Rights\_MarketDocument**

mult	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	docStatus	Action_Status	Identification de la condition ou de la position du document par rapport à son statut.
[1..1]	domain.mRID	AreaID_String	Identification unique du domaine. --- Domaine couvert dans le cadre du document de droits.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné. --- Date et heure de début et de fin de la période couverte par le document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Destinataire du document.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Destinataire du document.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché. --- Propriétaire du document.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Propriétaire du document.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 247 montre toutes les extrémités d'association de Rights\_MarketDocument avec d'autres classes.

**Tableau 247 – Extrémités d'association du Modèle d'assemblage de droits::Rights\_MarketDocument avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Reason	Reason	Association Based On: Modèle contextuel des droits::Reason.Reason[0..*] ----- Modèle contextuel des droits::Rights_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Modèle contextuel des droits::TimeSeries.TimeSeries[0..*] ----- Modèle contextuel des droits::Rights_MarketDocument.[]

### 6.16.3.2 Point

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: Modèle contextuel des droits::Point

Le Tableau 248 montre tous les attributs de Point.

**Tableau 248 – Attributs du Modèle d’assemblage de droits::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[0..1]	price.amount	Amount_Decimal	Nombre d’unités monétaires spécifié dans une unité de devise. --- Prix exprimé pour chaque unité de grandeur comme le prix minimal de vente. Prix indiqué dans un document de revente égal ou supérieur à la valeur à laquelle la grandeur peut être vendue. Cette information définit le prix exprimé dans l’unité de mesure du prix par unité de grandeur conformément à la structure de prix basée sur les règles locales du marché. Le montant est obligatoire dans le cas de la revente de capacité à un prix minimal selon les règles locales du marché.
[1..1]	quantity	Decimal	Cette information définit la grandeur qui a été attribuée à la partie de nomination pendant l’intervalle considéré et qui est exprimée dans l’unité de mesure. Grandeur principale identifiée à un point.

### 6.16.3.3 Reason

Motivation d’un acte.

IsBasedOn: Modèle contextuel des droits::Reason

Le Tableau 249 montre tous les attributs de Reason.

**Tableau 249 – Attributs du Modèle d’assemblage de droits::Reason**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	code	ReasonCode_String	Motivation d’un acte sous forme codée.
[0..1]	text	ReasonText_String	Explication textuelle correspondant au code de cause.

### 6.16.3.4 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: Modèle contextuel des droits::Series\_Period

Le Tableau 250 montre tous les attributs de Series\_Period.

**Tableau 250 – Attributs du Modèle d’assemblage de droits::Series\_Period**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	resolution	Duration	Définition du nombre d’unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 251 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 251 – Extrémités d'association du Modèle d'assemblage de droits::Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: Modèle contextuel des droits::Point.Point[1..*] ----- Modèle contextuel des droits::Series_Period.[]

### 6.16.3.5 TimeSeries

Ensemble de grandeurs chronologiques échangées relatives à un produit.

IsBasedOn: Modèle contextuel des droits::TimeSeries

Le Tableau 252 montre tous les attributs de TimeSeries.

**Tableau 252 – Attributs du Modèle d'assemblage de droits::TimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[0..1]	auction.mRID	ID_String	Identification unique de la vente aux enchères. --- Identification associant les droits de capacité à un ensemble de spécifications créé par l'allocateur de capacité de transport. Identification unique de l'ensemble de spécifications qui définit clairement la vente aux enchères pour laquelle les droits de capacité soumis par le négociant de capacité sont à remettre aux enchères.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[0..1]	currency_Unit.name	CurrencyCode_String	Identification du code formel d'une devise (ISO 4217). --- Devise dans laquelle le montant en numéraire est exprimé.
[0..1]	curveType	CurveType_String	Identification de la représentation codée du type de courbe décrit.
[1..1]	holder_Rights_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Identification de la partie qui détient ou qui dispose du droit d'utiliser les droits de transport considérés. Si les droits sont transférés, le détenteur des droits est l'auteur du transfert des droits.
[1..1]	in_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone dans laquelle l'énergie est à fournir.
[1..1]	marketAgreement.mRID	ID_String	Identification unique de l'accord.
[1..1]	marketAgreement.type	CapacityContractKind_String	Spécification du type d'accord, par exemple, contrat à long terme, contrat journalier.

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	ID_String	Identification unique de la série chronologique.
[1..1]	out_Domain.mRID	AreaID_String	Identification unique du domaine. --- Zone de laquelle l'énergie provient.
[0..1]	previous_MarketAgreement.mRID	ID_String	Identification unique de l'accord. --- Identification d'un précédent contrat utilisé pour identifier les droits de transfert.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure dans laquelle le prix de la série chronologique est exprimé (MW par unité, MWh par unité, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	Identification du code formel d'une unité de mesure (Recommandation 20 de la CEE-ONU). --- Unité de mesure appliquée aux grandeurs dans laquelle la série chronologique est exprimée, par exemple MAW.
[0..1]	transferee_Rights_MarketParticipant.mRID	PartyID_String	Identification d'un acteur du marché de l'énergie. --- Identification de la partie à laquelle les droits sont transférés ou du Responsable d'échange d'interconnexion désigné par l'auteur du transfert (tel que désigné par l'attribut RightsHolder) pour utiliser les droits. Dans certains cas, le destinataire du transfert agit également comme Responsable d'échange d'interconnexion.

Le Tableau 253 montre toutes les extrémités d'association de TimeSeries avec d'autres classes.

**Tableau 253 – Extrémités d'association du Modèle d'assemblage de droits::TimeSeries avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Period	Series_Period	Association Based On: Modèle contextuel des droits::Series_Period.Period[1..*] ----- Modèle contextuel des droits::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Modèle contextuel des droits::Reason.Reason[0..*] ----- Modèle contextuel des droits::TimeSeries.[]

## 7 Schéma XML

### 7.1 Règles applicables à l'espace de nom (namespace)URN de schéma XML

Afin de fournir un moyen stable et générique de déclaration d'un URN pour les schémas XML du profil de marché de style européen, l'espace de nom se compose comme suit:

**urn:iec62325.351:tc57wg16:<process>:<document>:<version>:<release>**

où:

- iec62325.351 doit constituer le fondement de tous les espaces de noms de schémas XML du profil de marché de style européen.
- tc57wg16 identifie l'organisme ou le groupe d'organismes au sein de l'IEC qui détient l'objet référencé. Dans le cas du Comité technique (TC) 57, ceci doit être le Groupe de travail (WG) 16.
- <process> identifie le processus spécifique où se situe l'objet, par exemple la partie des normes IEC 62325 dans laquelle est défini le schéma XML, par exemple 451-1, 451-2, 451-3, etc.
- <document> identifie le schéma du document électronique.
- <version> identifie la version du schéma du document.
- <release> identifie l'édition du schéma du document.

Chaque schéma XML qui représente un document électronique doit avoir un nom d'espace par défaut correspondant à l'espace de nom qui identifie le document et respecte la construction de l'espace de nom URI ci-dessus.

Chaque schéma XML qui représente un document électronique doit avoir un targetNamespace correspondant à l'espace de nom par défaut.

Chaque schéma XML doit avoir un elementFormDefault "qualified" ("qualifié").

Chaque schéma XML doit avoir un attributeFormDefault "unqualified" ("non qualifié").

### 7.2 Règles applicables à l'espace de nom (namespace) des listes de codes URN

Dans le cas de la bibliothèque des listes de codes qui doit être utilisée pour le profil de marché de style européen, l'URN doit se composer comme suit  
**urn:entsoe.eu:wgedi:codelists.**

### 7.3 Règles applicables à l'URI pour la documentation des modèles

#### 7.3.1 Type de données (Datatype)

Dans le cas de la bibliothèque des types de données de base qui doit être utilisée pour le profil de marché de style européen, l'URI doit utiliser le sawsdl:modelReference comme suit:

**http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[datatype-name]**

où:

- <CIM-version-year> est l'année d'édition de la version CIM utilisée pour générer le profil de marché.
- <cimxx> est le nom de la version du CIM.
- [datatype-name] est le nom du type de données ou de la primitive CIM.

EXEMPLES:

<http://iec.ch/TC57/2012/CIM-schema-cim16#String>

<http://iec.ch/TC57/2012/CIM-schema-cim16#Money>

### 7.3.2 Classe

Dans le cas de la bibliothèque des classes de base qui doit être utilisée pour le profil de marché de style européen, l'URI doit utiliser le sawsdl:modelReference comme suit:

**[http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#\[class-name\]](http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name])**

où:

- <CIM-version-year> est l'année d'édition de la version CIM utilisée pour générer le profil de marché
- <cimxx> est le nom de la version du CIM
- [class-name] est le nom de la classe du CIM

EXEMPLE: <http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries>

### 7.3.3 Attribut

Dans le cas de la bibliothèque des attributs de base qui doit être utilisée pour le profil de marché de style européen, l'URI doit utiliser le sawsdl:modelReference comme suit:

**[http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#\[class-name\].\[attribute-name\]](http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[attribute-name])**

où:

- <CIM-version-year> est l'année d'édition de la version CIM utilisée pour générer le profil de marché
- <cimxx> est le nom de la version du CIM
- [class-name] est le nom de la classe du CIM
- [attribute-name] est le nom d'un attribut de classe

EXEMPLE:

<http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries.product>

### 7.3.4 Nom de rôle d'extrémité d'association

Dans le cas de la bibliothèque des associations de base qui doit être utilisée pour le profil de marché de style européen, l'URI doit utiliser le sawsdl:modelReference comme suit:

**[http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#\[class-name\].\[association-end-role-name\]](http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[association-end-role-name])**

où:

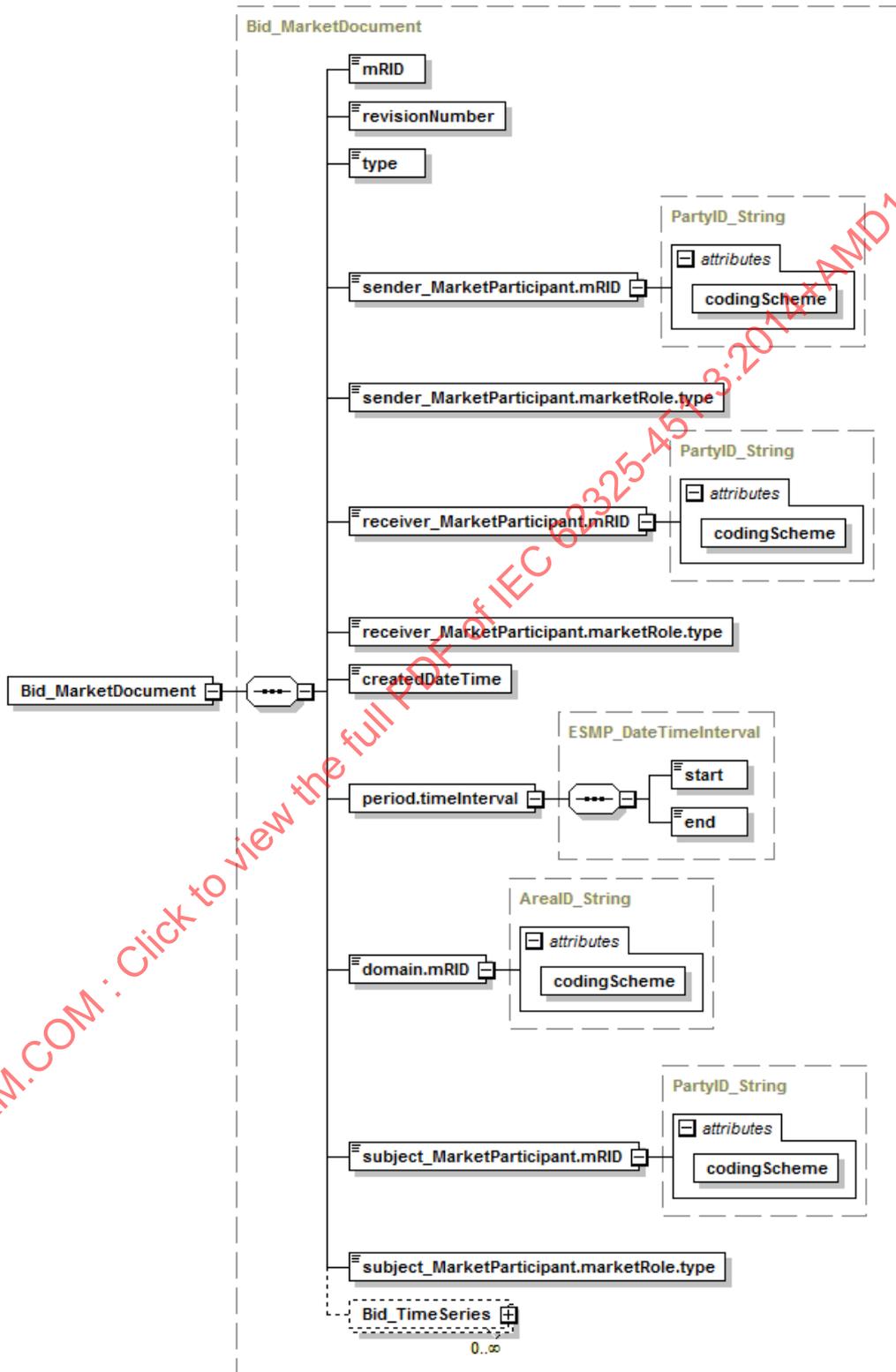
- <CIM-version-year> est l'année d'édition de la version CIM utilisée pour générer le profil de marché
- <cimxx> est le nom de la version du CIM
- [class-name] est le nom de la classe du CIM
- [association-end-role-name]

EXEMPLE: <http://iec.ch/TC57/2012/CIM-schema-cim16#MarketDocument.TimeSeries>

## 7.4 Schéma Bid\_MarketDocument

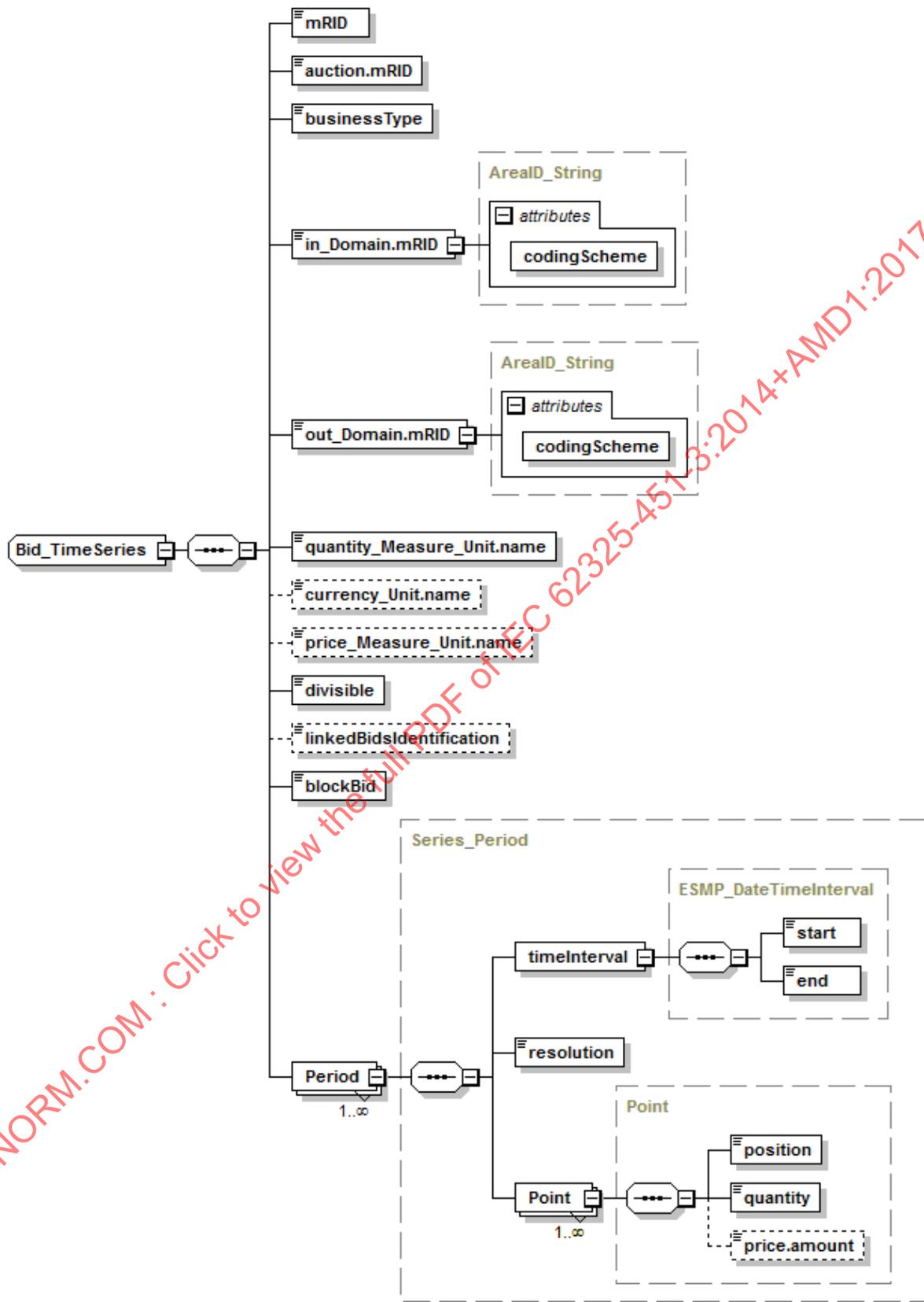
### 7.4.1 Structure du schéma

La Figure 25 et la Figure 26 montrent la structure du schéma.



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Figure 25 – Structure du schéma XML Bid\_MarketDocument – 1/2



IEC 2159/14

Figure 26 – Structure du schéma XML Bid\_MarketDocument – 2/2

## 7.4.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:bidocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:bidocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe.eu-wgedi-codelists.xsd"/>
  <xs:element name="Bid_MarketDocument" type="Bid_MarketDocument"/>
  <xs:simpleType name="ID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="(((0-9){4}[\-]([\-] (0[13578]|1[02])[\-] (0[1-9]|12|[0-3]):[0-5][0-9]:[0-5][0-9])Z|(((13579)[26][02468][048]|13579)[01345789] (0)[48]|13579)[01345789][2468][048]|102468)[048][02468][048]|02468)[1235679] (0)[48]|02468)[1235679][2468][048]|0[0-9][0-9][13579][26][\-] (02)[\-] (0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579)[01345789] (0)[01235679]|13579)[01345789][2468][1235679]|02468)[048][02468][1235679]|02468)[1235679] (0)[01235679]|02468)[1235679][2468][1235679]|0[0-9][0-9][13579][01345789])[\-] (02)[\-] (0[1-9]|1[0-9]|2[0-8])T((01)[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
```

```
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30))T((([01][0-
9]|2[0-3]):[0-5][0-
9])Z)|((([13579][26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|0[0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9])Z)|((([13579][26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|02468[123
5679][2468][1235679]|0[0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Bid_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
    <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
    <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subject_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subject_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="Bid_TimeSeries" type="Bid_TimeSeries"
minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Bid_TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:IndicatorTypeList"/>
</xs:simpleType>
<xs:complexType name="Bid_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="divisible" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.divisible"/>
    <xs:element name="linkedBidsIdentification" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.linkedBidsIdentification"/>
    <xs:element name="blockBid" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#BidTimeSeries.blockBid"/>
  </xs:sequence>
</xs:complexType>
</xs:sequence>
</xs:complexType>
```

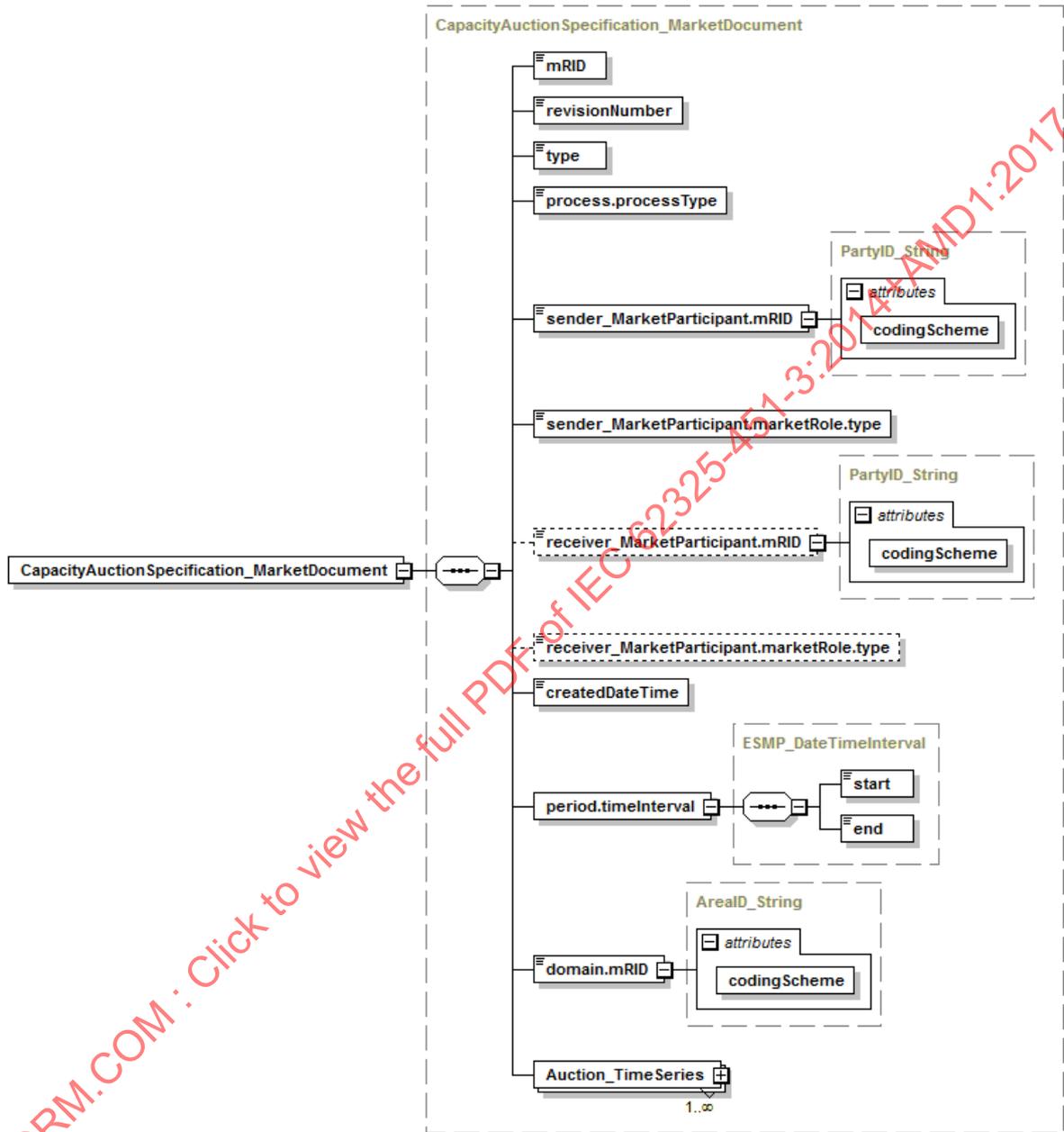
```
<xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#BidTimeSeries.Period"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.5 Schéma de CapacityAuctionSpecification\_MarketDocument

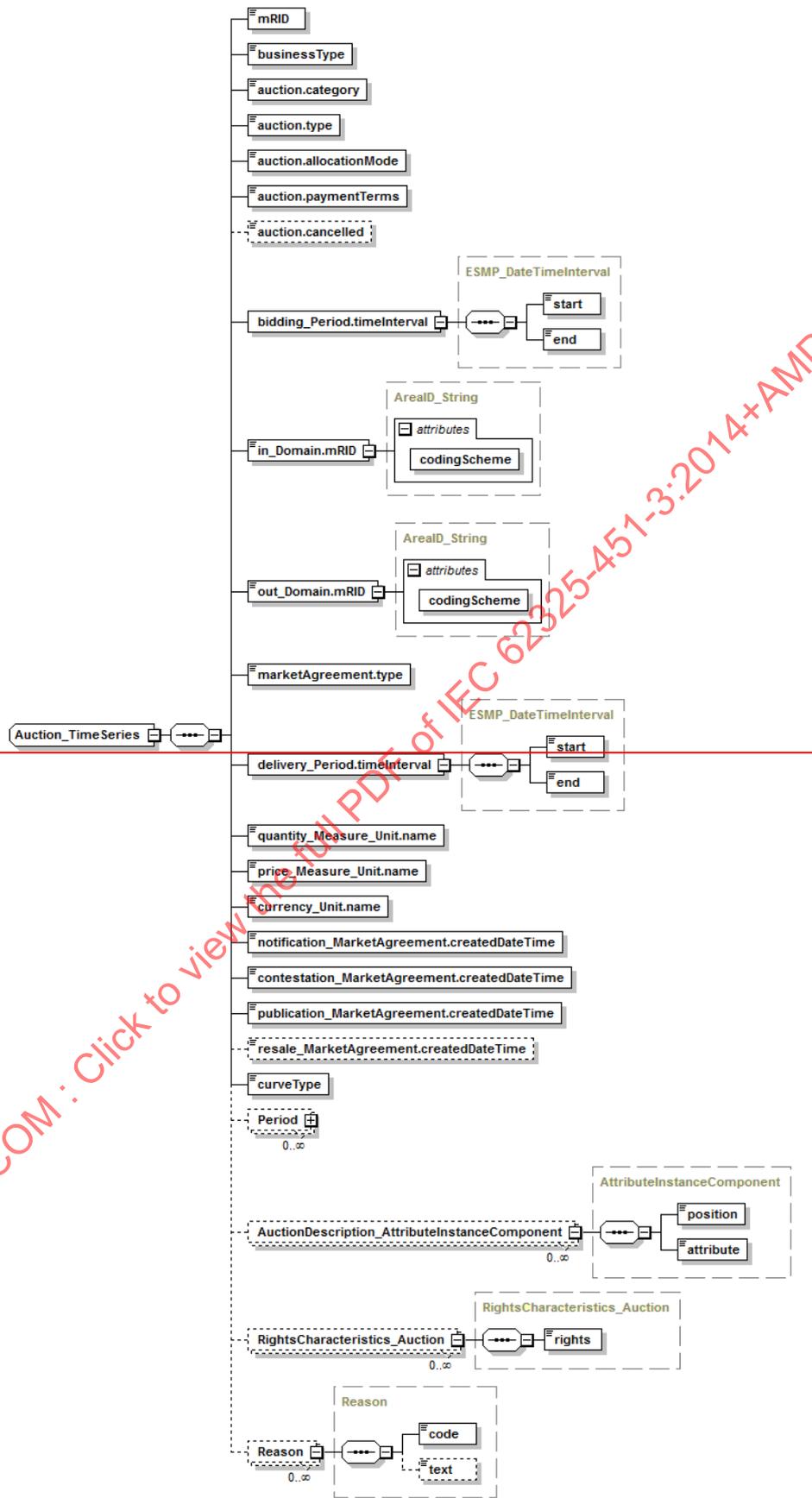
### 7.5.1 Structure du schéma

La Figure 27 et la Figure 28 montrent la structure du schéma.

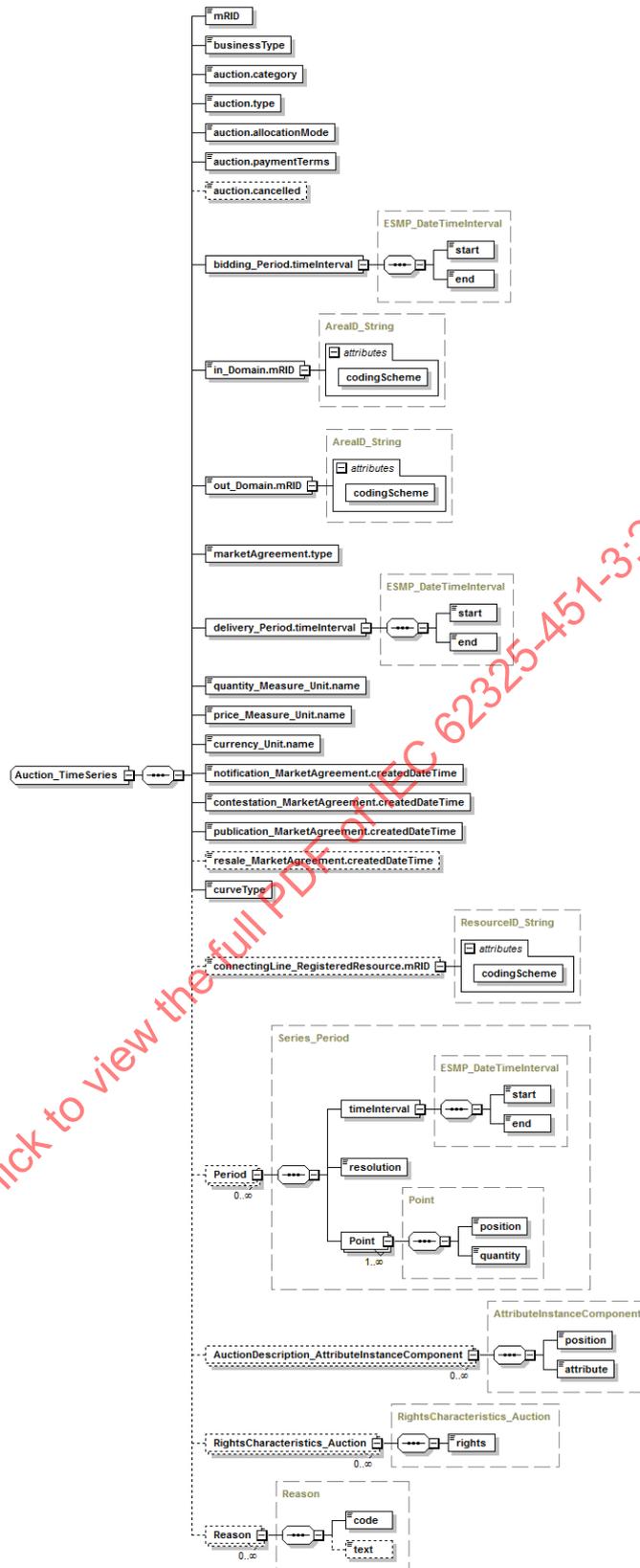


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Figure 27 – Structure du schéma XML  
CapacityAuctionSpecification\_MarketDocument – 1/2



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Figure 28 – Structure du schéma XML  
 CapacityAuctionSpecification\_MarketDocument – 2/2

## 7.5.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:capacityspecificationdocument:7:01" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacityspecificationdocument:7:01"
elementFormDefault="qualified" attributeFormDefault="unqualified">
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="CapacityAuctionSpecification_MarketDocument"
type="CapacityAuctionSpecification_MarketDocument"/>
  <xs:complexType name="AttributeInstanceComponent"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#AttributeInstanceComponent">
    <xs:sequence>
      <xs:element name="position" type="xs:integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#AttributeInstanceComponent.position"/>
      <xs:element name="attribute" type="xs:string" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#AttributeInstanceComponent.attribute"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:BusinessTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AuctionTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AllocationMode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AllocationModeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PaymentTerms_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:PaymentTermsTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:IndicatorTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>

```

```
        </xs:simpleContent>
      </xs:complexType>
      <xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="cl:ContractTypeList"/>
      </xs:simpleType>
      <xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="cl:UnitOfMeasureTypeList"/>
      </xs:simpleType>
      <xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="cl:CurrencyTypeList"/>
      </xs:simpleType>
      <xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="cl:CurveTypeList"/>
      </xs:simpleType>
      <xs:simpleType name="ResourceID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="xs:string">
          <xs:maxLength value="18" />
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:simpleContent>
          <xs:extension base="ResourceID_String-base">
            <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
      <xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
        <xs:restriction base="xs:string">
          <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-
9]|12)[0-9]|3[01]) | (([0-9]{4}) [\-] (0[469]) | (11)) [\-] (0[1-9]|12)[0-9]|30))T((([01][0-
9]|2[0-3]):[0-5][0-
9])Z) | ((([13579][26][02468][048]) | [13579][01345789] (0)[48] | [13579][01345789][2468][048]
|[02468][048][02468][048] | [02468][1235679] (0)[48] | [02468][1235679][2468][048] | [0-
9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9])Z) | ((([13579][26][02468][1235679] | [13579][01345789] (0)[01235679] | [13579][01345789][
2468][1235679] | [02468][048][02468][1235679] | [02468][1235679] (0)[01235679] | [02468][123
5679][2468][1235679] | [0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-
8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
        <xs:sequence>
          <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
          <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="Auction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
        <xs:sequence>
          <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
          <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>

```

```
<xs:element name="auction.category" type="Category_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
  <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
    <xs:element name="auction.allocationMode"
type="AllocationMode_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.allocationMode"/>
      <xs:element name="auction.paymentTerms"
type="PaymentTerms_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.paymentTerms"/>
        <xs:element name="auction.cancelled" type="ESMPBoolean_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.cancelled"/>
          <xs:element name="bidding_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
            <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
              <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
                <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
                  <xs:element name="delivery_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
                    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                      <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                        <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
                          <xs:element name="notification_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                            <xs:element name="contestation_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                                <xs:element name="publication_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                                    <xs:element name="resale_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
                                        <xs:element name="curveType" type="CurveType_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
                                            <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID">
</xs:element>
<xs:element name="Period" type="Series_Period" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.Period"/>
```

```
<xs:element name="AuctionDescription_AttributeInstanceComponent"
type="AttributeInstanceComponent" minOccurs="0" maxOccurs="unbounded"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.AuctionDescription_AttributeInstanceComponent"/>
  <xs:element name="RightsCharacteristics_Auction"
type="RightsCharacteristics_Auction" minOccurs="0" maxOccurs="unbounded"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.RightsCharacteristics_Auction"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="ESMPVersion_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="ProcessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ProcessTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="(((0-9){4})[\-]([\-] (0[13578]|1[02])[\-] (0[1-
9]|12)[0-9]|3[01])|((0-9){4})[\-]([\-] ((0[469])|(11))[\-] (0[1-9]|12)[0-9]|30))T(((01)[0-
9]|2[0-3])|:[0-5][0-9]:[0-5][0-
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|[02468][048][02468][048]|02468)[1235679] (0)[48]|02468)[1235679][2468][048]|0[0-
9][0-9][13579][26])[\-] (02)[\-] (0[1-9]|1[0-9]|2[0-9])T(((01)[0-9]|2[0-3])|:[0-5][0-
9]:[0-5][0-
9])Z|(((13579)[26][02468][1235679]|13579)[01345789] (0)[01235679]|13579)[01345789][
2468][1235679]|02468][048][02468][1235679]|02468)[1235679] (0)[01235679]|02468)[123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-] (02)[\-] (0[1-9]|1[0-9]|2[0-
8])T(((01)[0-9]|2[0-3])|:[0-5][0-9]:[0-5][0-9])Z"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityAuctionSpecification_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  </xs:sequence>
</xs:complexType>
</xs:sequence>
</xs:complexType>
```

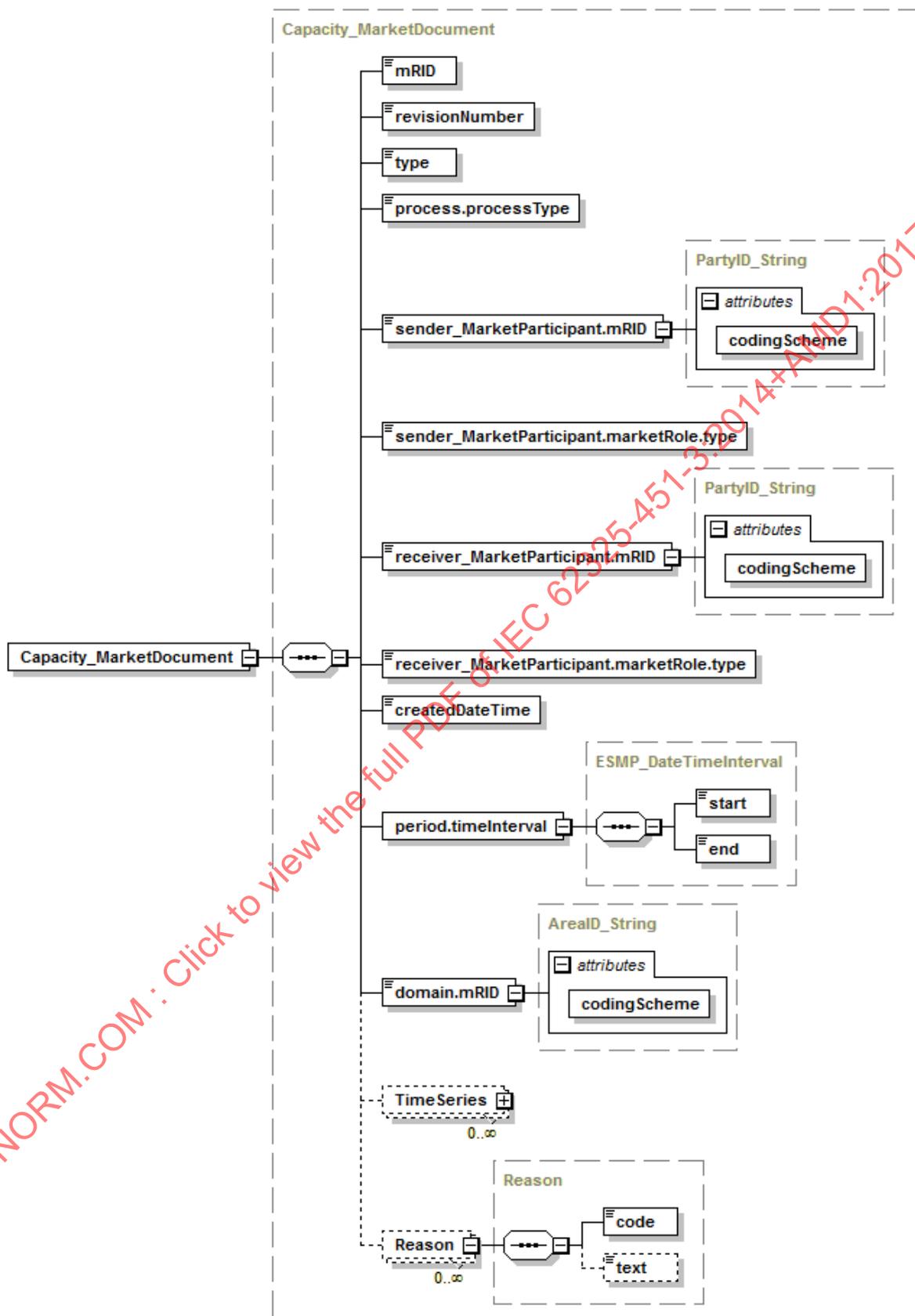
```
<xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
  <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
  <xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Process.processType"/>
  <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
  <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
  <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="Auction_TimeSeries" type="Auction_TimeSeries"
minOccurs="1" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Auction_TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
```

```
<xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="RightsKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:RightsTypeList"/>
</xs:simpleType>
<xs:complexType name="RightsCharacteristics_Auction"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction">
<xs:sequence>
<xs:element name="rights" type="RightsKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.rights"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMF_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

## 7.6 Schéma de Capacity\_MarketDocument

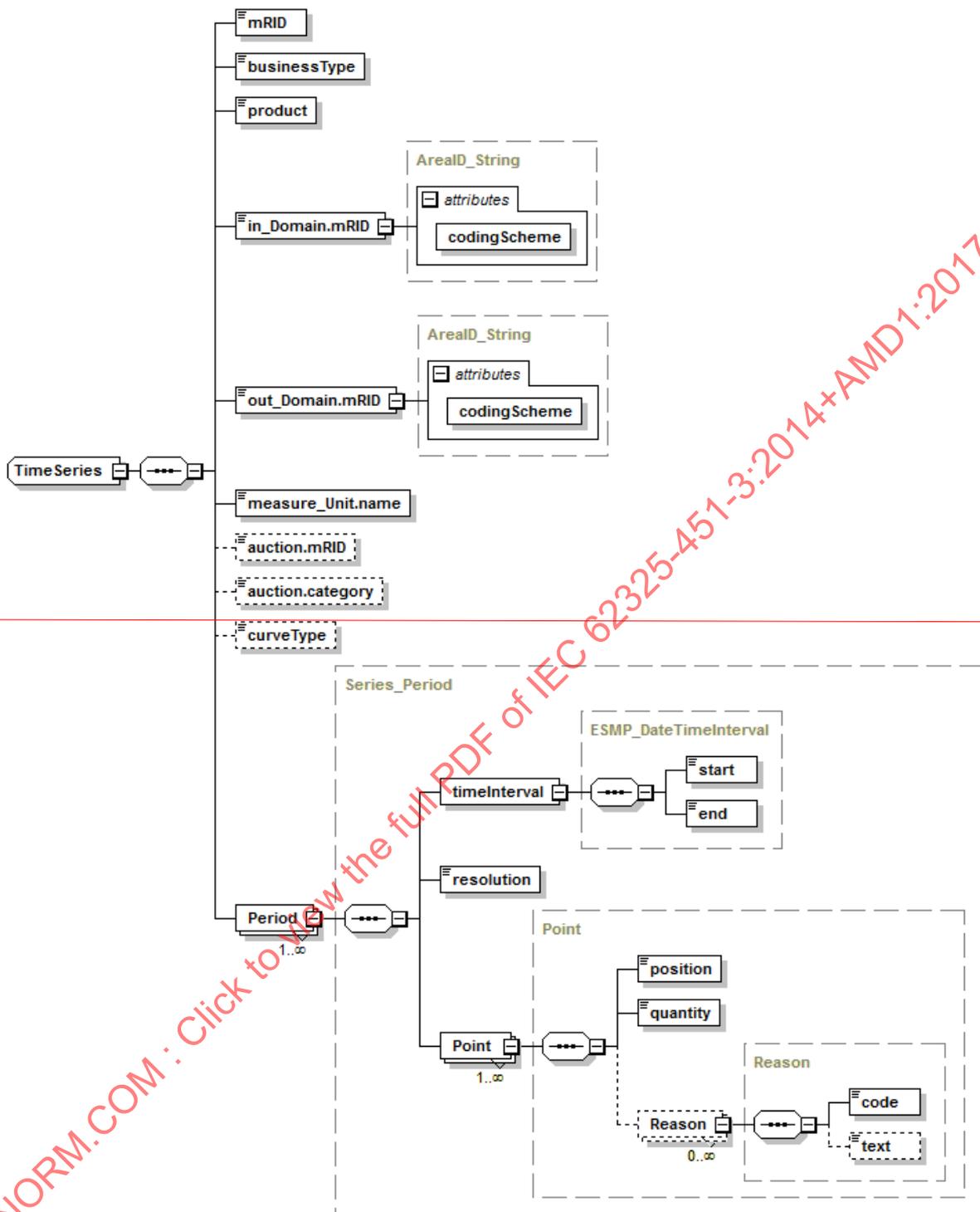
### 7.6.1 Structure du schéma

La Figure 29 et la Figure 30 montrent la structure du schéma.



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Figure 29 – Structure du schéma XML Capacity\_MarketDocument – 1/2



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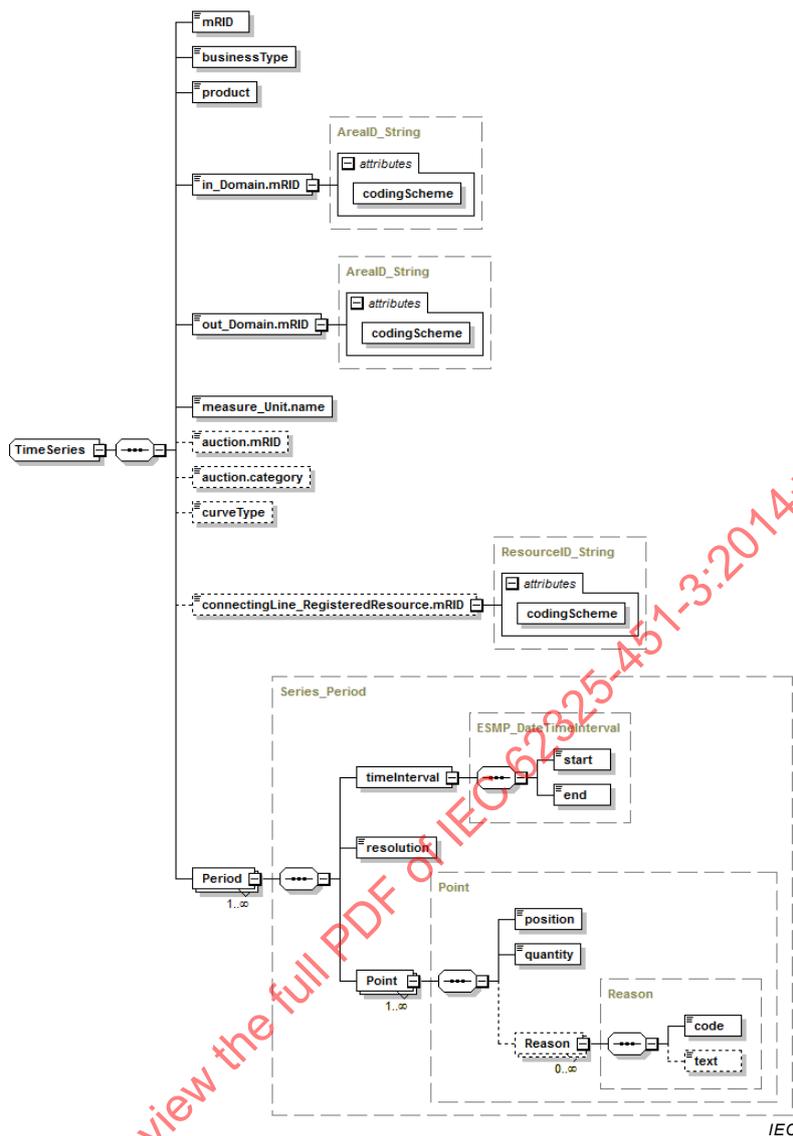


Figure 30 – Structure du schéma XML Capacity\_MarketDocument – 2/2

### 7.6.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:capacitydocument:7:01" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacitydocument:7:01"
elementFormDefault="qualified" attributeFormDefault="unqualified">
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Capacity_MarketDocument" type="Capacity_MarketDocument"/>
  <xs:simpleType name="ID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
```

```
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="ProcessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ProcessTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-9]|
[12][0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30)T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|
[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-8])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-9]|
[12][0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30)T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|
[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5]:[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
```

```
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] (0) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789]) [\ -] (02) [\ -] (0 [1-9] | 1 [0-9] | 2 [0-
8]) T (( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] ) Z) "/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
<xs:sequence>
<xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
<xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Capacity_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
<xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
<xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Process.processType"/>
<xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
<xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
<xs:restriction base="xs:integer">
<xs:minInclusive value="1"/>
<xs:maxInclusive value="999999"/>
</xs:restriction>
</xs:simpleType>
```

```
<xs:complexType name="Point">
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String">
    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
      <xs:restriction base="cl:ReasonCodeTypeList"/>
    </xs:simpleType>
    <xs:simpleType name="ReasonText_String">
      sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="xs:string">
          <xs:maxLength value="512"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="Reason">
        sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
          <xs:sequence>
            <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
            <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
          </xs:sequence>
        </xs:complexType>
        <xs:complexType name="Series_Period">
          sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
            <xs:sequence>
              <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
              <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
              <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
            </xs:sequence>
          </xs:complexType>
          <xs:simpleType name="BusinessKind_String">
            sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
              <xs:restriction base="cl:BusinessTypeList"/>
            </xs:simpleType>
            <xs:simpleType name="EnergyProductKind_String">
              sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                <xs:restriction base="cl:EnergyProductTypeList"/>
              </xs:simpleType>
              <xs:simpleType name="MeasurementUnitKind_String">
                sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
                </xs:simpleType>
                <xs:simpleType name="Category_String">
                  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                    <xs:restriction base="cl:CategoryTypeList"/>
                  </xs:simpleType>
                  <xs:simpleType name="CurveType_String">
                    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                      <xs:restriction base="cl:CurveTypeList"/>
                    </xs:simpleType>

```

```
<xs:simpleType name="ResourceID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="ResourceID_String-base">
      <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="product" type="EnergyProductKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.product"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  </xs:sequence>
<xs:element name="Period" type="Series_Period" minOccurs="1" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.Period"/>
</xs:complexType>
</xs:schema>
```

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## 7.7 Schéma de AllocationResult\_MarketDocument

### 7.7.1 Structure du schéma

La Figure 31 et la Figure 32 montrent la structure du schéma.

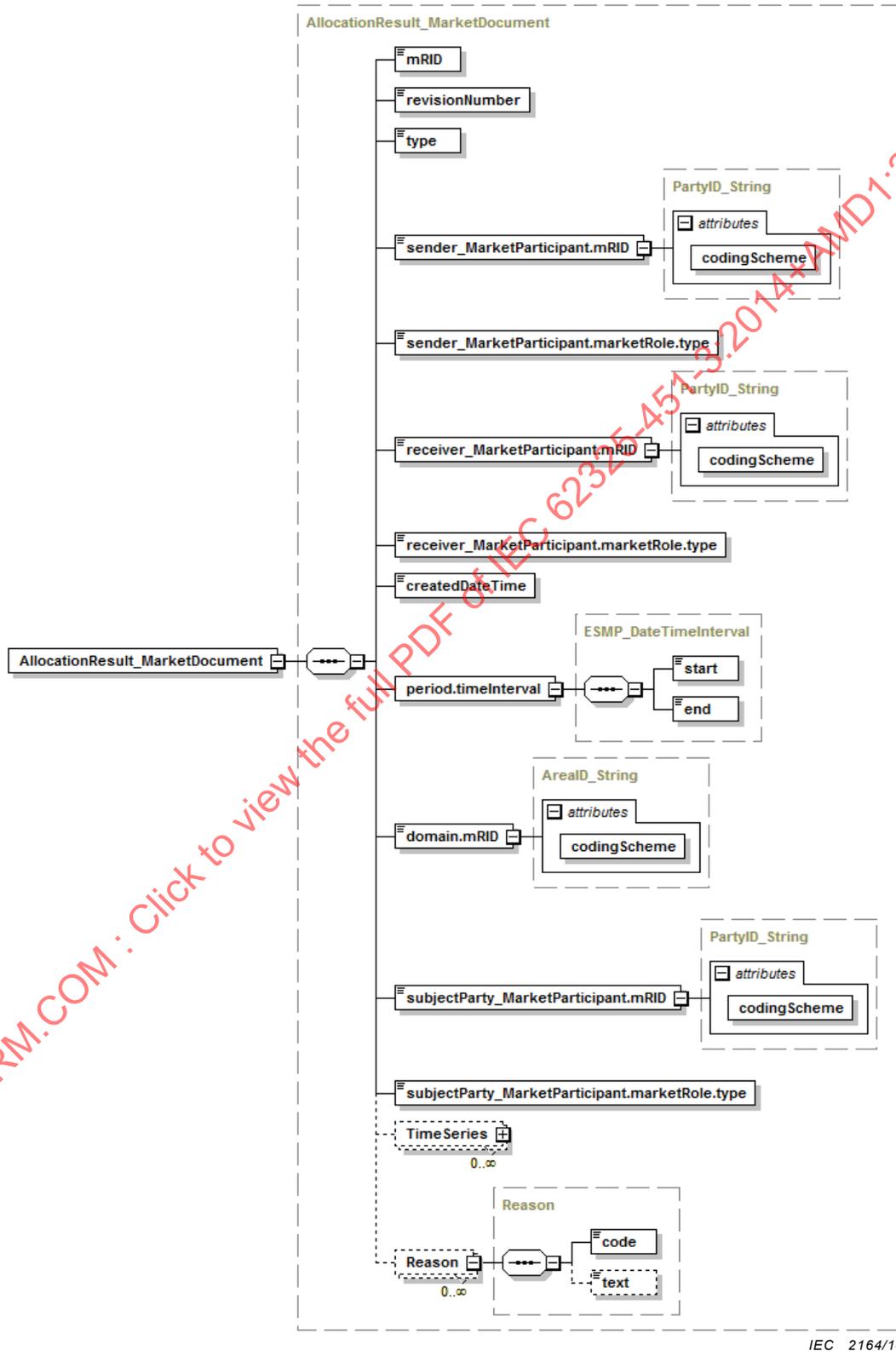
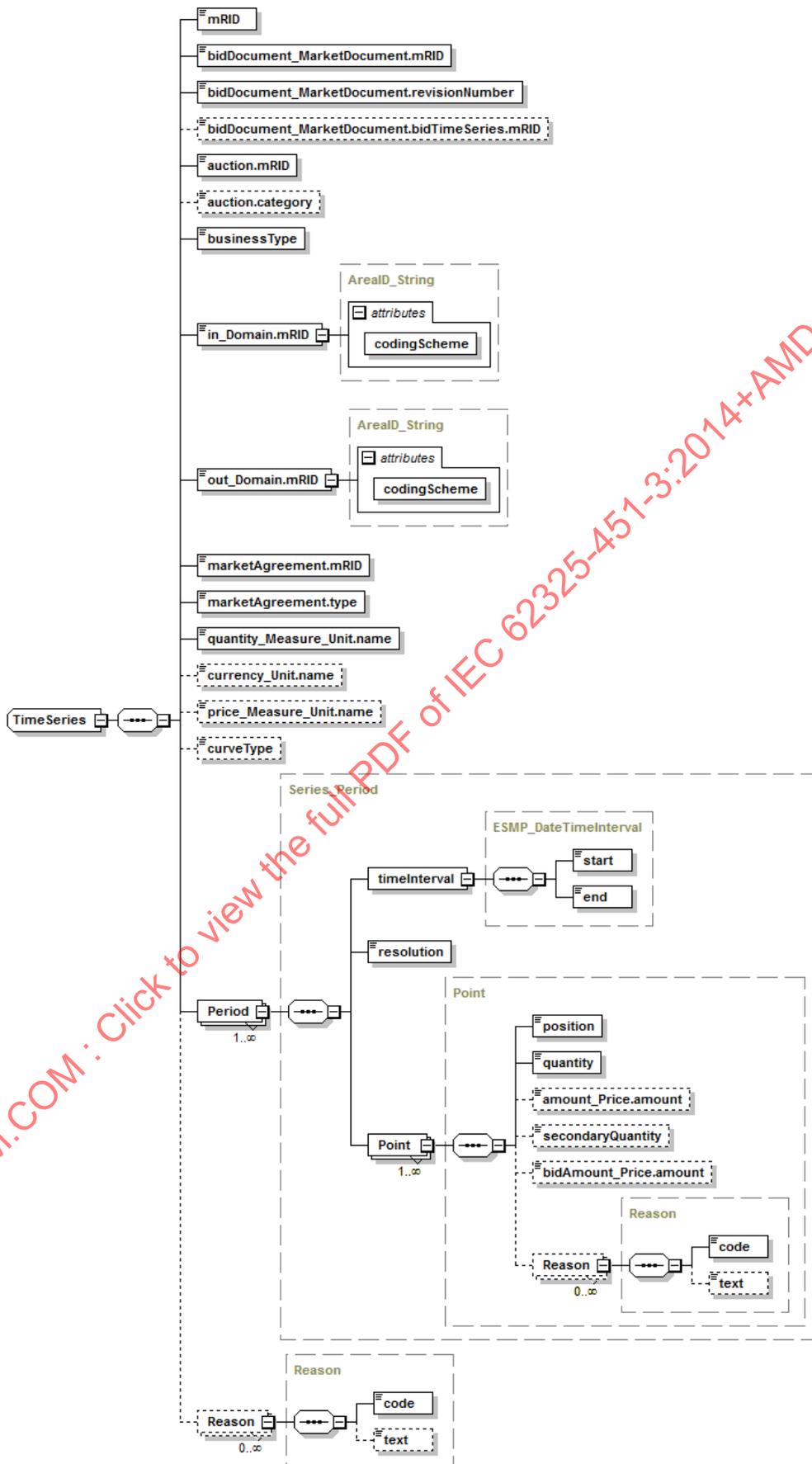


Figure 31 – Structure du schéma XML AllocationResult\_MarketDocument – 1/2



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Figure 32 – Structure du schéma XML AllocationResult\_MarketDocument – 2/2

## 7.7.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="AllocationResult_MarketDocument"
type="AllocationResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ \- ] ( ( 0 [469] ) | ( 11 ) ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048] | [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [1235679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
```



```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Point.secondaryQuantity"/>
    <xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
  </xs:sequence>
</xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
```

```
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
```

```
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
<xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.8 Schéma de TotalAllocationResult\_MarketDocument

### 7.8.1 Structure du schéma

La Figure 33 et la Figure 34 montrent la structure du schéma.

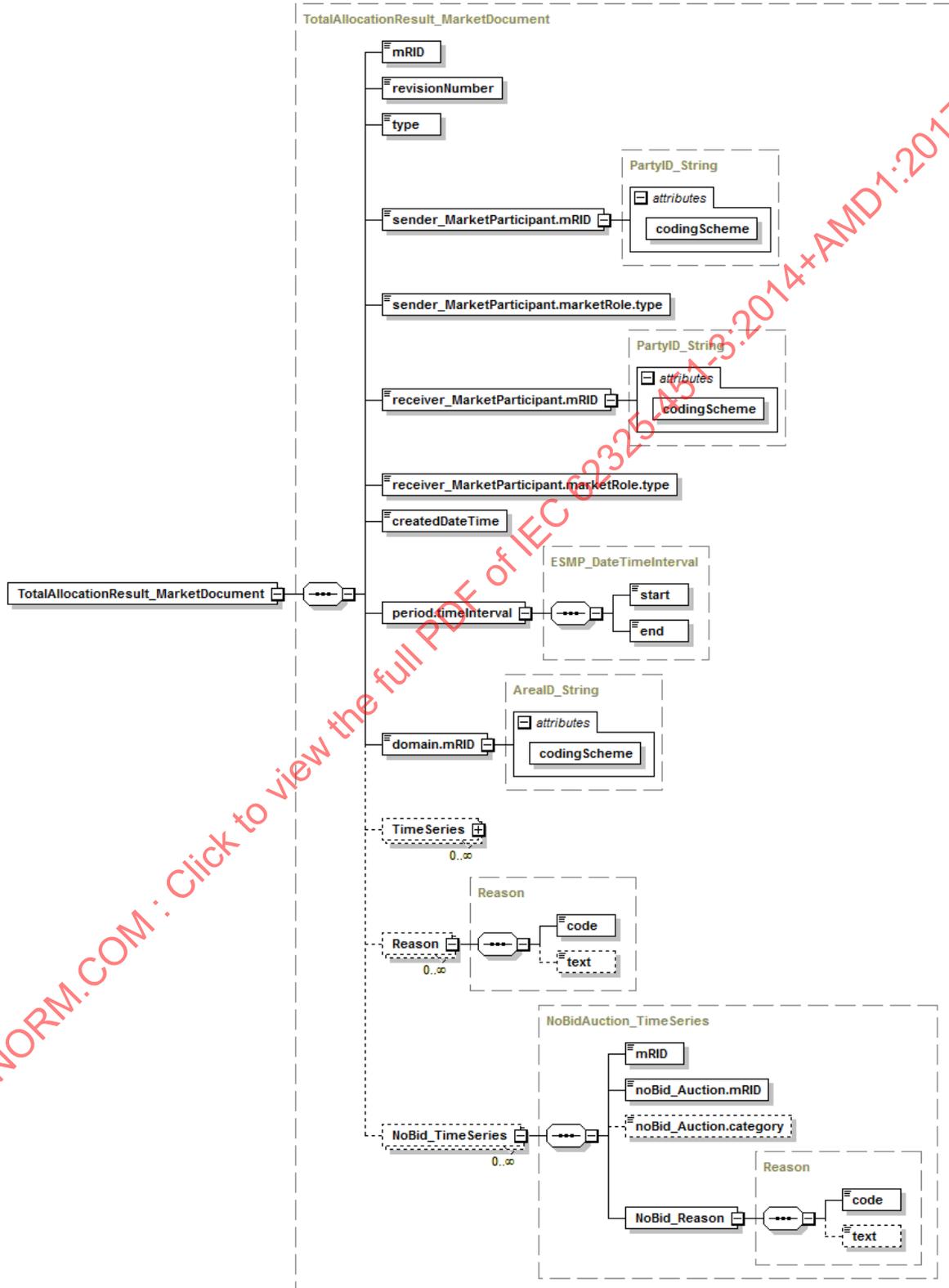


Figure 33 – Structure du schéma XML TotalAllocationResult\_MarketDocument – 1/2

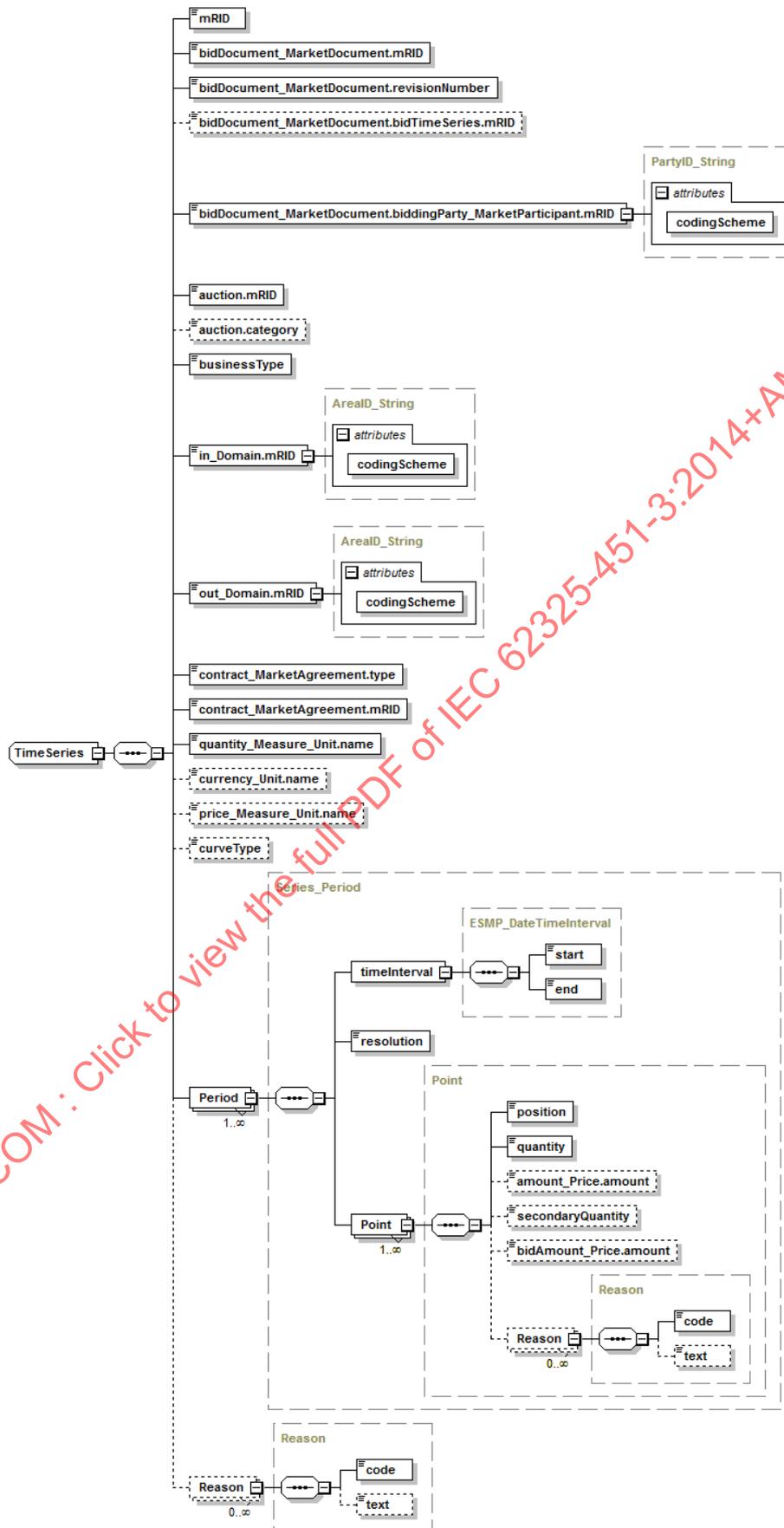


Figure 34 – Structure du schéma XML TotalAllocationResult\_MarketDocument – 2/2

## 7.8.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:totalallocationresultdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="TotalAllocationResult_MarketDocument"
type="TotalAllocationResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:complexType name="NoBidAuction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
      <xs:element name="NoBid Reason" type="Reason" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.NoBid_Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
      <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
      <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Point.secondaryQuantity"/>
    </xs:sequence>
  </xs:complexType>

```

```
<xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="(((0[0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|12)[0-9]|3[01])|((0[0-9]{4})[\-](0[469]|(11))[\-](0[1-9]|12)[0-9]|30))T((01)[0-
9]|2[0-3]):[0-5][0-
9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579)[01345789][2468][048]
|[02468][048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|0[0-
9][0-9][13579][26][\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5][0-
9])Z|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][
2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|02468)[123
5679][2468][1235679]|0[0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((01)[0-9]|2[0-3]):[0-5][0-9])Z"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
```



```
<xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
  </xs:sequence>
</xs:complexType>

```

```
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element
name="bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
        <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
          <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
            <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
              <xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
                <xs:element name="contract_MarketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
                  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
                      <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                        <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
                          <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
                            <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
                              </xs:sequence>
                            </xs:complexType>
                          <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                            <xs:restriction base="cl:MessageTypeList"/>
                          </xs:simpleType>
                        <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                            <xs:restriction base="cl:RoleTypeList"/>
                          </xs:simpleType>
                        <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
                            <xs:restriction base="xs:dateTime">
                              <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-9]|30))T((([01][0-
9])|2[0-3]):[0-5][0-9]:[0-5][0-
9])Z|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][048]
|[02468][048][02468][048]|02468[1235679](0)[48]|02468[1235679][2468][048]|0[0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9]):[0-5][0-
9])Z|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][
2468][1235679]|02468[048][02468][1235679]|02468[1235679](0)[01235679]|02468[123
```

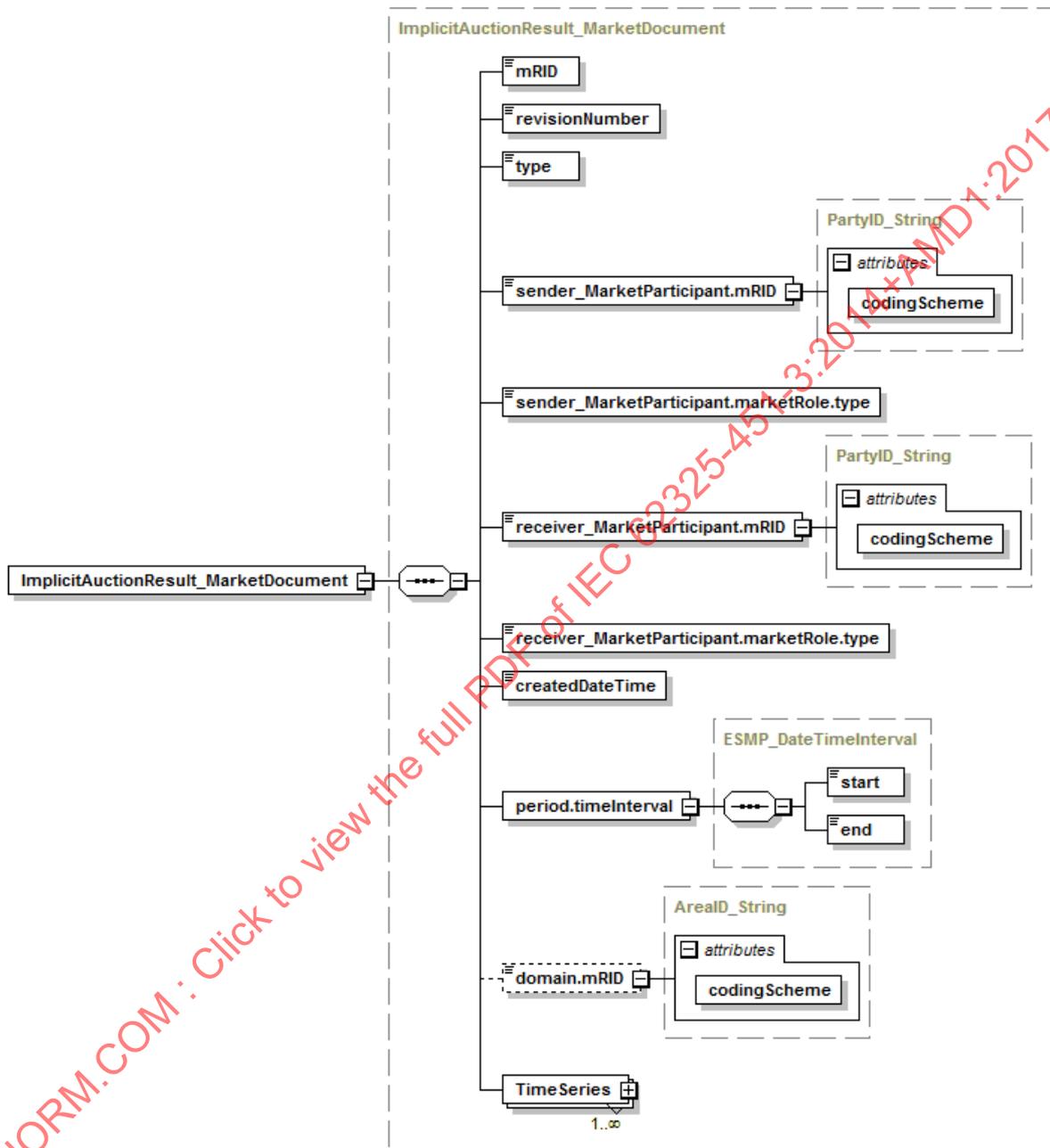
```
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789]) [\-] (02) [\-] (0[1-9] | 1[0-9] | 2[0-8]) T (([01] [0-9] | 2[0-3]) : [0-5] [0-9] : [0-5] [0-9]) Z) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="TotalAllocationResult_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
      <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
      <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
      <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
      <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
      <xs:element name="NoBid_TimeSeries"
type="NoBidAuction_TimeSeries" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.NoBid_TimeSeries"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```



## 7.9 Schéma de ImplicitAuctionResult\_MarketDocument

### 7.9.1 Structure du schéma

La Figure 35 et la Figure 36 montrent la structure du schéma.



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Figure 35 – Structure du schéma XML `ImplicitAuctionResult_MarketDocument` – 1/2

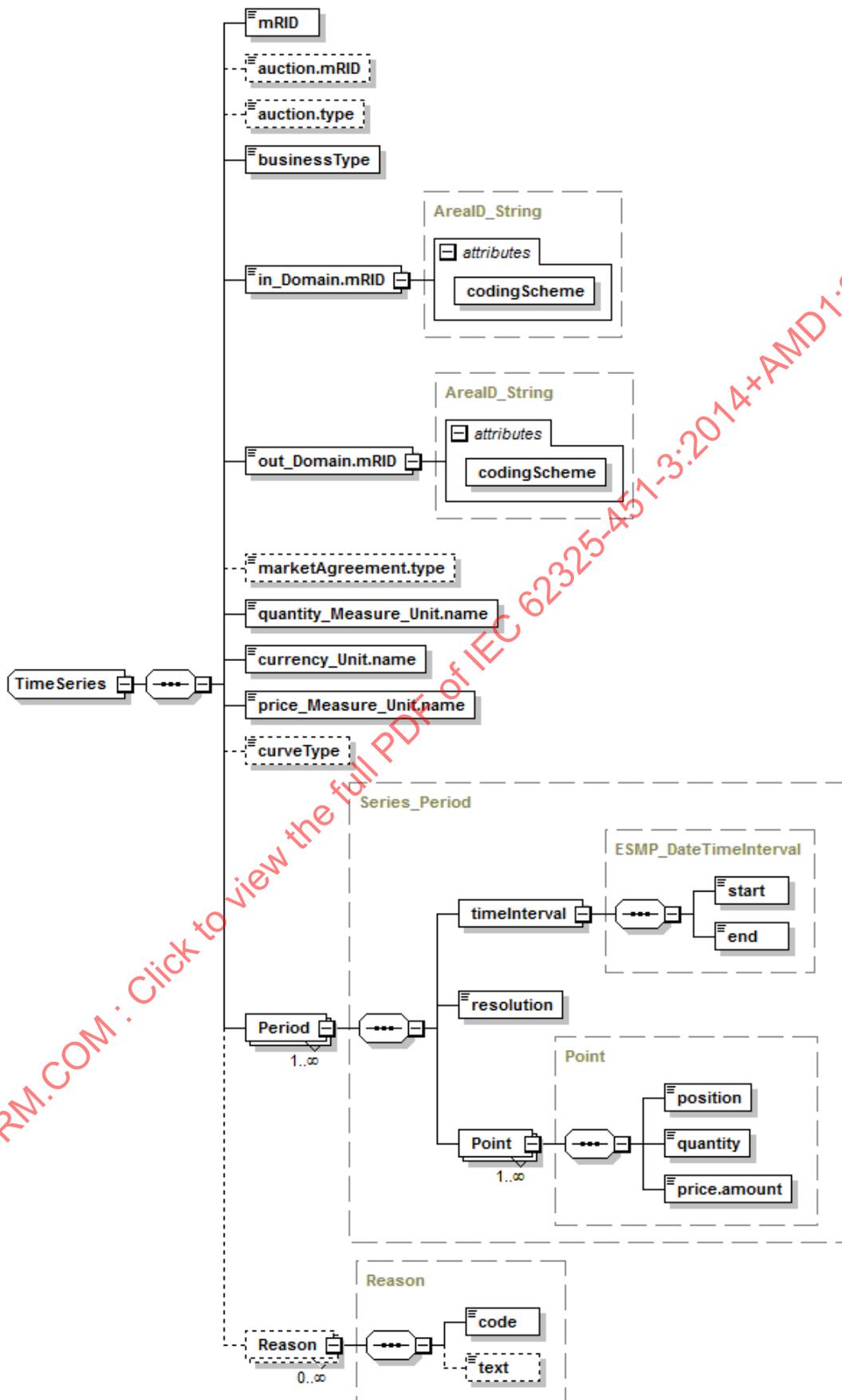


Figure 36 – Structure du schéma XML `ImplicitAuctionResult_MarketDocument` – 2/2

## 7.9.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:implicitauctiondocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:implicitauctiondocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="ImplicitAuctionResult_MarketDocument"
type="ImplicitAuctionResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ \- ] ( ( 0 [469] ) | ( 11 ) ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048] | [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [1235679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```



```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="9999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
</xs:complexType>
```

```
<xs:simpleType name="AuctionKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

## 7.10 Schéma de Publication\_MarketDocument

### 7.10.1 Structure du schéma

La Figure 37 et la Figure 38 montrent la structure du schéma.

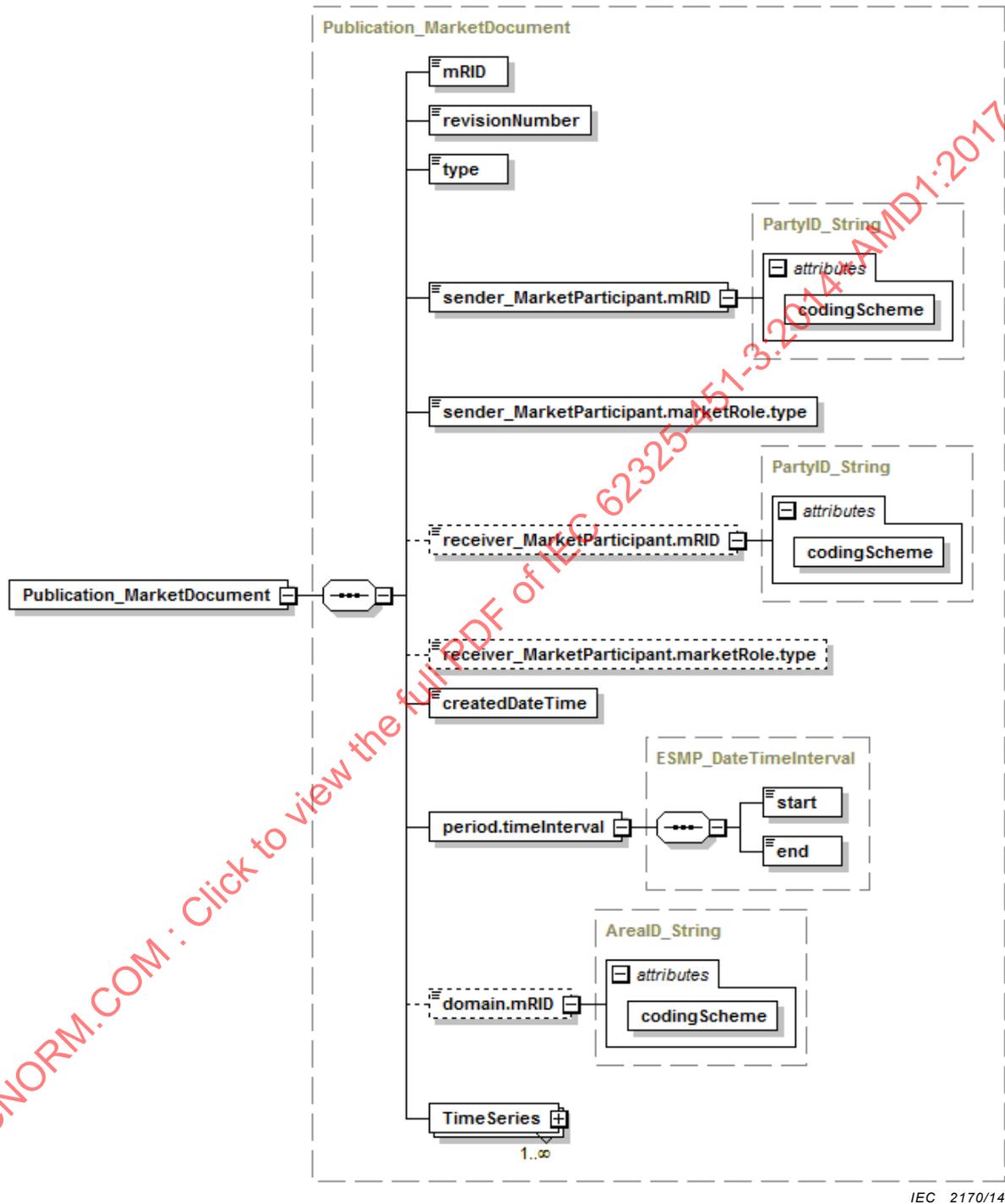
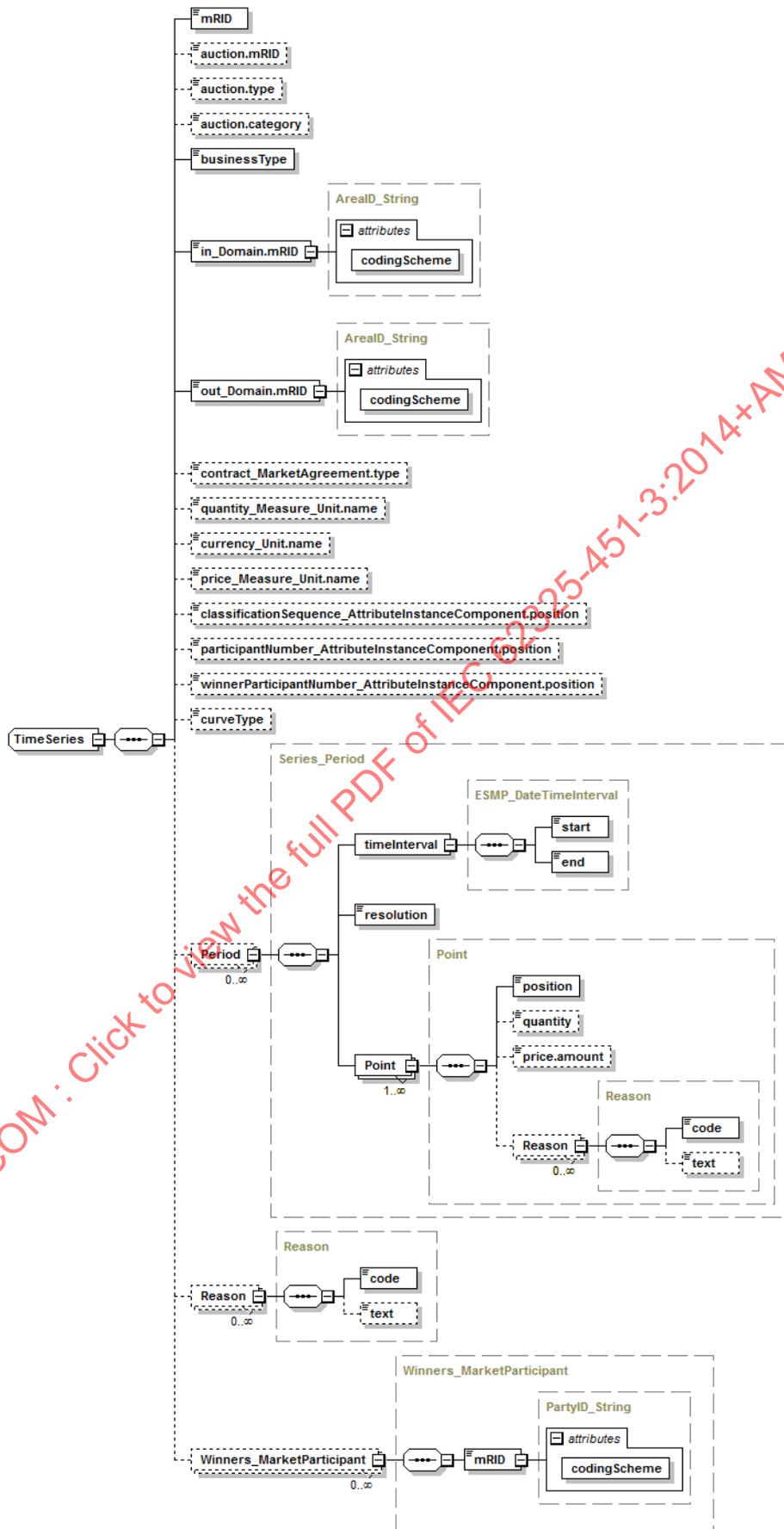


Figure 37 – Structure du schéma XML Publication\_MarketDocument – 1/2



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Figure 38 – Structure du schéma XML `Publication_MarketDocument` – 2/2

## 7.10.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Publication_MarketDocument"
type="Publication_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
```

```
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:dateTime">
<xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-
9]|12)[0-9]|3[01]) | (([0-9]{4}) [\-] ((0[469])|(11)) [\-] (0[1-9]|12)[0-9]|30))T(((01)[0-
9]|2[0-3]):[0-5][0-9]:[0-5][0-
9])Z)|((([13579][26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-
9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T(((01)[0-9]|2[0-3]):[0-5][0-
9]:[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][123
5679][2468][1235679]|0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-
8])T(((01)[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="18"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:simpleContent>
<xs:extension base="AreaID_String-base">
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:string">
<xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-
9]|12)[0-9]|3[01]) | (([0-9]{4}) [\-] ((0[469])|(11)) [\-] (0[1-9]|12)[0-9]|30))T(((01)[0-
9]|2[0-3]):[0-5][0-
9])Z)|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-
9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T(((01)[0-9]|2[0-3]):[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][123
5679][2468][1235679]|0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-
8])T(((01)[0-9]|2[0-3]):[0-5][0-9])Z)"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
<xs:sequence>
<xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
<xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Publication_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
<xs:sequence>
```



```
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
```

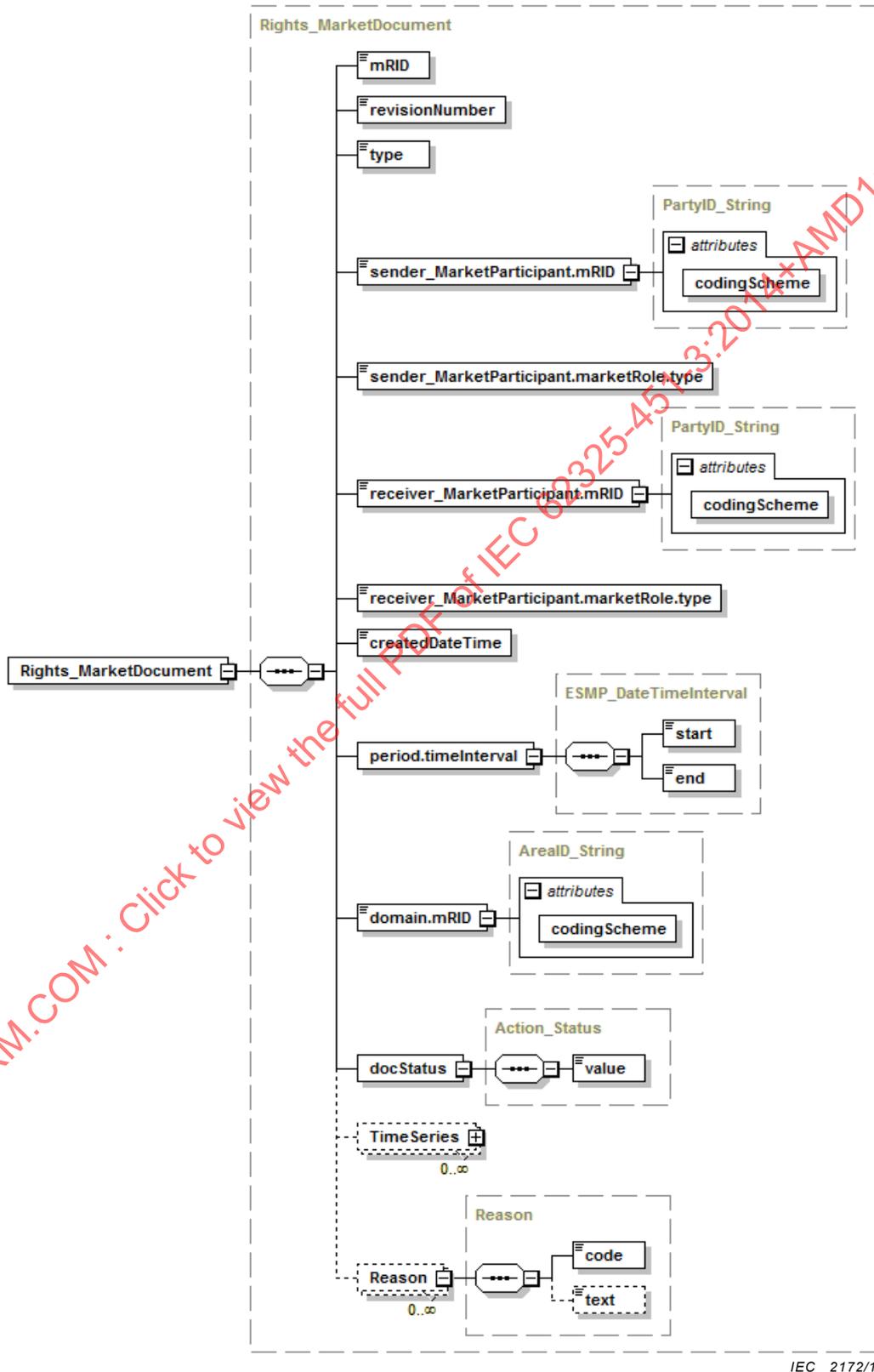
```
<xs:element
name="classificationSequence_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
  <xs:element
name="participantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
    <xs:element
name="winnerParticipantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
      <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
        <xs:element name="Period" type="Series_Period" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
          <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
            <xs:element name="Winners_MarketParticipant"
type="Winners_MarketParticipant" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Winners_MarketParticipant"/>
          </xs:sequence>
        </xs:complexType>
      <xs:complexType name="Winners_MarketParticipant"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketParticipant">
        <xs:sequence>
          <xs:element name="mRID" type="PartyID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
        </xs:sequence>
      </xs:complexType>
</xs:schema>
```

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## 7.11 Schéma de Rights\_MarketDocument

### 7.11.1 Structure du schéma

La Figure 39 et la Figure 40 montrent la structure du schéma.



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Figure 39 – Structure du schéma XML Rights\_MarketDocument – 1/2

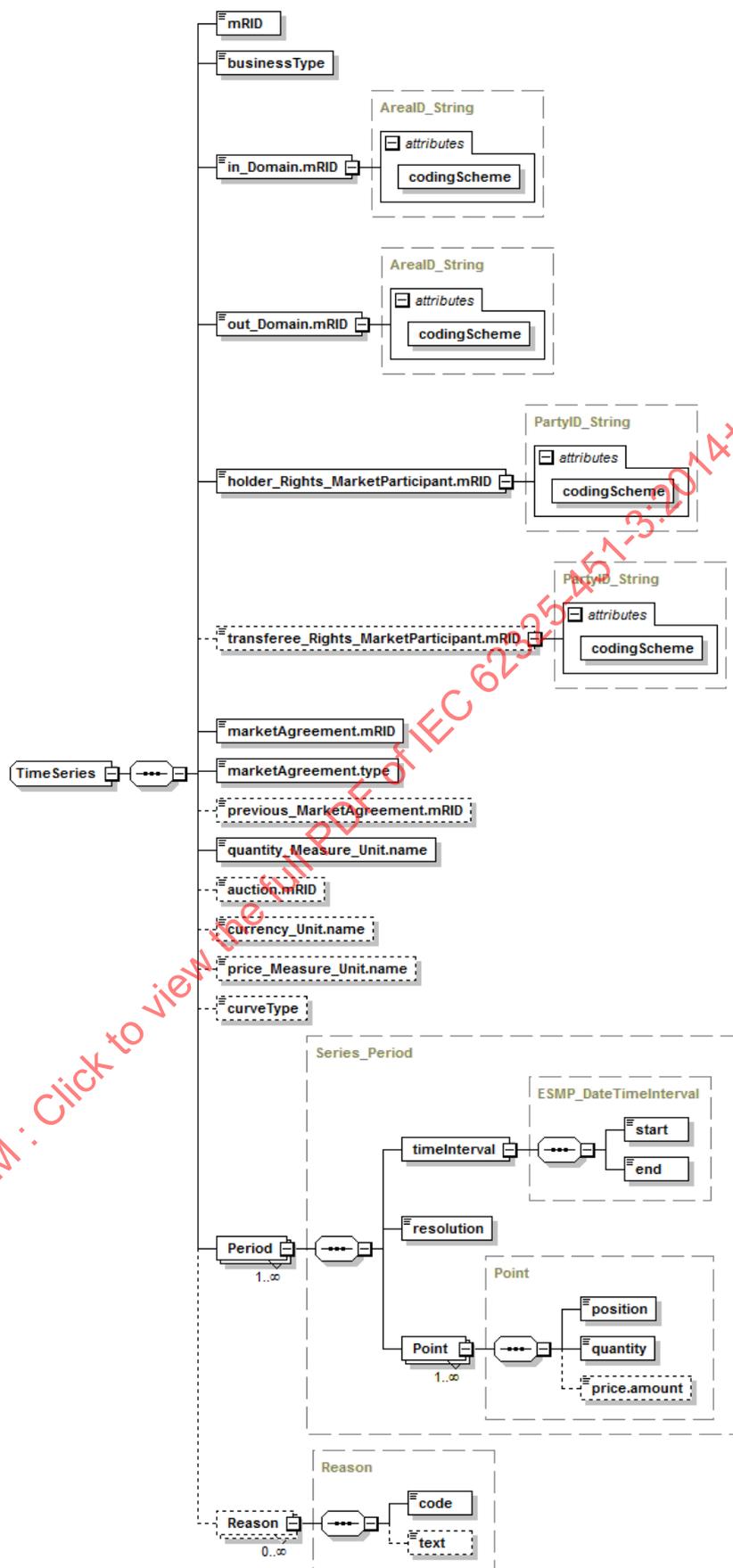


Figure 40 – Structure du schéma XML Rights\_MarketDocument – 2/2

## 7.11.2 Description du schéma

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Rights_MarketDocument" type="Rights_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.code"/>
      <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason.text"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
```

```
<xs:pattern value="[1-9]([0-9]){0,2}"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-9]|12)[0-9]|3[01])|([0-9]{4})[\-]((0[469])|(1[12])[\-](0[1-9]|12)[0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]|02468)[048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|0[0-9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-9]):[0-5][0-9])Z|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579)[01345789][2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|02468)[1235679][2468][1235679]|0[0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9]):[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="Status_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:StatusTypeList"/>
</xs:simpleType>
<xs:complexType name="Action_Status"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status">
  <xs:sequence>
    <xs:element name="value" type="Status_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status.value"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:string">
    <xs:pattern value="((([0-9]{4}) [\-] ([13578]|1[02]) [\-] (0[1-9]|
[12][0-9]|3[01]) | ([0-9]{4}) [\-] ((0[469])|(11)) [\-] (0[1-9]| [12][0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9])Z)|(((13579)[26][02468][048]| [13579][01345789](0)[48]| [13579][01345789][2468][048]| [02468][048][02468][048]| [02468][1235679](0)[48]| [02468][1235679][2468][048]| [0-9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)|(((13579)[26][02468][1235679]| [13579][01345789](0)[01235679]| [13579][01345789][2468][1235679]| [02468][048][02468][1235679]| [02468][1235679](0)[01235679]| [02468][1235679][2468][1235679]| [0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
  <xs:sequence>
    <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
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    <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.end"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Rights_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
    <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
    <xs:element name="receiver_MarketParticipant.mRID"
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    <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind String" minOccurs="1" maxOccurs="1"
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    <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.createdDateTime"/>
    <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.timeInterval"/>
    <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="docStatus" type="Action_Status" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.docStatus"/>
    <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.TimeSeries"/>
  </xs:sequence>
</xs:complexType>
</xs:complexType>
```

```
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
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schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
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cim16#Period.Point"/>
</xs:sequence>
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<xs:simpleType name="CapacityContractKind String"
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<xs:simpleType name="MeasurementUnitKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
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<xs:simpleType name="CurrencyCode String"
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<xs:simpleType name="CurveType String"
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</xs:simpleType>
<xs:complexType name="TimeSeries"
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<xs:element name="mRID" type="ID String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="businessType" type="BusinessKind String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="holder_Rights_MarketParticipant.mRID"
type="PartyID String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="transferee_Rights_MarketParticipant.mRID"
type="PartyID String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
```

```
<xs:element name="previous_MarketAgreement.mRID" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="currency_Unit.name" type="CurrencyCode_String"
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schema-cim16#Unit.name"/>
  <xs:element name="price_Measure_Unit.name"
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schema-cim16#TimeSeries.curveType"/>
  <xs:element name="Period" type="Series_Period" minOccurs="1"
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cim16#TimeSeries.Period"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
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cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## FINAL VERSION

## VERSION FINALE



**Framework for energy market communications –  
Part 451-3: Transmission capacity allocation business process (explicit or  
implicit auction) and contextual models for European market**

**Cadre pour les communications pour le marché de l'énergie –  
Partie 451-3: Processus métier d'attribution de la capacité de transport (vente  
aux enchères explicite ou implicite) et modèles contextuels pour le marché  
européen**

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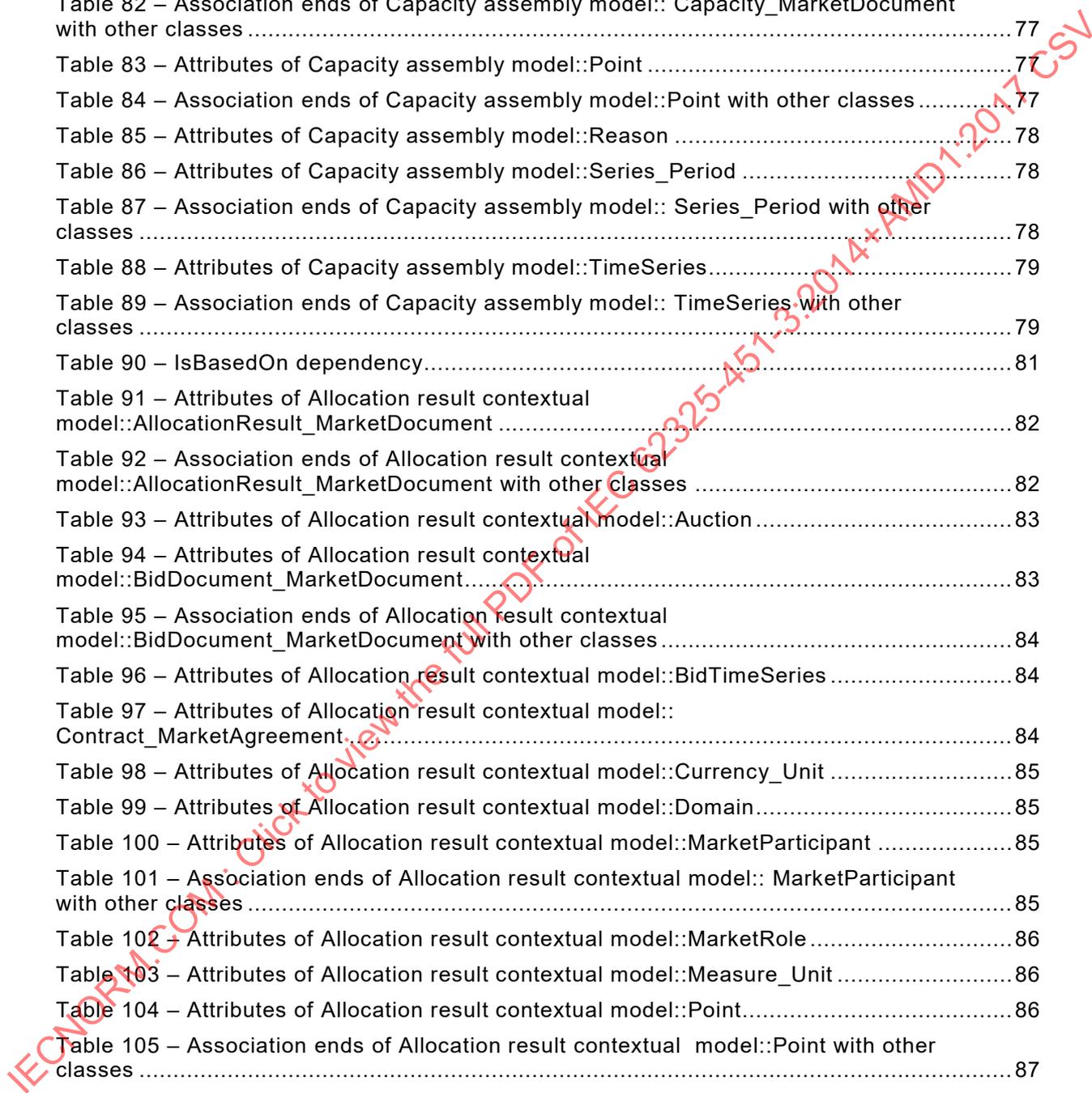


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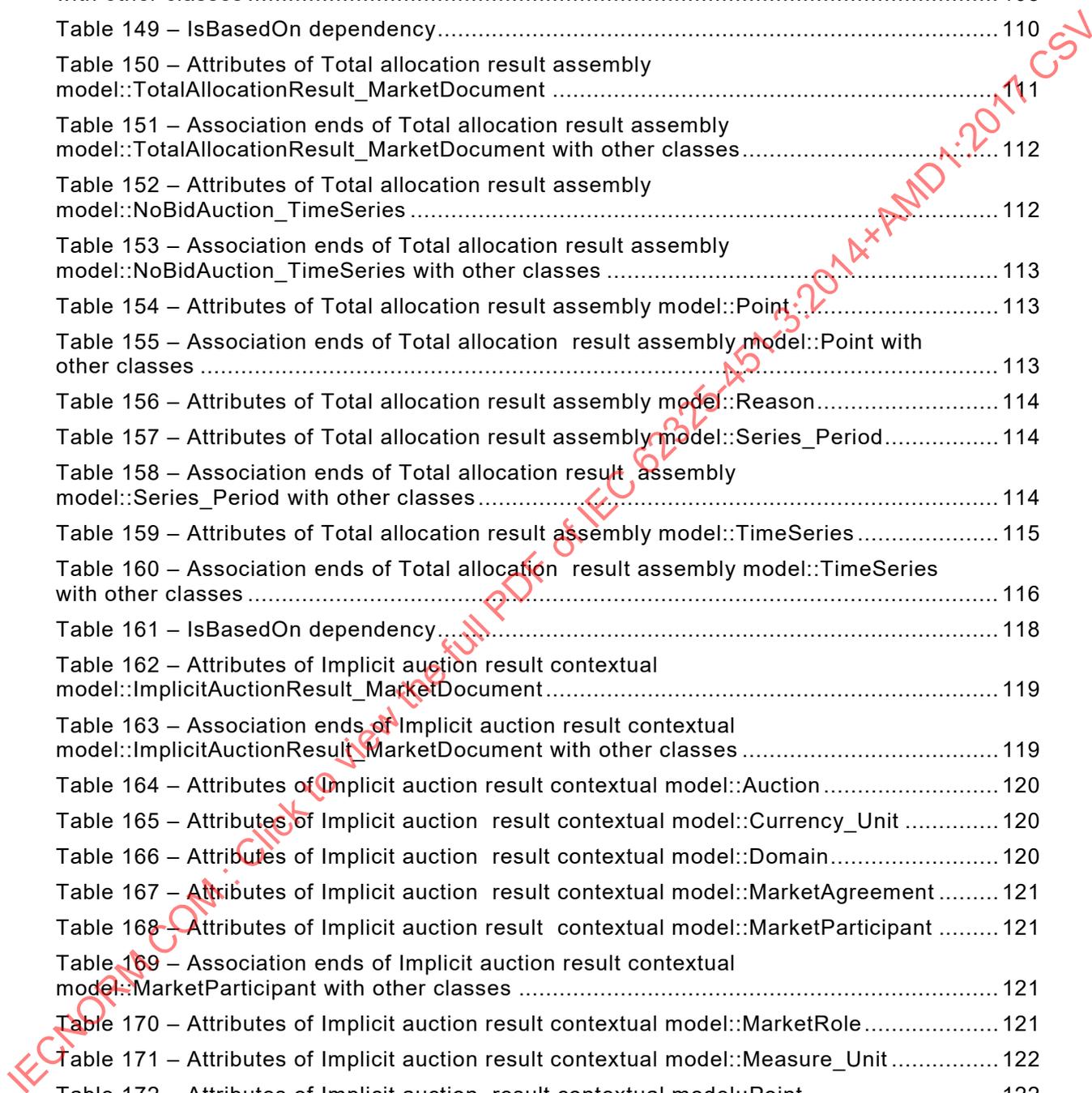


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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

#### Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

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**This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.**

International Standard IEC 62325-451-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62325 series, published under the general title *Framework forenergy market communications*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

This standard is one of the IEC 62325 series which define protocols for deregulated energy market communications.

The principal objective of the IEC 62325 series of standards is to produce standards which facilitate the integration of market application software developed independently by different vendors into a market management system, between market management systems and market participant systems. This is accomplished by defining message exchanges to enable these applications or systems access to public data and exchange information independent of how such information is represented internally.

The common information model (CIM) specifies the basis for the semantics for this message exchange.

The European style market profile is based on different parts of the CIM IEC standard. The CIM is defined through a series of standards, i.e. IEC 62325-301, IEC 61970-301 and IEC 61968-11.

This document provides for the European style market profile the transmission capacity allocation business process based on either explicit or implicit auction that can be used throughout a European style market. This standard was originally based upon the work of the European Transmission System Operators (ETSO) Task Force EDI (Electronic Data Interchange) and then on the work of the European Network of Transmission System Operators (ENTSO-E) Working Group EDI.

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## FRAMEWORK FOR ENERGY MARKET COMMUNICATIONS –

### Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

#### 1 Scope

This part of IEC 62325 specifies a package for the transmission capacity allocation business process through explicit or implicit auctions and the associated document contextual models, assembly models and XML schema for use within European style markets.

This International standard is based on the European style market contextual model (IEC 62325-351). The scheduling business process covered by this International Standard is described in Clause 5.

The relevant aggregate core components (ACCs) defined in IEC 62325-351 have been contextualised into aggregated business information entities (ABIEs) to satisfy the requirements of these business processes.

The contextualised ABIEs have been assembled into the relevant document contextual models.

Related assembly models and XML schema for the exchange of transmission capacity allocation information between market participants are automatically generated from the assembled document contextual models.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62325-351, *Framework for energy market communications – Part 351: CIM European market model exchange profile*

IEC 62325-450:2013, *Framework for energy market communications – Part 450: Profile and context modeling rules*

IEC 62325-451-1, *Framework for energy market communications – Part 451-1: Acknowledgement business process and contextual model for CIM European market*

IEC 62325-451-2, *Framework for energy market communications – Part 451-2: Scheduling business process and contextual model for CIM European market*

IEC 62361-100, *Power systems management and associated information exchange – Interoperability in the long term – Part 100: Naming and design rules for CIM profiles to XML schema mapping*<sup>1</sup>

---

<sup>1</sup> Under consideration.

### 3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 61970-2 apply, as well as the following.

NOTE Refer to International Electrotechnical Vocabulary, IEC 60050, for general glossary definitions.

#### 3.1

##### **already allocated capacity**

##### **AAC**

total amount of allocated transmission capacity rights, whether they are capacity or exchange programmes depending on the allocation method

#### 3.2

##### **aggregate business information entity**

##### **ABIE**

aggregate business information entity is a re-use of an aggregate core component (ACC) in a specified business

[SOURCE: ISO/TS 15000-5:2005, Clause 9, modified – modification of the definition]

#### 3.3

##### **aggregate core component**

##### **ACC**

collection of related pieces of business information that together convey a distinct business meaning, independent of any specific business context

Note 1 to entry: Expressed in modelling terms, this is the representation of an object class, independent of any specific business context.

[SOURCE: ISO/TS 15000-5:2005, Clause 9, modified – modification of the definition]

#### 3.4

##### **application program interface**

##### **API**

set of public functions provided by an executable application component for use by other executable application components

#### 3.5

##### **assembly model**

assembly model is a model that prepares information in a business context for assembly into electronic documents for data interchange

#### 3.6

##### **available transmission capacity**

##### **ATC**

part of NTC that remains available, after each phase of the allocation procedure, for further commercial activity

Note 1 to entry: ATC is given by the following equation:  $ATC = NTC - AAC$ .

#### 3.7

##### **based on**

##### **IsBasedOn**

use of an artefact that has been restricted according to the requirements of a specific business context

[SOURCE: IEC 62325-450:2013, 3.4]

**3.8**  
**bid**

request for a given capacity at a given price made by a capacity trader and corresponding to a single time series within a bid document

**3.9**  
**business context**

formal description of a specific business circumstance as identified by the values of a set of context categories, allowing different business circumstances to be uniquely distinguished

[SOURCE: UN/Cefact, Unified Context Methodology Technical Specification]

**3.10**  
**explicit auctioning**

congestion management method in which only the energy transmission capacity rights are auctioned

**3.11**  
**European style market profile**  
**ESMP**

the European style market profile, the object of this International Standard

**3.12**  
**implicit auctioning**

congestion management method in which the transmission capacity is included implicitly in the trading of energy in the market

**3.13**  
**information model**

representation of concepts, relationships, constraints, rules, and operations to specify data semantics for a chosen domain of discourse

Note 1 to entry: It can provide shareable, stable, and organized structure of information requirements for the domain context.

[SOURCE: IEC 62325-450:2013, 3.6]

**3.14**  
**market management system**  
**MMS**

computer system comprised of a software platform providing basic support services and a set of applications providing the functionality needed for the effective management of the electricity market

Note 1 to entry: These software systems in an electricity market may include support for capacity allocation, scheduling energy, ancillary or other services, real-time operations and settlements.

**3.15**  
**message business information entity**  
**MBIE**

aggregation of a set of ABIEs that respects a define set of assembly rules

**3.16**  
**net transfer capacity**  
**NTC**

maximum exchange between two areas compatible with security standards applicable in both areas and taking into account the technical uncertainties on future network conditions

Note 1 to entry:  $NTC = TTC - TRM$ .

### 3.17

#### **nomination**

firm declaration of the transmission capacity rights to be used

### 3.18

#### **profile**

basic outline of all the information that is required to satisfy a specific environment

[SOURCE: IEC 62325-450:2013, 3.7]

### 3.19

#### **transmission capacity rights**

rights of usage of a certain amount of transmission capacity in a potentially congested border between market areas

### 3.20

#### **transmission reliability margin**

##### **TRM**

security margin that copes with uncertainties on the computed TTC values arising from either unintended deviations of physical flows during operation due to the physical functioning of load-frequency regulation, or emergency exchanges between system operators to cope with unexpected unbalanced situation in real time

### 3.21

#### **total transfer capacity**

##### **TTC**

maximum exchange program between two areas compatible with operational security standards applicable at each system if future network conditions, generation and load patterns were perfectly known in advance

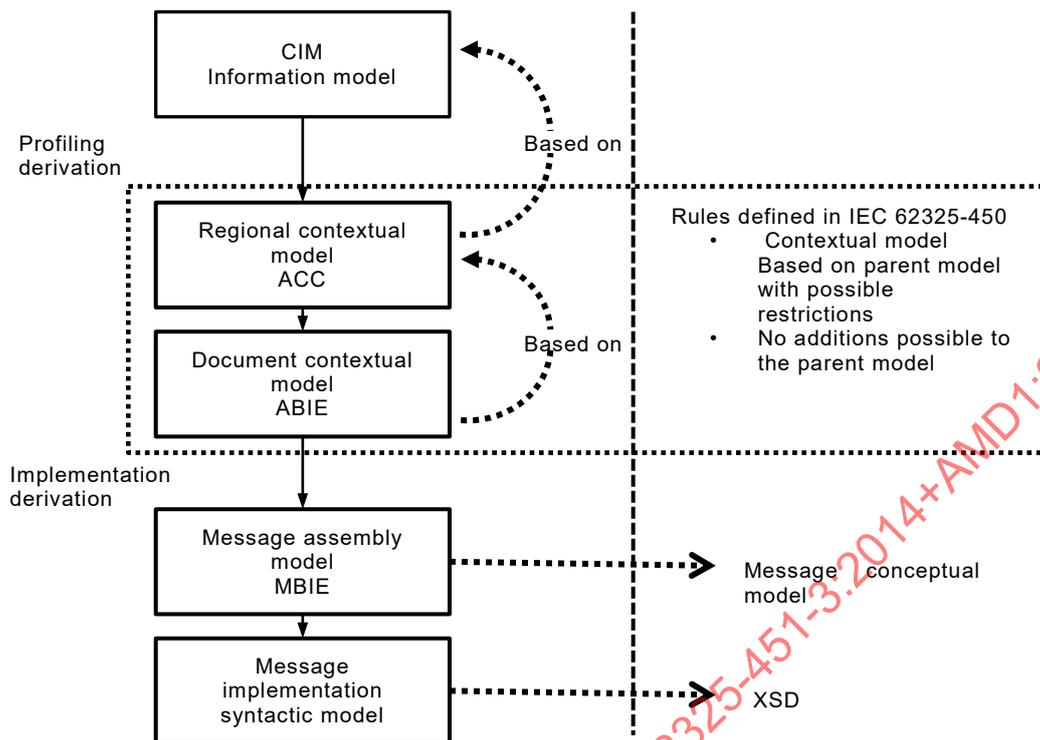
## **4 Document contextual model and message assembly model basic concepts**

### **4.1 Overview**

IEC 62325-450 defines a set of CIM profiles that follows a layered modelling framework as outlined in Figure 1 going from the common information model (CIM), to different regional contextual models and their subsequent contextualized documents for information exchange; the final step being the message specifications for information interchange.

The regional contextual models are the basic core components that are necessary to build electronic documents for information interchange. This is defined in the European style market contextual model (IEC 62325-351). These core components are also termed aggregate core components (ACCs).

A document contextual model is based upon a specific business requirements specification and is constructed from the contextualisation of the ACCs that can be found in the European style market contextual model. The contextualised ACCs at this stage are termed aggregate business information entities (ABIEs) These ABIEs are the constructs that are assembled together into a specific electronic document to satisfy the information requirements outlined in the business requirements specification. The transformation from an ACC to an ABIE shall respect the rules defined in IEC 62325-450.



IEC 2134/14

**Figure 1 – IEC 62325-450 modelling framework**

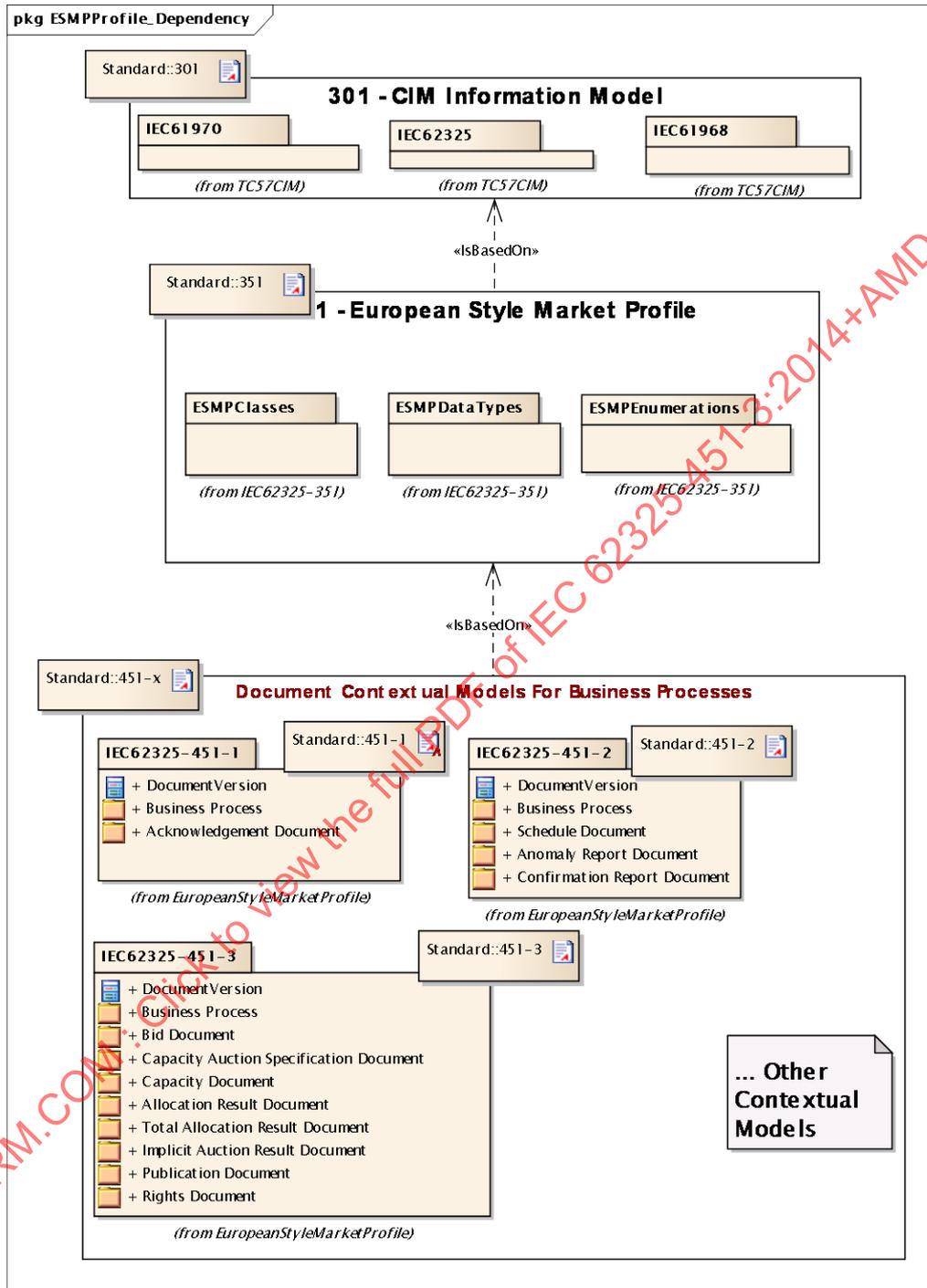
Once a document contextual model has been built that satisfactorily meets the business requirements, a message assembly model can be automatically generated from it. The automatic generation respects the rules defined in IEC 62325-450.

XML schema then may be automatically generated from the message assembly model. If necessary specific mapping can take place at this stage to transform the CIM class and attribute names into more market legacy names.

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#### 4.2 European style market package (ESMP) structure

The main package structure described in the European style market profile is provided in Figure 2.



IEC 2135/14

Figure 2 – Overview of European style market profile dependency

For each business process, a business process package is described in an IEC 62325-451-x (x from 1 to n) standard. A business process package contains:

- The document contextual model (ABIE) and the automatically generated message assembly model (MBIE) for each electronic document required to enable the completion of

the business process. Each document is a sub contextual model derived by restriction from the European style market profile.

- The XML schema of the business document that is automatically generated from the message assembly model.

The European style market profile (ESMP), as defined in the IEC 62325-351, provides the core components permitted for use in an IEC 62325-451-x standard as all ABIEs must be “based on” the IEC 62325-351 core components:

- ESMPClasses: Defining all the semi-contextual classes of the European style market profile derived by restriction from the CIM model.
- ESMPDataTypes: Defining all the core datatypes used within the ESMP classes.

All the core components that are used in every electronic document structure have been harmonized and centralized in the European style market profile. These core components are consequently the basic building blocks from which all electronic document ABIEs are derived.

#### **4.3 From the European style market profile to the document contextual model**

The document contextual model for a given business process is constructed by an information analyst who identifies all the information requirements necessary to satisfy the business process.

Once the information requirements have been identified the information analyst identifies the related ACCs that are available in the European style market profile and contextualises them to meet the information requirements. This contextualisation step creates a set of aggregate business information entities (ABIEs).

In a final step the information analyst assembles together into a specific document contextual model package the ABIEs to form a document model satisfying the business requirements.

#### **4.4 From the document contextual model to the message assembly model**

Once the document contextual model has been finalised, the message assembly model may be automatically generated.

All document contextual models share the same core components and core datatypes. These are defined in the European style market profile (IEC 62325-351) and are contextualised and refined in all document contextual models (IEC 62325-451-x series) respecting the rules as described in IEC 62325-450.

#### **4.5 From the assembly model to the XML schema**

The final modelling step applies a standardized set of criteria in order to generate a uniform XML schema from the assembly model. This transformation process respects the rules defined in IEC 62361-100.

### **5 The transmission capacity allocation business process**

#### **5.1 Overall business context**

The business processes described in this standard are related to the transmission capacity auctions and to the market of transmission capacity rights.

No assumption is made on the way the auction are carried out as well as on the allocation mode or the payment terms.

The auctions can be carried out for products such as:

- multi-year,
- annual,
- monthly,
- weekly,
- daily
- intraday.

The allocation mode can be one of the following:

- order by price with pro rata,
- first come first served,
- pro rata,
- etc.

And the payment terms may vary from:

- pay as bid,
- pay as cleared,
- no payment terms,
- etc.

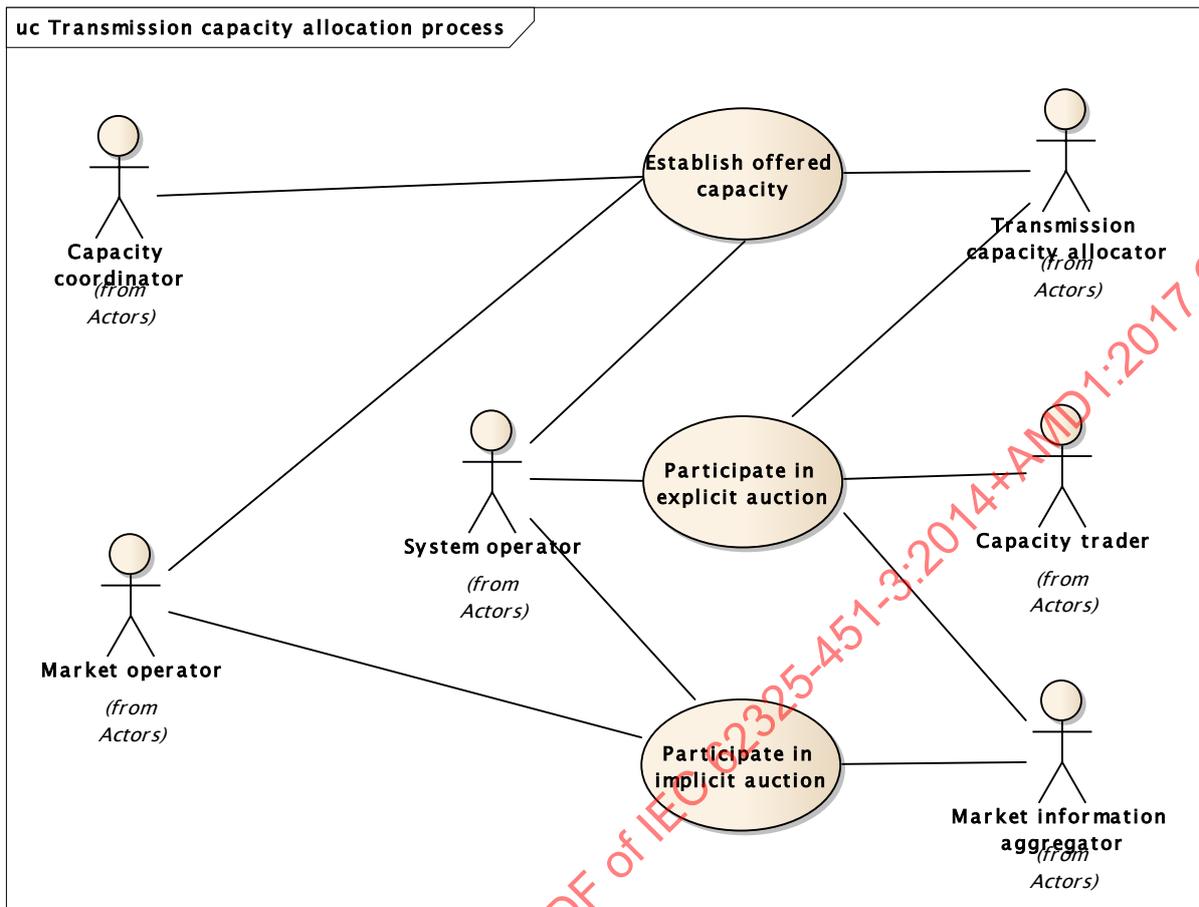
There are two different types of transmission capacity auctioning, explicit or implicit auctions. These are outlined in the use case in Figure 3.

The use case “Establish offered capacity” is common to both explicit and implicit auctions and relates to the identification and publication of the offered capacity that can be allocated. The available transmission capacity has initially to be agreed between the system operators. Once the offered capacity is agreed, it is published with the relevant information that defines the auction, i.e. the transmission capacity auction specification.

The use case “Participate in Explicit auctions” implies the following steps:

- The first step covers the bidding and allocation activity itself. A sub use case of the bidding and allocation activity may be the eventual secondary trade and negotiation of allocated capacity rights between capacity traders or capacity traders and interconnection trade responsible parties. The principle actors are the capacity trader and the transmission capacity allocator.
- The second step concerns nomination, the activity of declaring the long term, daily and intraday capacity rights to be used. This involves the interconnection trade responsible, the nomination validator and the system operator. The nomination validator ensures that all nominations presented are coherent. To carry out this nomination process, the electronic documents defined in IEC 62325-451-2 are to be used.
- The third and final step concerns the validation and final confirmation of all nominations. This step includes cross border matching. The principle actors are the nomination validator and the system operators.

The use case “Participate in Implicit auctions” implies the publication of cross border exchange values with or without prices.



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Figure 3 – Use case of the transmission capacity allocation process

## 5.2 Establish offered capacity process

The process necessary to constitute an auction specification is initiated by the system operators who provide the capacity coordinator with all the information necessary for the establishment of the offered capacity.

This capacity may be increased with additional capacity rights submitted by the capacity traders for resale, for the period being addressed such as resale of annual capacity rights to a monthly auction, etc.

This capacity may be also increased with additional capacity rights not used for nomination, i.e. the annual, monthly, weekly capacity rights that have not been used for the daily nomination, and thus that are released (either as “use it or lose it” or “use it or get paid for it” or “use it or sale it”, etc.) to the daily auction.

The capacity coordinator then determines the initial offered capacity with the information received.

The offered capacity is then sent to the transmission capacity allocator to enable the establishment of the auction specification for the period in question.

Finally, the auction specification is published. A first version of the AuctionSpecification\_MarketDocument may be published with only the identification of the auction and the planned date of the auction. Then a new version of document shall be issued with all the relevant information. It is to be noted that this document may be updated to inform the market participant that the auction is cancelled.

This process is described in Figure 4; the documents exchanged within this process are indicated.

The establishment of the offered capacity is common to both explicit and implicit auction process.

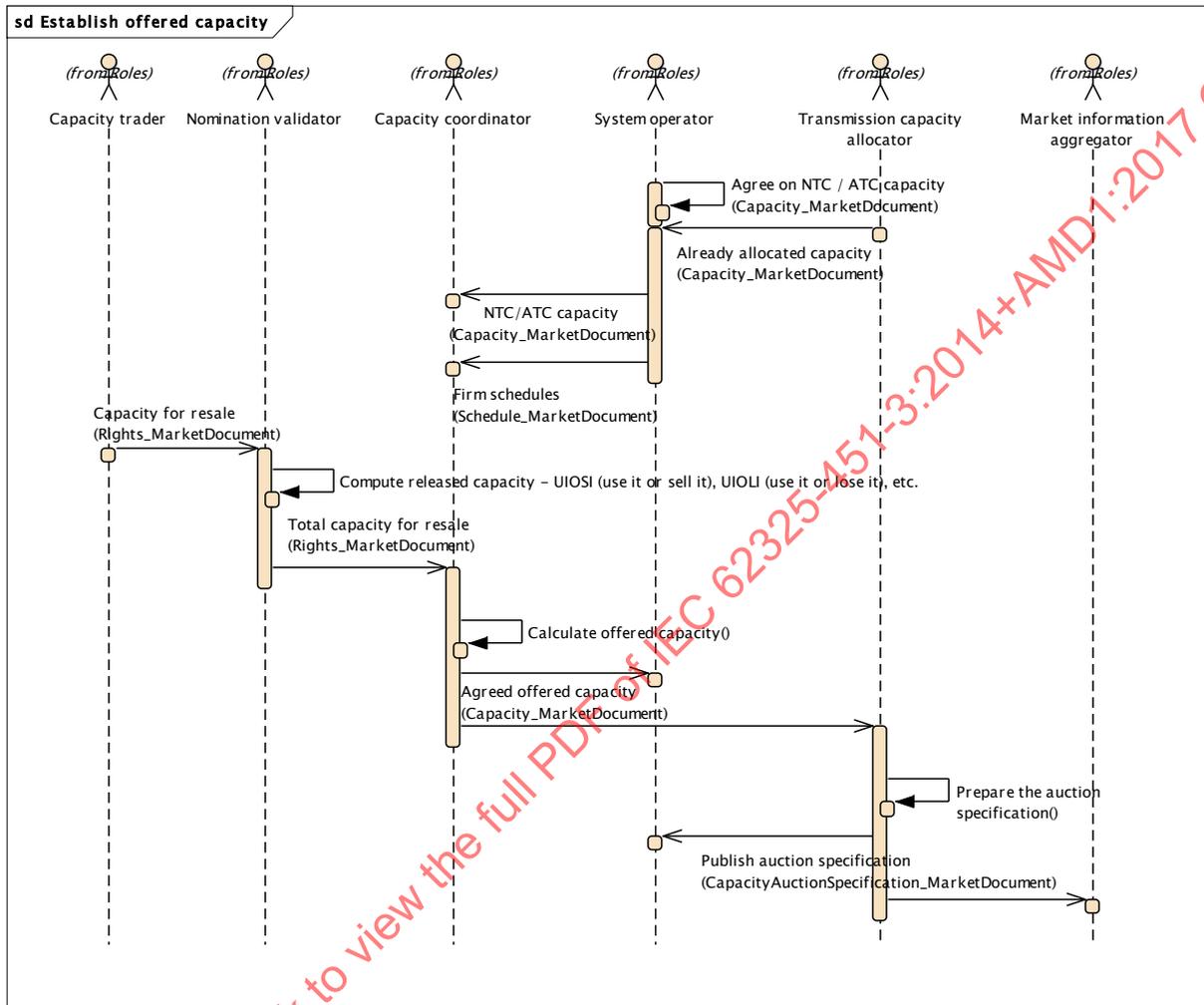


Figure 4 – Establish offered capacity overview

### 5.3 Explicit auction process

#### 5.3.1 Overview of explicit auction process

The explicit auction process is composed of a number of steps described in the following paragraphs:

- Figure 5 describes the submission of bids, the allocation process of capacity rights and the publication of allocated capacity rights.
- Figure 6 describes the resale of capacity rights and the capacity curtailment process for security reason.
- Figure 7 describes the nomination of capacity rights.

#### 5.3.2 Bid and allocate capacity

The capacity traders submit bids for the transmission rights on a border to the transmission capacity allocator during the bidding period.

During a predefined validation window the transmission capacity allocator will verify the correctness of all bids for the auction in question.

After the bidding phase, the bids in question are allocated transmission rights by the transmission capacity allocator in compliance with the published auction rules.

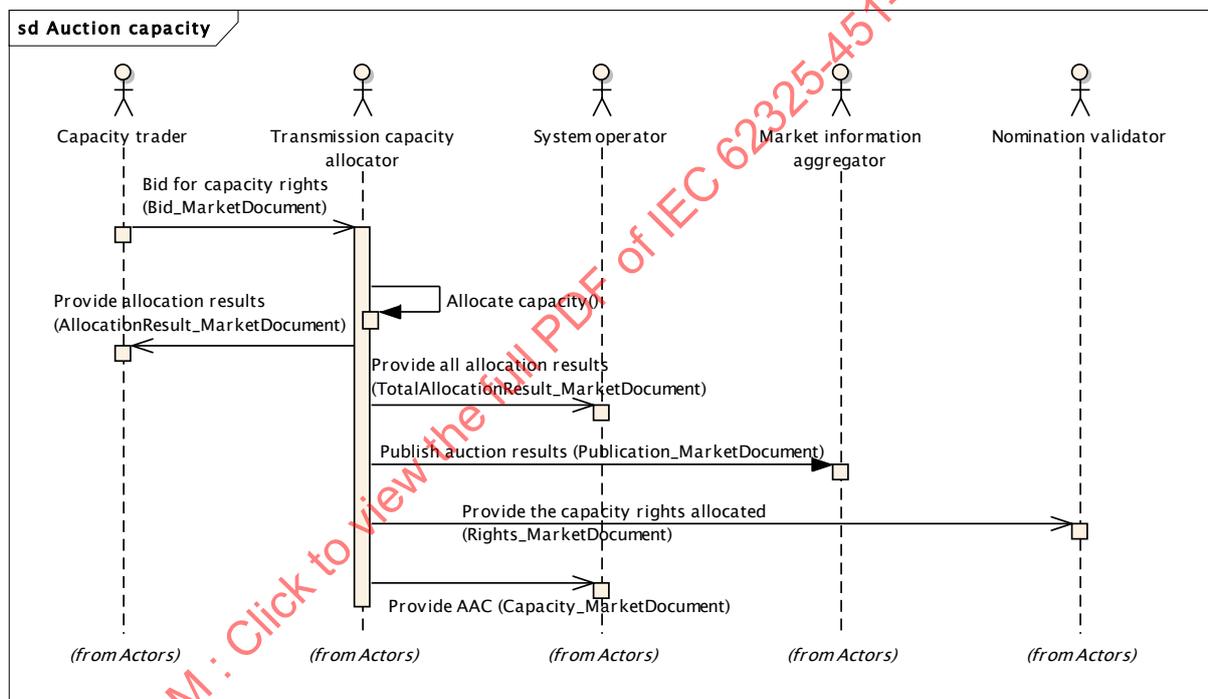
### 5.3.3 Publish auction results

In the final step of the capacity allocation process the transmission capacity allocator publishes the auction results which include the auction outcome of all bids and resales.

Involved system operators are informed of the allocated and resold capacity being the outcome of the auction.

Each capacity trader is informed of the outcome of its bid(s) and resales after the bidding period in compliance with auction rules.

The results may be re-transmitted to market information aggregators for general publication.



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Figure 5 – Auction capacity

### 5.3.4 Trade and negotiate allocated capacity

In this process capacity traders trade transmission capacity rights between themselves and at the end of the trade inform the transmission capacity allocator of the rights transfer.

This is an “Over The Counter (OTC)” market, i.e. there are no specific rules for the trade, only the rules agreed between the parties involved in the trade. This market is also called “secondary market”.

The transmission capacity allocator approves the transfer through the transmission of a Rights\_MarketDocument containing the approved transmission rights that have been transferred between both parties. This is sent to both the transferor and the transferee parties.

### 5.3.5 Capacity rights resale

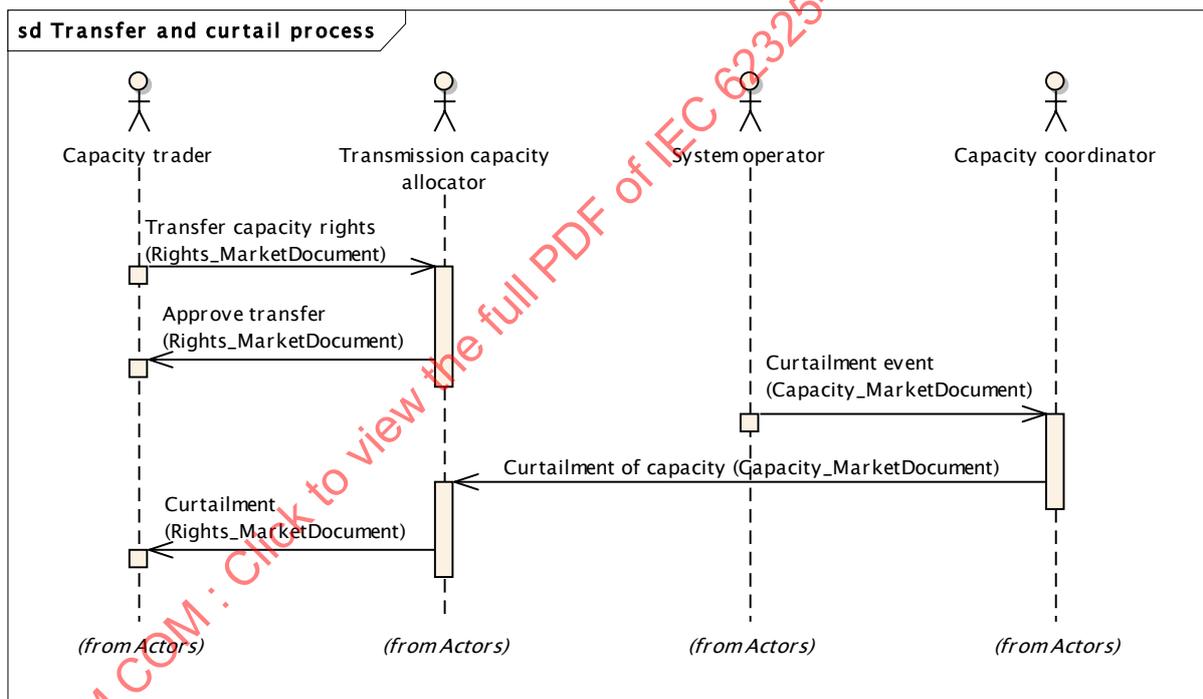
The capacity trader may, dependent on local rules, release his transmission capacity rights that he has previously acquired prior to an auction. If the capacity is released to the transmission capacity allocator sufficiently in advance the trader can benefit from its resale in the coming auction.

In a “use it or sell it” (UIOSI) model the capacity trader benefits from the resale of the capacity rights in a subsequent auction for the part of the capacity rights that was not nominated beforehand.

In a “use it or lose it” model (UIOLI) capacity not nominated is generally lost by the capacity trader.

### 5.3.6 Possibility of curtailment of allocated capacity

If, in order to ensure network security, the system operator found it necessary to curtail the transmission capacity rights from a previous auction, the system operator informs the corresponding transmission capacity allocator of the curtailment that will have to be imposed. The transmission capacity allocator informs the capacity traders of the new curtailed transmission capacity rights.



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Figure 6 – Transfer and curtailment

### 5.3.7 Designate interconnection trade responsible for nomination

The capacity trader informs the transmission capacity allocator of the interconnection trade responsible that will carry out the nomination of transmission capacity rights on his behalf.

The designation of the interconnection trade responsible that will nominate the capacity rights is transmitted to the transmission capacity allocation with a Rights\_MarketDocument.

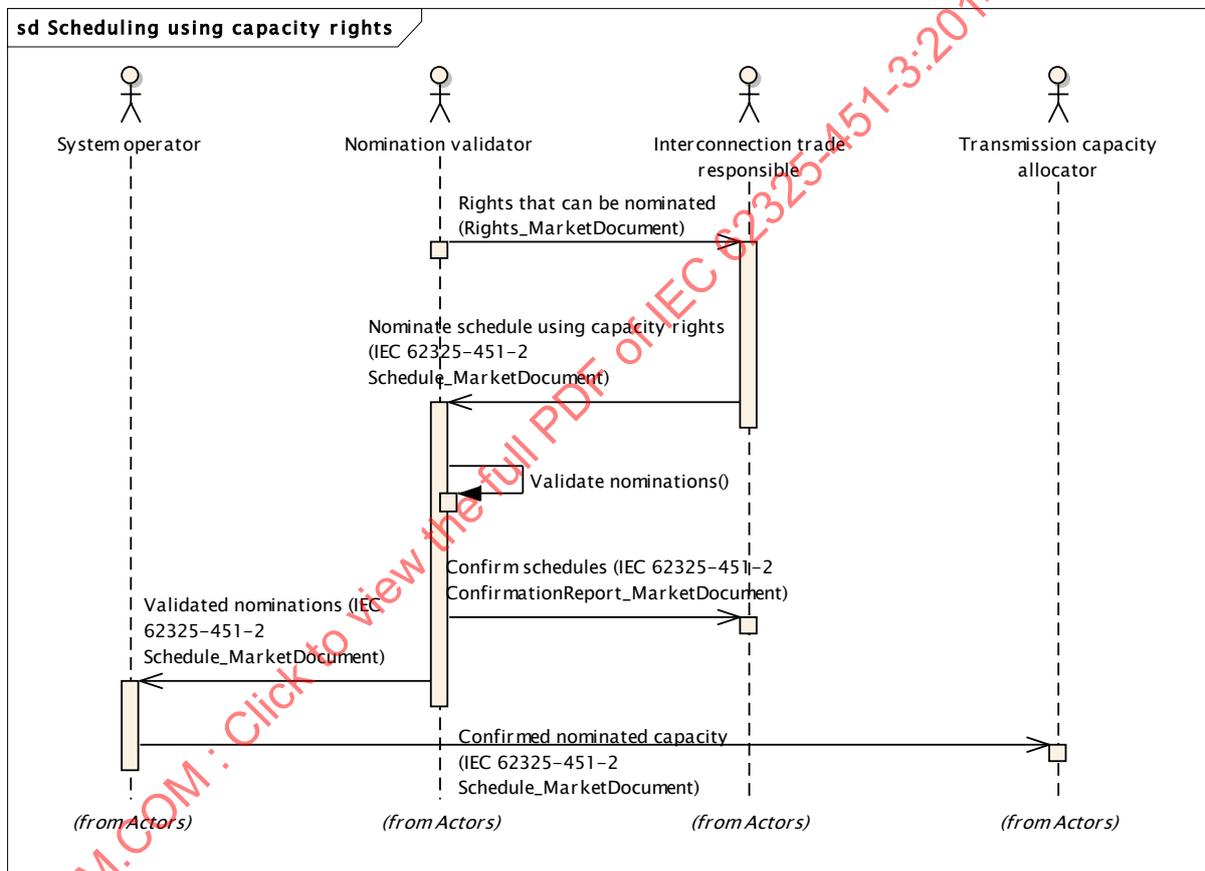
### 5.3.8 Nominate use of border capacity

The nomination validator receives the final allocations (capacity rights) from the transmission capacity allocator, which identifies the interconnection trade responsible parties authorised to nominate the capacity, and sends the authorised nomination capacity to the interconnection trade responsible parties in question.

### 5.3.9 Validate nominations

The validation process for nominations may take place on one side or both sides of the border.

The nomination validator must check that the nominations from the interconnection trade responsible parties do not exceed the amount of capacity that the transmission capacity allocator has communicated. In the case that the nominations exceeded the amount of the capacity rights the nomination validator applies local market rules.



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Figure 7 – Nomination of capacity rights

## 5.4 Implicit auction process

### 5.4.1 Overview implicit auction process

The implicit auction is characterized by the fact that the trade responsible party bought both energy and transmission capacity at the same time.

Thus the distinction between the role of capacity trader and interconnection trade responsible is not necessary for this business process.

The rules covering the auction mechanism determine the market energy price for the market balance area after applying technical constraints from the system operator.

Figure 8 provides an overview of the implicit auction process and the list of exchanged documents.

#### **5.4.2 Submit bids and offers to local exchange**

The trade responsible parties submit to their market operator their offer (sell or buy) of energy. The document to carry out this exchange is not further elaborated in this document.

#### **5.4.3 Implicit auction**

The market operator defines, based on agreed market rules, the “market equilibrium point”, i.e. the cross border flows, the energy prices and the trades that are matched.

#### **5.4.4 Publish exchange results**

The market operator provides to the involved system operators the result of the matching using the ImplicitAuctionResult\_MarketDocument.

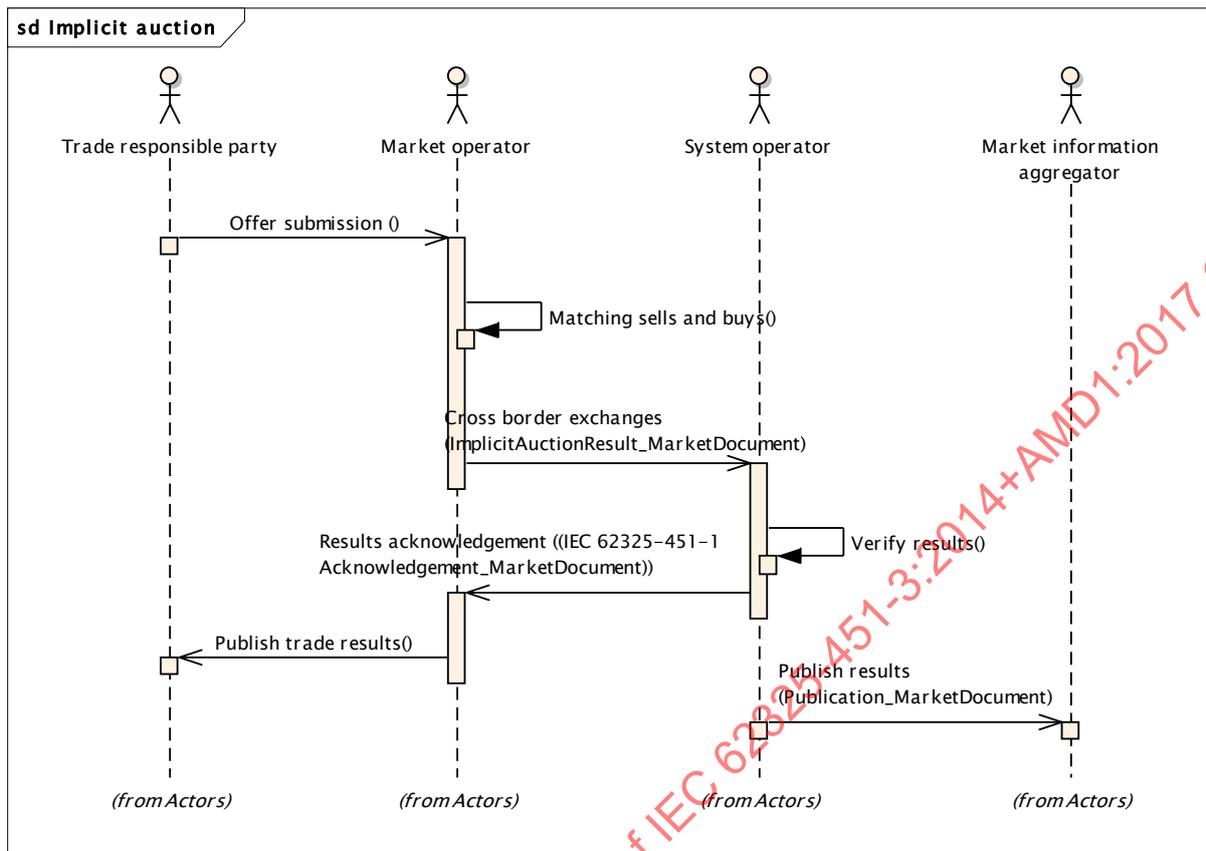
The system operators verify the consistency of the results with the constraints provided when defining the offered capacity.

The result are then provided to the market information aggregator using the Publication\_MarketDocument.

#### **5.4.5 Publish trade results**

The market operator provides to each market participant the results of the market. The document to carry out this exchange is not further elaborated in this document.

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Figure 8 – Implicit auction overview

## 5.5 Business rules for the transmission capacity allocation process

### 5.5.1 General rules

The generic rules defined in IEC 62325-351 apply to all the documents described in this part. In particular, IEC 62325-351 describes the concept of curve type that is to be used to define the pattern of an auction.

For each electronic data interchange defined in this document, an application acknowledgement is required as defined in IEC 62325-451-1, except for the document sent to the capacity trader or the interconnection trade responsible as receiver\_MarketParticipant.marketRole.type.

When a document is received, it shall be checked at the application level to ensure that there are no faults in it that could prevent its normal processing. After this check, an acknowledgement document, as defined in IEC 62325-451-1, shall be generated either accepting in its entirety the document in question or rejecting it.

In the case of explicit auction, nomination of capacity rights shall be made using the schedule document as described in IEC 62325-451-2.

### 5.5.2 Rules governing the Bid\_MarketDocument

The following rules apply to the Bid\_MarketDocument:

- A bid document contains a set of bids (a bid is represented by a time series).
- There may be several bids submitted by the sender for the same bid period and subject party (capacity trader).

- To cancel a complete set of bids the bid document is resubmit with a new version number but no time series under it.
- There can only be one sender for a given subject party.
- A bid document can only be for only one subject party.
- A bid document received with the same document identification and document version as an existing bid document shall be rejected.
- The last version of a bid document with the same document identification shall constitute the last valid bid for the document in question.
- Each Bid\_TimeSeries within a document is considered a bid within this specification. The bid mRID that the bidder assigns is the unique identification of the bid for a given auction identification (auction.mRID).
- Table 1 provides the dependency concerning the bid indicators:

**Table 1 – Bid indicators dependency**

	Default case	Other cases			
		NO	NO	YES	YES
Divisible (possible values)	YES	NO	NO	YES	YES
Linked Bids Identification (attribute used or not)	Not used	Used	Not used	Not used	Not applicable
Block Bid (possible values)	NO	YES	YES	NO	Not applicable

NOTE “Not used” signifies that the attribute cannot be used. “Not applicable” signifies that the attributes in question do not apply to the dependency case.

For example: a LinkedBidIdentification could only contain an identification where Divisible was “NO” and a BlockedBid was “YES”. In all other cases it could not contain an identification.

### 5.5.3 Rules governing the Capacity\_MarketDocument

The dependencies are listed here after:

- The document type “Agreed capacity” is to be used with the process type “Capacity determination” and the business types “Offered capacity”, “NTC” or “ATC”, the “Reason” could be “Curtailement”;
- The document type “Proposed capacity” is to be used with the process type “Capacity determination” and the business types “Offered capacity”, “NTC” or “ATC”, the “Reason” could be “Curtailement”;
- The document type “Interconnection capacity” is to be used with the process type “Capacity determination” and the business types “AAC” or “Released AAC”;
- The document type “Interconnection capacity” is to be used with the process type “Capacity allocation” and the business type “General capacity information”.

NOTE the Business Type “General Capacity Information” is a generic type for the identification of a time series that provides the total capacity available on a TSO border

### 5.5.4 Rules governing the AllocationResult\_MarketDocument

The following rules apply to the AllocationResult\_MarketDocument:

- There is only one contract identification assigned by the transmission capacity allocator per auction identification, bid period and subject party.
- There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.
- Only one of these three possibilities is permitted in a given allocation result document:
  - a) In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and

resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

- b) It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.
  - c) A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.
- The bid result may mirror the original bid itself in which case the curveType shall not be used, or a profile may be provided as a result in which the curveType shall be used.
  - The choice of whether or not to mirror the original bids must be consistent within the whole result document.

#### **5.5.5 Rules governing the TotalAllocationResult\_MarketDocument**

The following rules apply to the TotalAllocationResult\_MarketDocument:

- There is only one contract identification assigned by the transmission capacity allocator per auction identification, bid period and bidding party.
- Only one of these three possibilities is permitted in a given total allocation result document:
  - a) In the case where the total allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.
  - b) It is also possible for the total allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.
  - c) A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.
- The bid result may mirror the original bid itself in which case the curveType shall not be used, or a profile may be provided as a result in which the curveType shall be used.
- The choice of whether or not to mirror the original bids must be consistent within the whole result document.

#### **5.5.6 Rules governing the Rights\_MarketDocument**

The following rules apply to the Rights\_MarketDocument:

- A Rights\_MarketDocument is used in various business contexts. In general it identifies the capacity transmission rights that a capacity trader or an interconnection trade responsible has in his portfolio for a given border.
- Any time a party's capacity transmission rights change for a given period the capacity trader may inform the party of his new portfolio by sending a new version of the rights document to the party in question.
- A rights document may also be used to provide the complete portfolio for a given border.
- In addition, a rights document may be used to provide information on rights compensation such as UIOSI pricing or rights curtailment compensation.
- There can only be one sender for a given subject party.
- A Rights\_MarketDocument can only be for only one subject party.
- A Rights\_MarketDocument received with the same document identification and document version as an existing Rights\_MarketDocument shall be rejected.

- Table 2 provides the dependency concerning the Rights\_MarketDocument indicators:

**Table 2 – Rights\_MarketDocument dependency table**

Document type	Business type	Rights holder	Transferee	Previous contract identification	Auction identification
Capacity for resale	Released AAC	Mandatory			Mandatory
	Capacity rights not nominated	Mandatory			
Approved transfer	Capacity transfer notification	Mandatory			
AAC transfer	Capacity transfer notification	Mandatory	Mandatory	Mandatory	
	Interconnection trade responsible designation				
Transmission rights portfolio	Capacity rights	Mandatory			
Allocations	Authorised AAC	Mandatory			
	Minimum authorised AAC	Mandatory			
	Maximum authorised AAC	Mandatory			
Compensation rights	Use it or sell it pricing	Mandatory			
	Resale compensation following cancellation				
	Rights curtailment				
	Use it or sell it compensation				
	Auction cancellation				

When using the document type “Allocations”, the business type “Authorised AAC” is generally sufficient to provide the maximum amount of AAC available for nomination. However, if the business type “Minimum authorized AAC” is used then the business type “Maximum authorised AAC” shall be used in the place of the business type “Authorised AAC”.

## 6 Contextual and assembly models

### 6.1 Bid contextual model

#### 6.1.1 Overview of the model

Figure 9 shows the model.

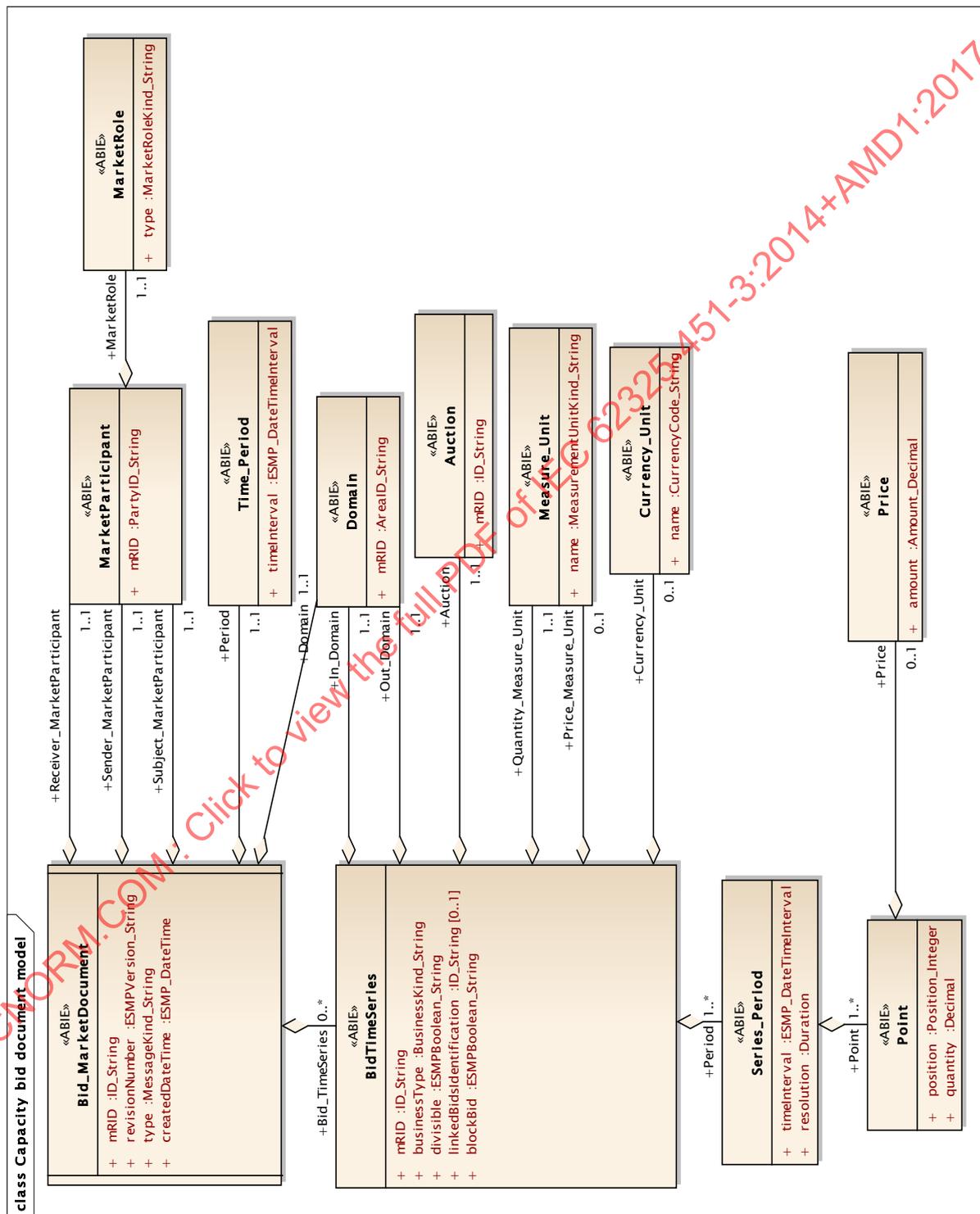


Figure 9 – Bid contextual model

### 6.1.2 IsBasedOn relationships from the European style market profile

Table 3 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 3 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Bid_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.1.3 Detailed Bid contextual model

#### 6.1.3.1 Bid\_MarketDocument root class

A bid document contains a set of bids (a bid is represented by a time series). There may be several bids submitted by the sender for the same bid period and subject party.

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: ESMPClasses::MarketDocument

Table 4 shows all attributes of Bid\_MarketDocument.

**Table 4 – Attributes of Bid contextual model::Bid\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 5 shows all association ends of Bid\_MarketDocument with other classes.

**Table 5 – Association ends of Bid contextual model:: Bid\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	The timeseries contains the bids that are submitted to the auction. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	The domain covered within the bid document, i.e. the border for which auction is done. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Subject_MarketParticipant	MarketParticipant	The party for whom the bid is being submitted. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.1.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 6 shows all attributes of Auction.

**Table 6 – Attributes of Bid contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.1.3.3 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 7 shows all attributes of BidTimeSeries.

**Table 7 – Attributes of Bid contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	blockBid	ESMPBoolean_String	The indication that the values in the period are considered as a whole. They cannot be changed or subdivided.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	divisible	ESMPBoolean_String	An indication whether or not each element of the bid may be partially accepted or not.
[0..1]	linkedBidsIdentification	ID_String	The unique identification used to identify associated bids with each other.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 8 shows all association ends of BidTimeSeries with other classes.

**Table 8 – Association ends of Bid contextual model:  
BidTimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the bid to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed (MW, MWh, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

#### 6.1.3.4 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 9 shows all attributes of Currency\_Unit.

**Table 9 – Attributes of Bid contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

#### 6.1.3.5 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 10 shows all attributes of Domain.

**Table 10 – Attributes of Bid contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

#### 6.1.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 11 shows all attributes of MarketParticipant.

**Table 11 – Attributes of Bid contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 12 shows all association ends of MarketParticipant with other classes.

**Table 12 – Association ends of Bid contextual model::  
MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.1.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 13 shows all attributes of MarketRole.

**Table 13 – Attributes of Bid contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.1.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 14 shows all attributes of Measure\_Unit.

**Table 14 – Attributes of Bid contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.1.3.9 Point

The quantity that is bid for the interval in question.

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 15 shows all attributes of Point.

**Table 15 – Attributes of Bid contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 16 shows all association ends of Point with other classes.

**Table 16 – Association ends of Bid contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed for each unit of quantity. The price amount is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules (for example "first come first serve"). Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

#### 6.1.3.10 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 17 shows all attributes of Price.

**Table 17 – Attributes of Bid contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

#### 6.1.3.11 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 18 shows all attributes of Series\_Period.

**Table 18 – Attributes of Bid contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 19 shows all association ends of Series\_Period with other classes.

**Table 19 – Association ends of Bid contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.1.3.12 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 20 shows all attributes of Time\_Period.

**Table 20 – Attributes of Bid contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

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## 6.2 Bid assembly model

### 6.2.1 Overview of the model

Figure 10 shows the model.

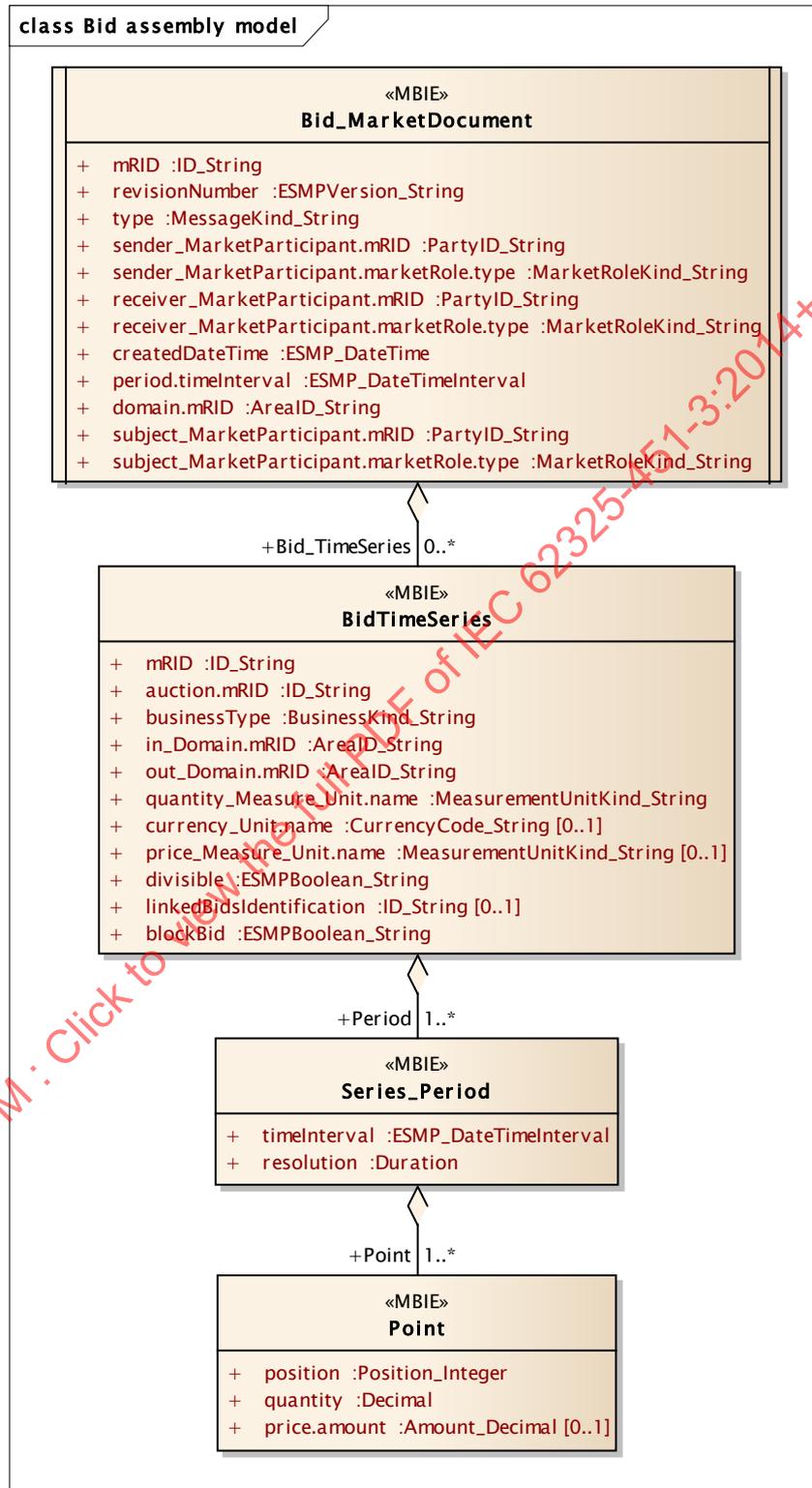


Figure 10 – Bid assembly model

## 6.2.2 IsBasedOn relationships from the European style market profile

Table 21 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 21 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Bid_MarketDocument	Bid contextual model::Bid_MarketDocument	Bid Document\Bid contextual model
BidTimeSeries	Bid contextual model::BidTimeSeries	Bid Document\Bid contextual model
Point	Bid contextual model::Point	Bid Document\Bid contextual model
Series_Period	Bid contextual model::Series_Period	Bid Document\Bid contextual model

## 6.2.3 Detailed Bid assembly model

### 6.2.3.1 Bid\_MarketDocument root class

A bid document contains a set of bids (a bid is represented by a time series). There may be several bids submitted by the sender for the same bid period and subject party.

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: Bid contextual model::Bid\_MarketDocument

Table 22 shows all attributes of Bid\_MarketDocument.

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**Table 22 – Attributes of Bid assembly model::Bid\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the bid document, i.e. the border for which auction is done.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	subject_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- The party for whom the bid is being submitted.
[1..1]	subject_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The party for whom the bid is being submitted.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 23 shows all association ends of Bid\_MarketDocument with other classes.

**Table 23 – Association ends of Bid assembly model:: Bid\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	The timeseries contains the bids that are submitted to the auction. Association Based On: Bid contextual model::BidTimeSeries.Bid_TimeSeries[0..*] ----- Bid contextual model::Bid_MarketDocument.[]

### 6.2.3.2 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: Bid contextual model::BidTimeSeries

Table 24 shows all attributes of BidTimeSeries.

**Table 24 – Attributes of Bid assembly model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the bid to a set of specifications created by the auction operator.
[1..1]	blockBid	ESMPBoolean_String	The indication that the values in the period are considered as a whole. They cannot be changed or subdivided.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[1..1]	divisible	ESMPBoolean_String	An indication whether or not each element of the bid may be partially accepted or not.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[0..1]	linkedBidsIdentification	ID_String	The unique identification used to identify associated bids with each other.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed (MW, MWh, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.

Table 25 shows all association ends of BidTimeSeries with other classes.

**Table 25 – Association ends of Bid assembly model::BidTimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Bid contextual model::Series_Period.Period[1..*] ----- Bid contextual model::BidTimeSeries.[]

### 6.2.3.3 Point

The quantity that is bid for the interval in question.

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Bid contextual model::Point

Table 26 shows all attributes of Point.

**Table 26 – Attributes of Bid assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity. The price amount is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules (for example "first come first serve").
[1..1]	quantity	Decimal	The principal quantity identified for a point.

### 6.2.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Bid contextual model::Series\_Period

Table 27 shows all attributes of Series\_Period.

**Table 27 – Attributes of Bid assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 28 shows all association ends of Series\_Period with other classes.

**Table 28 – Association ends of Bid assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Bid contextual model::Point.Point[1..*] ----- Bid contextual model::Series_Period.[]

### 6.3 Capacity auction specification contextual model

#### 6.3.1 Overview of the model

Figure 11 shows the model.

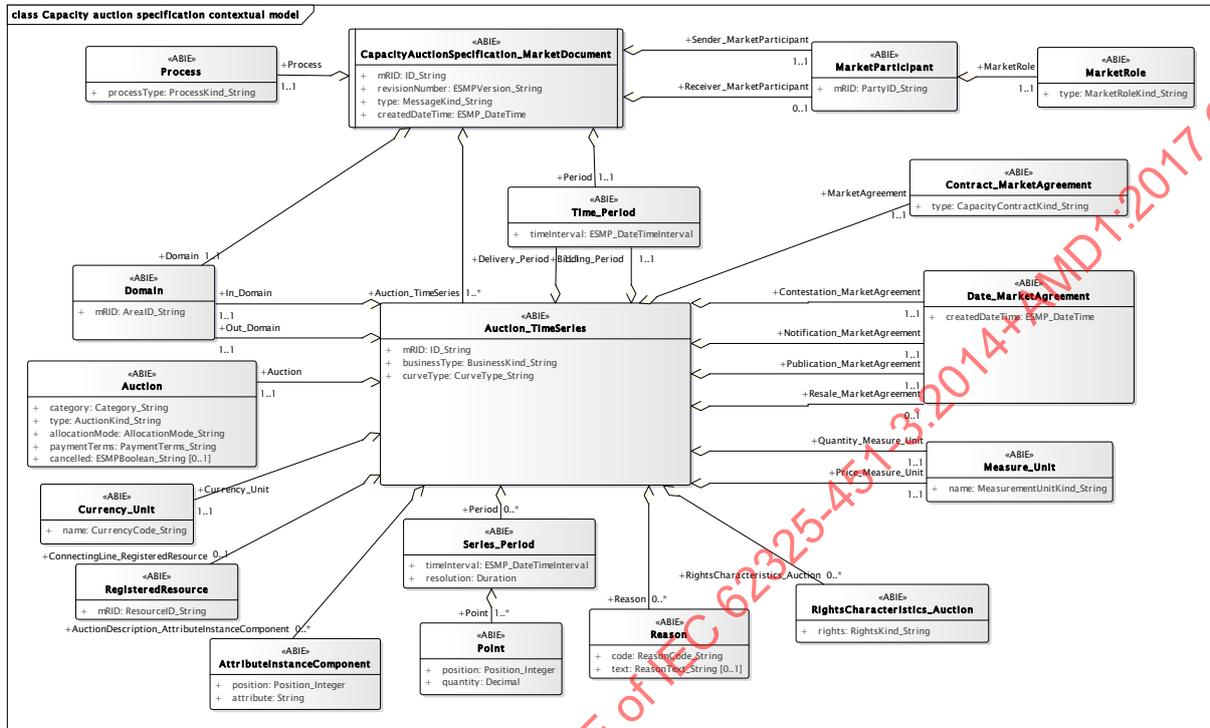


Figure 11 – Capacity auction specification contextual model

#### 6.3.2 IsBasedOn relationships from the European style market profile

Table 29 shows the traceability dependency of the classes used in this package towards the upper level.

Table 29 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Auction_TimeTypeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
CapacityAuctionSpecification_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Date_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon
RightsCharacteristics_Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.3.3 Detailed Capacity auction specification contextual model

#### 6.3.3.1 CapacityAuctionSpecification\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The CapacityAuctionSpecification\_MarketDocument is issued by the Transmission Capacity Allocator to any market participant interested in the reception of such information.

It provides information on the auction that will be carried out and in particular the unique identification of the auction.

IsBasedOn: ESMPClasses::MarketDocument

Table 30 shows all attributes of CapacityAuctionSpecification\_MarketDocument.

**Table 30 – Attributes of Capacity auction specification contextual model::CapacityAuctionSpecification\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 31 shows all association ends of CapacityAuctionSpecification\_MarketDocument with other classes.

**Table 31 – Association ends of Capacity auction specification contextual model::CapacityAuctionSpecification\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	The domain covered within the Capacity AuctionSpecification document, i.e. the border. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the capacity auctions are covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.3.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Table 32 shows all attributes of AttributeInstanceComponent.

**Table 32 – Attributes of Capacity auction specification contextual model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	attribute	String	This provides the textual content of a line within a description (textual description of the auction and its market rules to clarify information that is not formally defined). The identification of an attribute for a given request component.
[1..1]	position	Integer	The position provides the identification of each line within the textual description of an auction. A sequential value representing a relative sequence number.

### 6.3.3.3 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 33 shows all attributes of Auction.

**Table 33 – Attributes of Capacity auction specification contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	allocationMode	AllocationMode_String	The identification of the method of allocation in an auction.
[0..1]	cancelled	ESMPBoolean_String	An indicator that signifies that the object, subject of the TimeSeries, has been cancelled.
[1..1]	category	Category_String	The product category of an auction.
[1..1]	paymentTerms	PaymentTerms_String	The terms which dictate the determination of the bid payment price.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

### 6.3.3.4 Auction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

The Auction\_TimeSeries provide the necessary information about what is auctioned as transmission capacity.

IsBasedOn: ESMPClasses::TimeSeries

Table 34 shows all attributes of Auction\_TimeSeries.

**Table 34 – Attributes of Capacity auction specification contextual model::Auction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	The identification attributed by the auction office that uniquely identifies the auction. A unique identification of the time series.

Table 35 shows all association ends of Auction\_TimeSeries with other classes.

**Table 35 – Association ends of Capacity auction specification contextual model::Auction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	It provides the textual description of the auction and its market rules to clarify information that is not formally defined. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Bidding_Period	Time_Period	The beginning and ending date and time of the bidding period within which capacity traders can submit a bid to the transmission capacity allocator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	Contestation_MarketAgreement	Date_MarketAgreement	The period in which contestations may be provided starts with the notification date time and ends with the contestation date and time. If there is no possibility of contestation both dates and times must be the same. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Delivery_Period	Time_Period	The beginning and ending date and time of the period when the capacity is to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the capacity will be allocated. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]

mult.	Role	Class type name	Description
[1..1]	Notification_MarketAgreement	Date_MarketAgreement	The date and time that the participants will be notified of the results prior to the contestation period. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the prices in the auction bids are to be expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Publication_MarketAgreement	Date_MarketAgreement	The date and time that the final auction results will be published to the market after the contestation period. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	It may provide any coded or textual information that is necessary to completely describe a change to the auction specification or its eventual cancellation. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Resale_MarketAgreement	Date_MarketAgreement	The date and time where the resale of capacity rights acquired in previous auctions for this auction will no longer be acceptable. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	The definition of the type of the rights that are to be auctioned. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]

### 6.3.3.5 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 36 shows all attributes of Contract\_MarketAgreement.

**Table 36 – Attributes of Capacity auction specification contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.3.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 37 shows all attributes of Currency\_Unit.

**Table 37 – Attributes of Capacity auction specification contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.3.3.7 Date\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 38 shows all attributes of Date\_MarketAgreement.

**Table 38 – Attributes of Capacity auction specification contextual model::Date\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement.

### 6.3.3.8 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 39 shows all attributes of Domain.

**Table 39 – Attributes of Capacity auction specification contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ArealID_String	The unique identification of the domain.

### 6.3.3.9 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 40 shows all attributes of MarketParticipant.

**Table 40 – Attributes of Capacity auction specification contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 41 shows all association ends of MarketParticipant with other classes.

**Table 41 – Association ends of Capacity auction specification contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.3.3.10 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 42 shows all attributes of MarketRole.

**Table 42 – Attributes of Capacity auction specification contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.3.3.11 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 43 shows all attributes of Measure\_Unit.

**Table 43 – Attributes of Capacity auction specification contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.3.3.12 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 44 shows all attributes of Point.

**Table 44 – Attributes of Capacity auction specification contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity to be auctioned for the interval in question. The principal quantity identified for a point.

### 6.3.3.13 Process

A formal identification of the business process in which a flow of information is exchanged.

IsBasedOn: ESMPClasses::Process

Table 45 shows all attributes of Process.

**Table 45 – Attributes of Capacity auction specification contextual model::Process**

mult.	Attribute name	Attribute type	Description
[1..1]	processType	ProcessKind_String	The identification of the nature of process that the document addresses.

### 6.3.3.14 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 46 shows all attributes of Reason.

**Table 46 – Attributes of Capacity auction specification contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.3.3.15 RightsCharacteristics\_Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 47 shows all attributes of RightsCharacteristics\_Auction.

**Table 47 – Attributes of Capacity auction specification contextual model::RightsCharacteristics\_Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	rights	RightsKind_String	The rights of use that is accorded to what is acquired in an auction.

### 6.3.3.16 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 48 shows all attributes of Series\_Period.

**Table 48 – Attributes of Capacity auction specification contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 49 shows all association ends of Series\_Period with other classes.

**Table 49 – Association ends of Capacity auction specification contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.3.3.17 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 50 shows all attributes of Time\_Period.

**Table 50 – Attributes of Capacity auction specification contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.3.3.18 RegisteredResource

A resource that is registered through the market participant registration system. Examples include generating unit, load, and non-physical generator or load.

IsBasedOn: ESMPClasses::RegisteredResource

Table 254 shows all attributes of RegisteredResource.

**Table 254 – Attributes of Capacity auction specification contextual model::RegisteredResource**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ResourceID_String	The unique identification of a resource.

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## 6.4 Capacity auction specification assembly model

### 6.4.1 Overview of the model

Figure 12 shows the model.

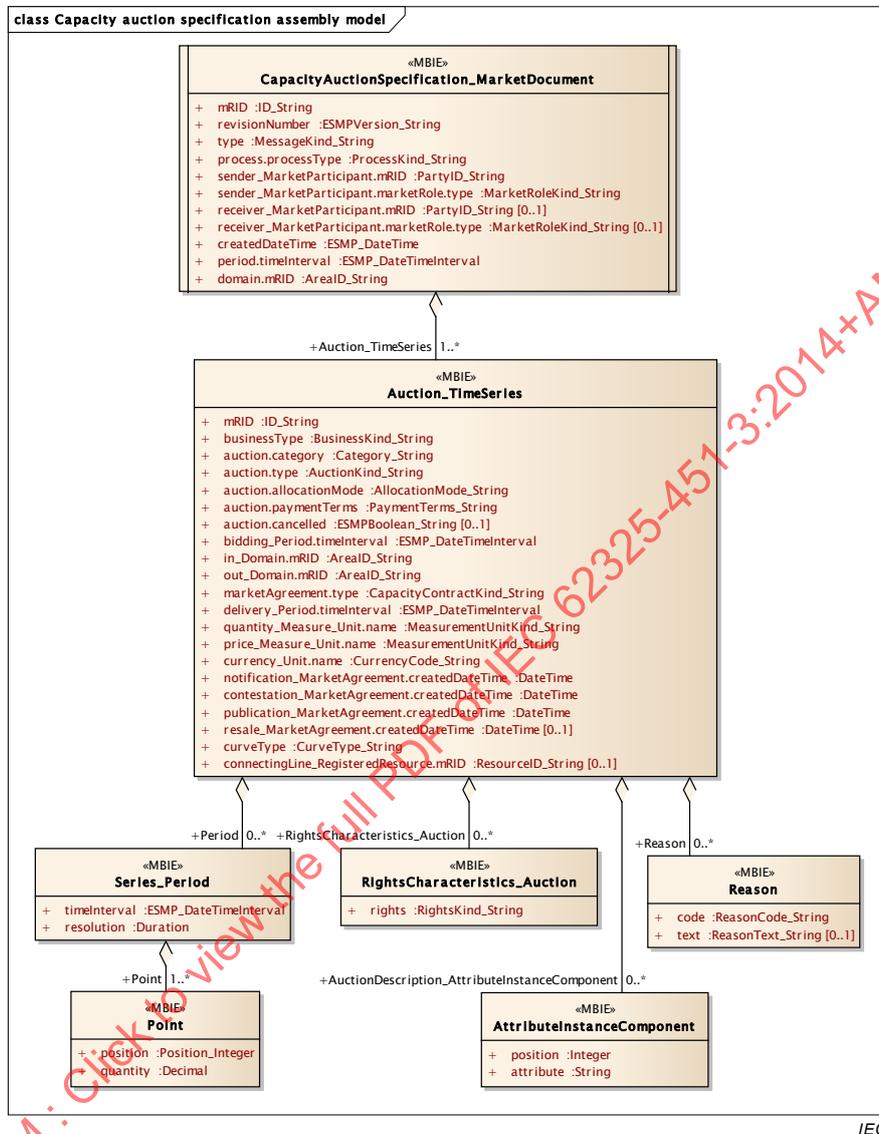


Figure 12 – Capacity auction specification assembly model

### 6.4.2 IsBasedOn relationships from the European style market profile

Table 51 shows the traceability dependency of the classes used in this package towards the upper level.

Table 51 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	Capacity auction specification contextual model::AttributeInstanceComponent	Capacity Auction Specification Document\Capacity auction specification contextual model
Auction_TimeSeries	Capacity auction specification contextual model::Auction_TimeSeries	Capacity Auction Specification Document\Capacity auction specification contextual model

Name	Is BasedOn Class	Complete IsBasedOn Path
CapacityAuctionSpecification_MarketDocument	Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument	Capacity Auction Specification Document\Capacity auction specification contextual model
Point	Capacity auction specification contextual model::Point	Capacity Auction Specification Document\Capacity auction specification contextual model
Reason	Capacity auction specification contextual model::Reason	Capacity Auction Specification Document\Capacity auction specification contextual model
RightsCharacteristics_Auction	Capacity auction specification contextual model::RightsCharacteristics_Auction	Capacity Auction Specification Document\Capacity auction specification contextual model
Series_Period	Capacity auction specification contextual model::Series_Period	Capacity Auction Specification Document\Capacity auction specification contextual model

### 6.4.3 Detailed Capacity auction specification assembly model

#### 6.4.3.1 CapacityAuctionSpecification\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The CapacityAuctionSpecification\_MarketDocument is issued by the Transmission Capacity Allocator to any market participant interested in the reception of such information.

It provides information on the auction that will be carried out and in particular the unique identification of the auction.

IsBasedOn: Capacity auction specification contextual  
model::CapacityAuctionSpecification\_MarketDocument

Table 52 shows all attributes of CapacityAuctionSpecification\_MarketDocument.

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**Table 52 – Attributes of Capacity auction specification assembly  
 model::CapacityAuctionSpecification\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the Capacity AuctionSpecification document, i.e. the border.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the capacity auctions are covering.
[1..1]	process.processType	ProcessKind_String	The identification of the nature of process that the document addresses.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 53 shows all association ends of CapacityAuctionSpecification\_MarketDocument with other classes.

**Table 53 – Association ends of Capacity auction specification assembly  
 model::CapacityAuctionSpecification\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	Auction_TimeSeries	Auction_TimeSeries	Association Based On: Capacity auction specification contextual model::Auction_TimeSeries.Auction_TimeSeries[1..*] ----- Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument.[]

### 6.4.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: Capacity auction specification contextual model::AttributeInstanceComponent

Table 54 shows all attributes of AttributeInstanceComponent.

**Table 54 – Attributes of Capacity auction specification assembly model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	attribute	String	This provides the textual content of a line within a description (textual description of the auction and its market rules to clarify information that is not formally defined). The identification of an attribute for a given request component.
[1..1]	position	Integer	The position provides the identification of each line within the textual description of an auction. A sequential value representing a relative sequence number.

### 6.4.3.3 Auction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

The Auction\_TimeSeries provide the necessary information about what is auctioned as transmission capacity.

IsBasedOn: Capacity auction specification contextual model::Auction\_TimeSeries

Table 55 shows all attributes of Auction\_TimeSeries.

**Table 55 – Attributes of Capacity auction specification assembly model::Auction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	auction.allocationMode	AllocationMode_String	The identification of the method of allocation in an auction.
[0..1]	auction.cancelled	ESMPBoolean_String	An indicator that signifies that the object, subject of the TimeSeries, has been cancelled.
[1..1]	auction.category	Category_String	The product category of an auction.
[1..1]	auction.paymentTerms	PaymentTerms_String	The terms which dictate the determination of the bid payment price.
[1..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).
[1..1]	bidding_Period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the bidding period within which capacity traders can submit a bid to the transmission capacity allocator.

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	The unique identification of a resource. --- The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines.
[1..1]	contestation_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The period in which contestations may be provided starts with the notification date time and ends with the contestation date and time. If there is no possibility of contestation both dates and times must be the same.
[1..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[1..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	delivery_Period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period when the capacity is to be used.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity will be allocated.
[1..1]	mRID	ID_String	The identification attributed by the auction office that uniquely identifies the auction. A unique identification of the time series.
[1..1]	notification_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time that the participants will be notified of the results prior to the contestation period.

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mult.	Attribute name	Attribute type	Description
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the prices in the auction bids are to be expressed.
[1..1]	publication_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time that the final auction results will be published to the market after the contestation period.
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.
[0..1]	resale_MarketAgreement.createdDateTime	DateTime	The date and time related to conditions of the agreement. The date and time of the creation of the agreement. --- The date and time where the resale of capacity rights acquired in previous auctions for this auction will no longer be acceptable.

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Table 56 shows all association ends of Auction\_TimeSeries with other classes.

**Table 56 – Association ends of Capacity auction specification assembly model::Auction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..*]	AuctionDescription_AttributeInstanceComponent	AttributeInstanceComponent	It provides the textual description of the auction and its market rules to clarify information that is not formally defined. Association Based On: Capacity auction specification contextual model::AttributeInstanceComponent.AuctionDescription_AttributeInstanceComponent[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: Capacity auction specification contextual model::Series_Period.Period[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	Reason	Reason	It may provide any coded or textual information that is necessary to completely describe a change to the auction specification or its eventual cancellation. Association Based On: Capacity auction specification contextual model::Reason.Reason[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]
[0..*]	RightsCharacteristics_Auction	RightsCharacteristics_Auction	The definition of the type of the rights that are to be auctioned. Association Based On: Capacity auction specification contextual model::RightsCharacteristics_Auction.RightsCharacteristics_Auction[0..*] ----- Capacity auction specification contextual model::Auction_TimeSeries.[]

#### 6.4.3.4 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Capacity auction specification contextual model::Point

Table 57 shows all attributes of Point.

**Table 57 – Attributes of Capacity auction specification assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity to be auctioned for the interval in question. The principal quantity identified for a point.

#### 6.4.3.5 Reason

The motivation of an act.

IsBasedOn: Capacity auction specification contextual model::Reason

Table 58 shows all attributes of Reason.

**Table 58 – Attributes of Capacity auction specification assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.4.3.6 RightsCharacteristics\_Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: Capacity auction specification contextual model::RightsCharacteristics\_Auction

Table 59 shows all attributes of RightsCharacteristics\_Auction.

**Table 59 – Attributes of Capacity auction specification assembly model::RightsCharacteristics\_Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	rights	RightsKind_String	The rights of use that is accorded to what is acquired in an auction.

#### 6.4.3.7 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Capacity auction specification contextual model::Series\_Period

Table 60 shows all attributes of Series\_Period.

**Table 60 – Attributes of Capacity auction specification assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 61 shows all association ends of Series\_Period with other classes.

**Table 61 – Association ends of Capacity auction specification assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Capacity auction specification contextual model::Point.Point[1..*] ----- Capacity auction specification contextual model::Series_Period.[]

## 6.5 Capacity contextual model

### 6.5.1 Overview of the model

Figure 13 shows the model.

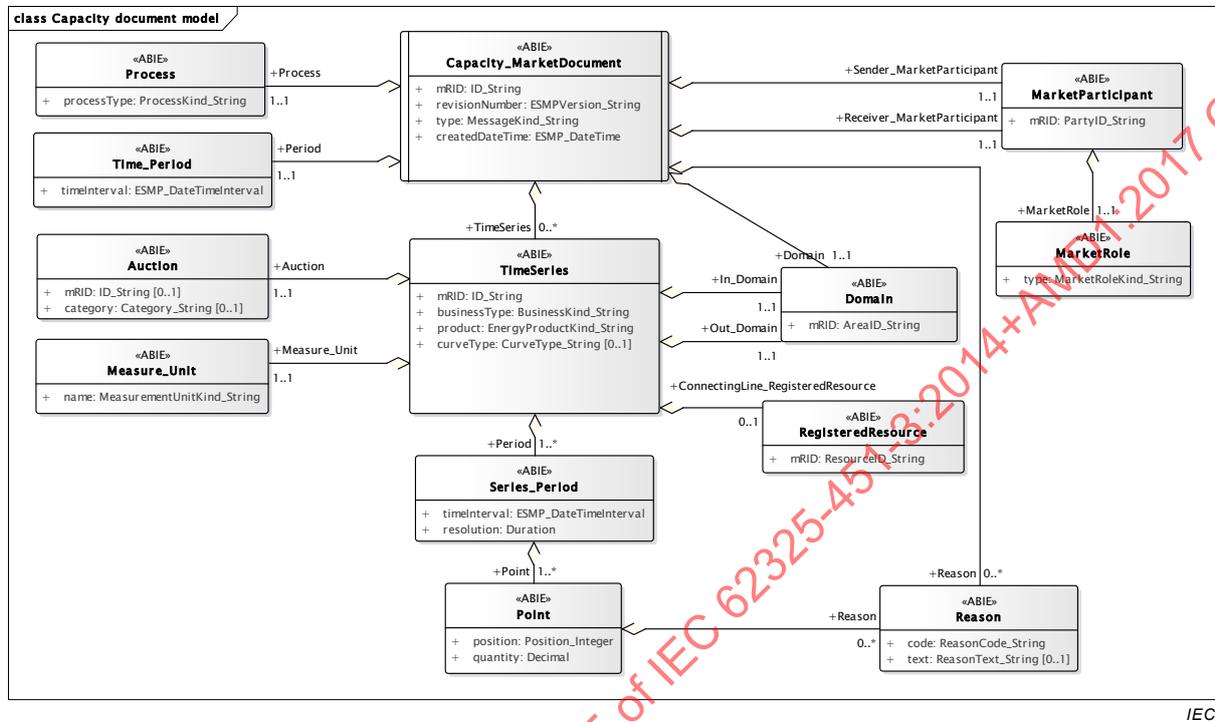


Figure 13 – Capacity contextual model

### 6.5.2 IsBasedOn relationships from the European style market profile

Table 62 shows the traceability dependency of the classes used in this package towards the upper level.

Table 62 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Capacity_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Process	ESMPClasses::Process	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
RegisteredResource	MarketCommon::RegisteredResource	IEC62325/MarketCommon
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.5.3 Detailed Capacity contextual model

#### 6.5.3.1 Capacity\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The Capacity\_MarketDocument enables the exchange of information related to transmission capacity. These exchanges could be related to capacity determination or capacity allocation. The values exchanged could be related to NTC, ATC, AAC, released AAC, offered capacity or general capacity information.

IsBasedOn: ESMPClasses::MarketDocument

Table 63 shows all attributes of Capacity\_MarketDocument.

**Table 63 – Attributes of Capacity contextual model::Capacity\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 64 shows all association ends of Capacity\_MarketDocument with other classes.

**Table 64 – Association ends of Capacity contextual model::Capacity\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the Capacity_MarketDocument. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Process	Process	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Process.Process[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]

mult.	Role	Class type name	Description
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.5.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

The unique identification of the set of specifications that clearly identifies the auction to which the capacity is addressed.

IsBasedOn: ESMPClasses::Auction

Table 65 shows all attributes of Auction.

**Table 65 – Attributes of Capacity contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[0..1]	mRID	ID_String	The unique identification of the auction.

### 6.5.3.3 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 66 shows all attributes of Domain.

**Table 66 – Attributes of Capacity contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.5.3.4 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 67 shows all attributes of MarketParticipant.

**Table 67 – Attributes of Capacity contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 68 shows all association ends of MarketParticipant with other classes.

**Table 68 – Association ends of Capacity contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant [] ----- ESMPClasses::MarketRole.MarketRole[0..1]

#### 6.5.3.5 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 69 shows all attributes of MarketRole.

**Table 69 – Attributes of Capacity contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

#### 6.5.3.6 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 70 shows all attributes of Measure\_Unit.

**Table 70 – Attributes of Capacity contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.5.3.7 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 71 shows all attributes of Point.

**Table 71 – Attributes of Capacity contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 72 shows all association ends of Point with other classes.

**Table 72 – Association ends of Capacity contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.5.3.8 Process

A formal identification of the business process in which a flow of information is exchanged.

IsBasedOn: ESMPClasses::Process

Table 73 shows all attributes of Process.

**Table 73 – Attributes of Capacity contextual model::Process**

mult.	Attribute name	Attribute type	Description
[1..1]	process.Type	ProcessKind_String	The identification of the nature of process that the document addresses.

### 6.5.3.9 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 74 shows all attributes of Reason.

**Table 74 – Attributes of Capacity contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.5.3.10 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 75 shows all attributes of Series\_Period.

**Table 75 – Attributes of Capacity contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 76 shows all association ends of Series\_Period with other classes.

**Table 76 – Association ends of Capacity contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.5.3.11 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 77 shows all attributes of Time\_Period.

**Table 77 – Attributes of Capacity contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.5.3.12 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 78 shows all attributes of TimeSeries.

**Table 78 – Attributes of Capacity contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	product	EnergyProductKind_String	The identification of the nature of an energy product such as power, energy, reactive power, etc.

Table 79 shows all association ends of TimeSeries with other classes.

**Table 79 – Association ends of Capacity contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification of a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ConnectingLine_RegisteredResource	RegisteredResource	The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines. Association Based On: ESMPClasses::RegisteredResource.RegisteredResource[0..*] ----- ESMPClasses::TimeSeries.[]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]

### 6.5.3.13 RegisteredResource

A resource that is registered through the market participant registration system. Examples include generating unit, load, and non-physical generator or load.

IsBasedOn: ESMPClasses::RegisteredResource

Table 255 shows all attributes of RegisteredResource.

**Table 255 – Attributes of Capacity contextual model::RegisteredResource**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ResourceID_String	The unique identification of a resource.

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## 6.6 Capacity assembly model

### 6.6.1 Overview of the model

Figure 14 shows the model.

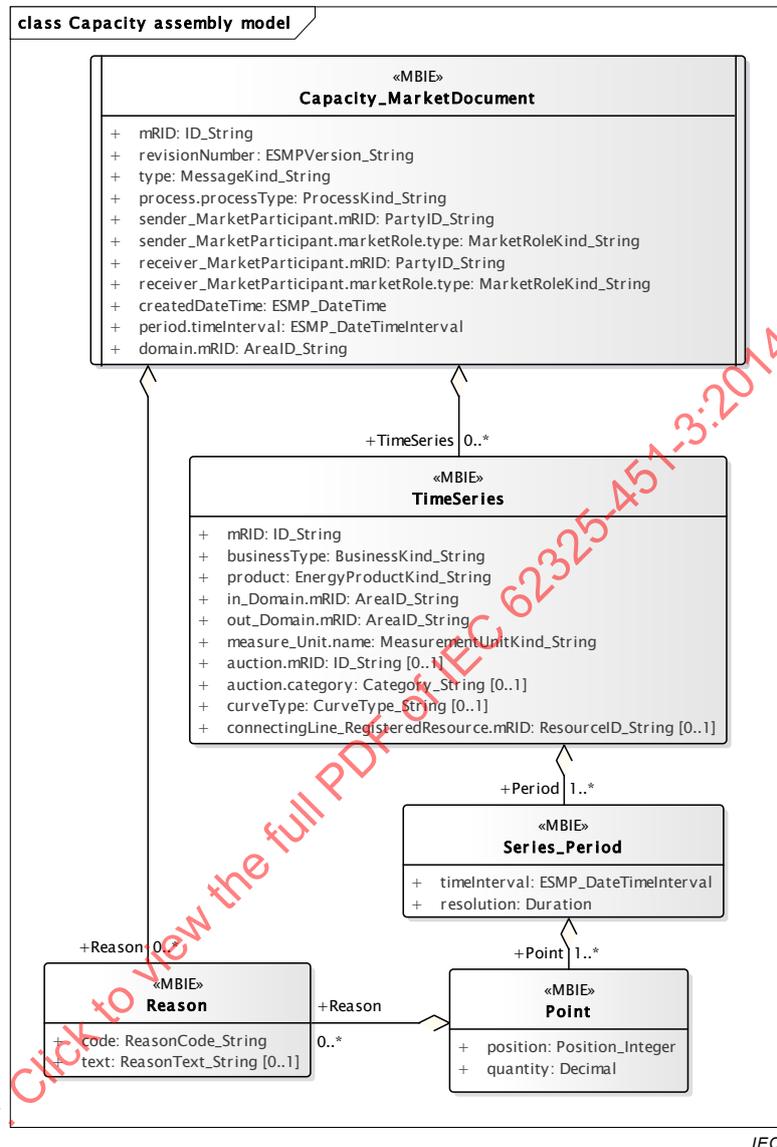


Figure 14 – Capacity assembly model

### 6.6.2 IsBasedOn relationships from the European style market profile

Table 80 shows the traceability dependency of the classes used in this package towards the upper level.

Table 80 – IsBasedOn dependency

Name	Is BasedOn Class	Complete IsBasedOn Path
Capacity_MarketDocument	Capacity contextual model::Capacity_MarketDocument	Capacity Document\Capacity contextual model
Point	Capacity contextual model::Point	Capacity Document\Capacity contextual model

Name	Is BasedOn Class	Complete IsBasedOn Path
Reason	Capacity contextual model::Reason	Capacity Document\Capacity contextual model
Series_Period	Capacity contextual model::Series_Period	Capacity Document\Capacity contextual model
TimeSeries	Capacity contextual model::TimeSeries	Capacity Document\Capacity contextual model

### 6.6.3 Detailed Capacity assembly model

#### 6.6.3.1 Capacity\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The Capacity\_MarketDocument enables the exchange of information related to transmission capacity. These exchanges could be related to capacity determination or capacity allocation. The values exchanged could be related to NTC, ATC, AAC, released AAC, offered capacity or general capacity information.

IsBasedOn: Capacity contextual model::Capacity\_MarketDocument

Table 81 shows all attributes of Capacity\_MarketDocument.

**Table 81 – Attributes of Capacity assembly model::Capacity\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the Capacity_MarketDocument.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	process.processType	ProcessKind_String	The identification of the nature of process that the document addresses.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.

mult.	Attribute name	Attribute type	Description
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 82 shows all association ends of Capacity\_MarketDocument with other classes.

**Table 82 – Association ends of Capacity assembly model:: Capacity\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Capacity contextual model::Reason.Reason[0..*] ----- Capacity contextual model::Capacity_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Capacity contextual model::TimeSeries.TimeSeries[0..*] ----- Capacity contextual model::Capacity_MarketDocument.[]

### 6.6.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Capacity contextual model::Point

Table 83 shows all attributes of Point.

**Table 83 – Attributes of Capacity assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.

Table 84 shows all association ends of Point with other classes.

**Table 84 – Association ends of Capacity assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Capacity contextual model::Reason.Reason[0..*] ----- Capacity contextual model::Point.[]

### 6.6.3.3 Reason

The motivation of an act.

IsBasedOn: Capacity contextual model::Reason

Table 85 shows all attributes of Reason.

**Table 85 – Attributes of Capacity assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.6.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Capacity contextual model::Series\_Period

Table 86 shows all attributes of Series\_Period.

**Table 86 – Attributes of Capacity assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 87 shows all association ends of Series\_Period with other classes.

**Table 87 – Association ends of Capacity assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Capacity contextual model::Point.Point[1..*] ----- Capacity contextual model::Series_Period.[]

### 6.6.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Capacity contextual model::TimeSeries

Table 88 shows all attributes of TimeSeries.

**Table 88 – Attributes of Capacity assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification of a set of specifications created by the auction operator.
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification of a set of specifications created by the auction operator.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	connectingLine_RegisteredResource.mRID	ResourceID_String	The unique identification of a resource. --- The identification of a resource associated with a TimeSeries. The identification of a set of lines that connect two areas; the transmission capacity rights are related to this set of lines.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	product	EnergyProductKind_String	The identification of the nature of an energy product such as power, energy, reactive power, etc.

Table 89 shows all association ends of TimeSeries with other classes.

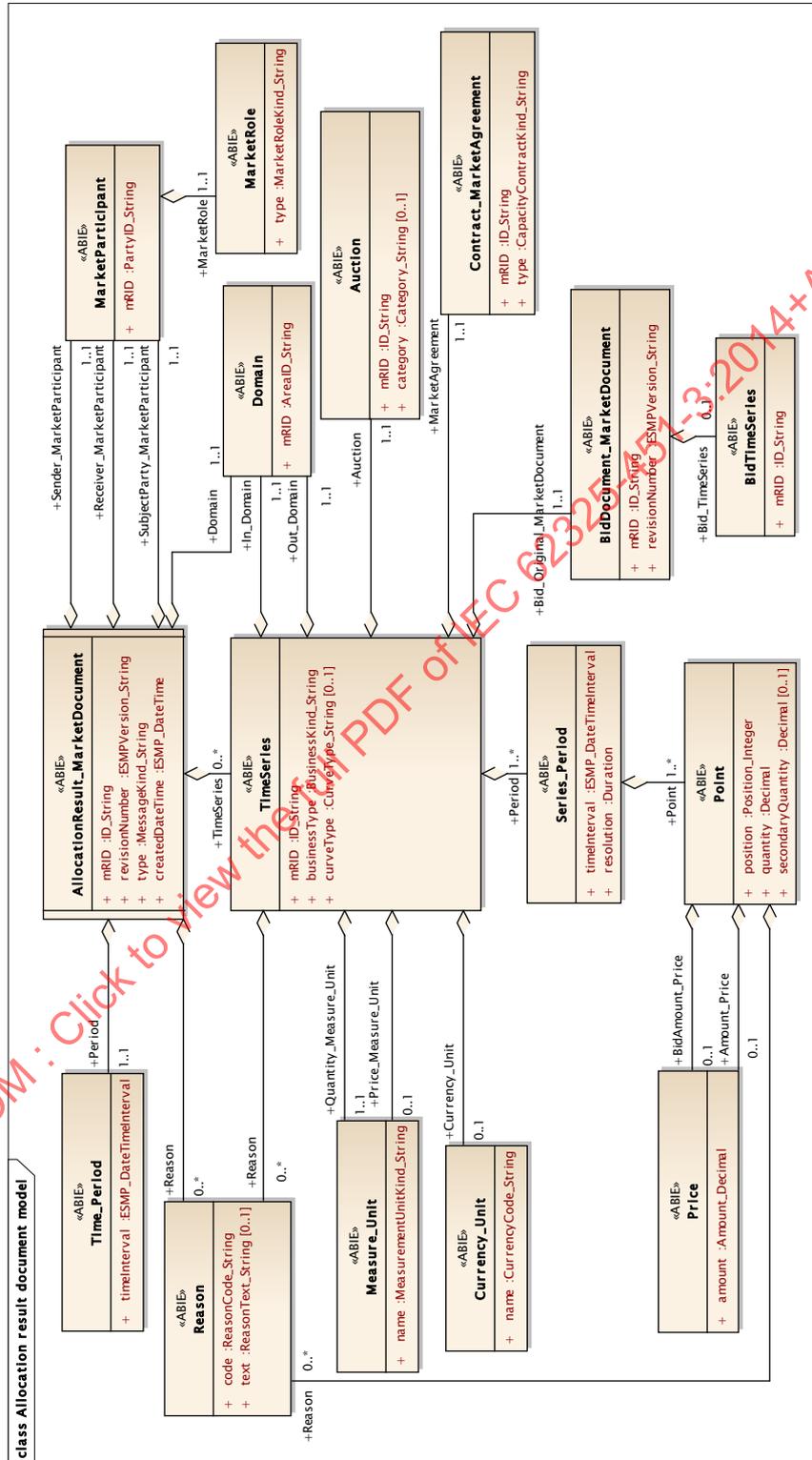
**Table 89 – Association ends of Capacity assembly model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Capacity contextual model::Series_Period.Period[1..*] ----- Capacity contextual model::TimeSeries.[]

## 6.7 Allocation result contextual model

### 6.7.1 Overview of the model

Figure 15 shows the model.



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Figure 15 – Allocation result contextual model

## 6.7.2 IsBasedOn relationships from the European style market profile

Table 90 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 90 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

## 6.7.3 Detailed Allocation result contextual model

### 6.7.3.1 AllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.

In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.

A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.

Only one of these possibilities is permitted in a given allocation result document.

IsBasedOn: ESMPClasses::MarketDocument

Table 91 shows all attributes of AllocationResult\_MarketDocument.

**Table 91 – Attributes of Allocation result contextual model::AllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 92 shows all association ends of AllocationResult\_MarketDocument with other classes.

**Table 92 – Association ends of Allocation result contextual model::AllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	SubjectParty_MarketParticipant	MarketParticipant	The party for whom the bid is allocated. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

mult.	Role	Class type name	Description
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.7.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

The unique identification of the set of specifications that clearly identify the auction to which the bid is addressed.

IsBasedOn: ESMPClasses::Auction

Table 93 shows all attributes of Auction.

**Table 93 – Attributes of Allocation result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.7.3.3 BidDocument\_MarketDocument

An electronic document containing the information necessary to satisfy the requirements of a given business process.

Each bid allocated is contained in the bid document sent by the user.

IsBasedOn: ESMPClasses::MarketDocument

Table 94 shows all attributes of BidDocument\_MarketDocument.

**Table 94 – Attributes of Allocation result contextual model::BidDocument\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.

Table 95 shows all association ends of BidDocument\_MarketDocument with other classes.

**Table 95 – Association ends of Allocation result contextual model::BidDocument\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Bid_TimeSeries	BidTimeSeries	The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

#### 6.7.3.4 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 96 shows all attributes of BidTimeSeries.

**Table 96 – Attributes of Allocation result contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

#### 6.7.3.5 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 97 shows all attributes of Contract\_MarketAgreement.

**Table 97 – Attributes of Allocation result contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

#### 6.7.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 98 shows all attributes of Currency\_Unit.

**Table 98 – Attributes of Allocation result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.7.3.7 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 99 shows all attributes of Domain.

**Table 99 – Attributes of Allocation result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.7.3.8 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 100 shows all attributes of MarketParticipant.

**Table 100 – Attributes of Allocation result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 101 shows all association ends of MarketParticipant with other classes.

**Table 101 – Association ends of Allocation result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.7.3.9 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 102 shows all attributes of MarketRole.

**Table 102 – Attributes of Allocation result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

#### 6.7.3.10 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 103 shows all attributes of Measure\_Unit.

**Table 103 – Attributes of Allocation result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

#### 6.7.3.11 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 104 shows all attributes of Point.

**Table 104 – Attributes of Allocation result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid or resale document. The secondary quantity identified for a point.

Table 105 shows all association ends of Point with other classes.

**Table 105 – Association ends of Allocation result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Amount_Price	Price	The price expressed for each unit of quantity allocated. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	The original price expressed in the original bid or resale for each unit of quantity requested. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.7.3.12 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 106 shows all attributes of Price.

**Table 106 – Attributes of Allocation result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.7.3.13 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 107 shows all attributes of Reason.

**Table 107 – Attributes of Allocation result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.7.3.14 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 108 shows all attributes of Series\_Period.

**Table 108 – Attributes of Allocation result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 109 shows all association ends of Series\_Period with other classes.

**Table 109 – Association ends of Allocation result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.7.3.15 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 110 shows all attributes of Time\_Period.

**Table 110 – Attributes of Allocation result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

#### 6.7.3.16 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

For each time series in the document, the identification shall be a unique number assigned by the auction office.

IsBasedOn: ESMPClasses::TimeSeries

Table 111 shows all attributes of TimeSeries.

**Table 111 – Attributes of Allocation result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 112 shows all association ends of TimeSeries with other classes.

**Table 112 – Association ends of Allocation result contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the allocation to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	Bid_Original_MarketDocument	BidDocument_MarketDocument	The identification of the document that contains the bids or resales referenced in the BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.8 Allocation result assembly model

### 6.8.1 Overview of the model

Figure 16 shows the model.

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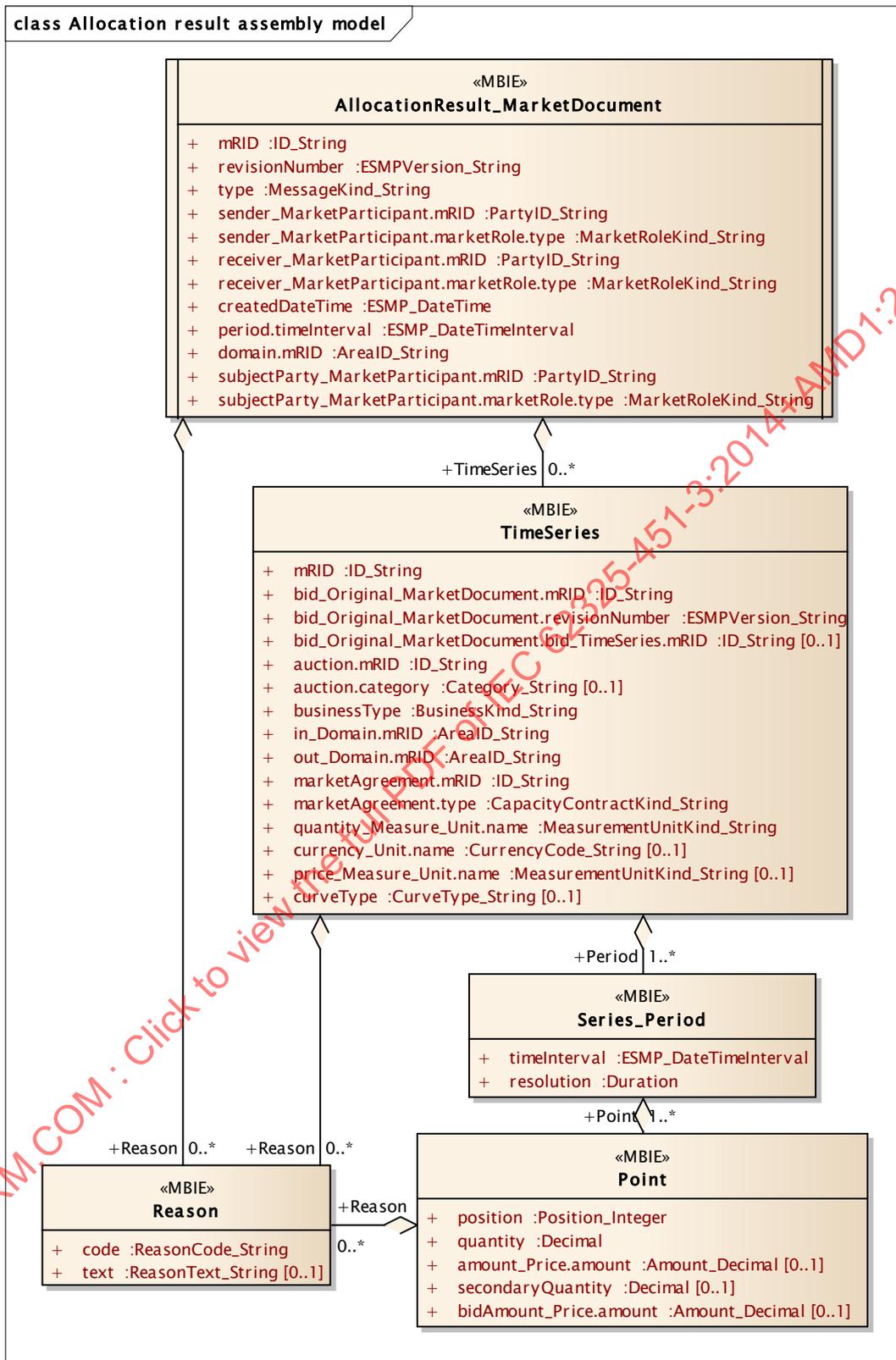


Figure 16 – Allocation result assembly model

## 6.8.2 IsBasedOn relationships from the European style market profile

Table 113 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 113 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AllocationResult_MarketDocument	Allocation result contextual model::AllocationResult_MarketDocument	Allocation Result Document\Allocation result contextual model
Point	Allocation result contextual model::Point	Allocation Result Document\Allocation result contextual model
Reason	Allocation result contextual model::Reason	Allocation Result Document\Allocation result contextual model
Series_Period	Allocation result contextual model::Series_Period	Allocation Result Document\Allocation result contextual model
TimeSeries	Allocation result contextual model::TimeSeries	Allocation Result Document\Allocation result contextual model

## 6.8.3 Detailed Allocation result assembly model

### 6.8.3.1 AllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

There is only one allocation result document per sender and subject party for a given auction identification and bid time interval.

In the case where the allocation result document contains all bids and resales that have been validated for processing in the auction in the latest version of bid and resales documents received, this shall include bids and resales that have not been satisfied. In this case the quantity and price amount of the bids and resales that have not been satisfied shall be equal to zero.

It is also possible for the allocation result document to contain only the bids that have been allocated capacity transmission rights and resales that have sold capacity transmission rights.

A third possibility exists where only the aggregation of the bids that have capacity transmission rights and the aggregation of transmission rights that have been sold are provided. In this case the bid identification shall not be specified.

Only one of these possibilities is permitted in a given allocation result document.

IsBasedOn: Allocation result contextual model::AllocationResult\_MarketDocument

Table 114 shows all attributes of AllocationResult\_MarketDocument.

**Table 114 – Attributes of Allocation result assembly  
 model::AllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	subjectParty_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- The party for whom the bid is allocated.
[1..1]	subjectParty_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The party for whom the bid is allocated.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 115 shows all association ends of AllocationResult\_MarketDocument with other classes.

**Table 115 – Association ends of Allocation result assembly model::AllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Allocation result contextual model::AllocationResult_MarketDocument.[]

### 6.8.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Allocation result contextual model::Point

Table 116 shows all attributes of Point.

**Table 116 – Attributes of Allocation result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[0..1]	amount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity allocated.
[0..1]	bidAmount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The original price expressed in the original bid or resale for each unit of quantity requested.
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The quantity that has been allocated or resold in the auction. The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid or resale document. The secondary quantity identified for a point.

Table 117 shows all association ends of Point with other classes.

**Table 117 – Association ends of Allocation result assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::Point.[]

### 6.8.3.3 Reason

The motivation of an act.

IsBasedOn: Allocation result contextual model::Reason

Table 118 shows all attributes of Reason.

**Table 118 – Attributes of Allocation result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.8.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Allocation result contextual model::Series\_Period

Table 119 shows all attributes of Series\_Period.

**Table 119 – Attributes of Allocation result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 120 shows all association ends of Series\_Period with other classes.

**Table 120 – Association ends of Allocation result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Allocation result contextual model::Point.Point[1..*] ----- Allocation result contextual model::Series_Period.[]

### 6.8.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

For each time series in the document, the identification shall be a unique number assigned by the auction office.

IsBasedOn: Allocation result contextual model::TimeSeries

Table 121 shows all attributes of TimeSeries.

**Table 121 – Attributes of Allocation result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[0..1]	bid_Original_MarketDocument. bid_TimeSeries.mRID	ID_String	A unique identification of the time series. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.
[1..1]	bid_Original_MarketDocument. mRID	ID_String	The unique identification of the document being exchanged within a business process flow. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	bid_Original_MarketDocument.r evisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	marketAgreement.mRID	ID_String	The unique identification of the agreement. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	marketAgreement.type	CapacityContractKind_S tring	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	mRID	ID_String	A unique identification of the time series.

mult.	Attribute name	Attribute type	Description
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.

Table 122 shows all association ends of TimeSeries with other classes.

**Table 122 – Association ends of Allocation result assembly model::TimeSeries with other classes**

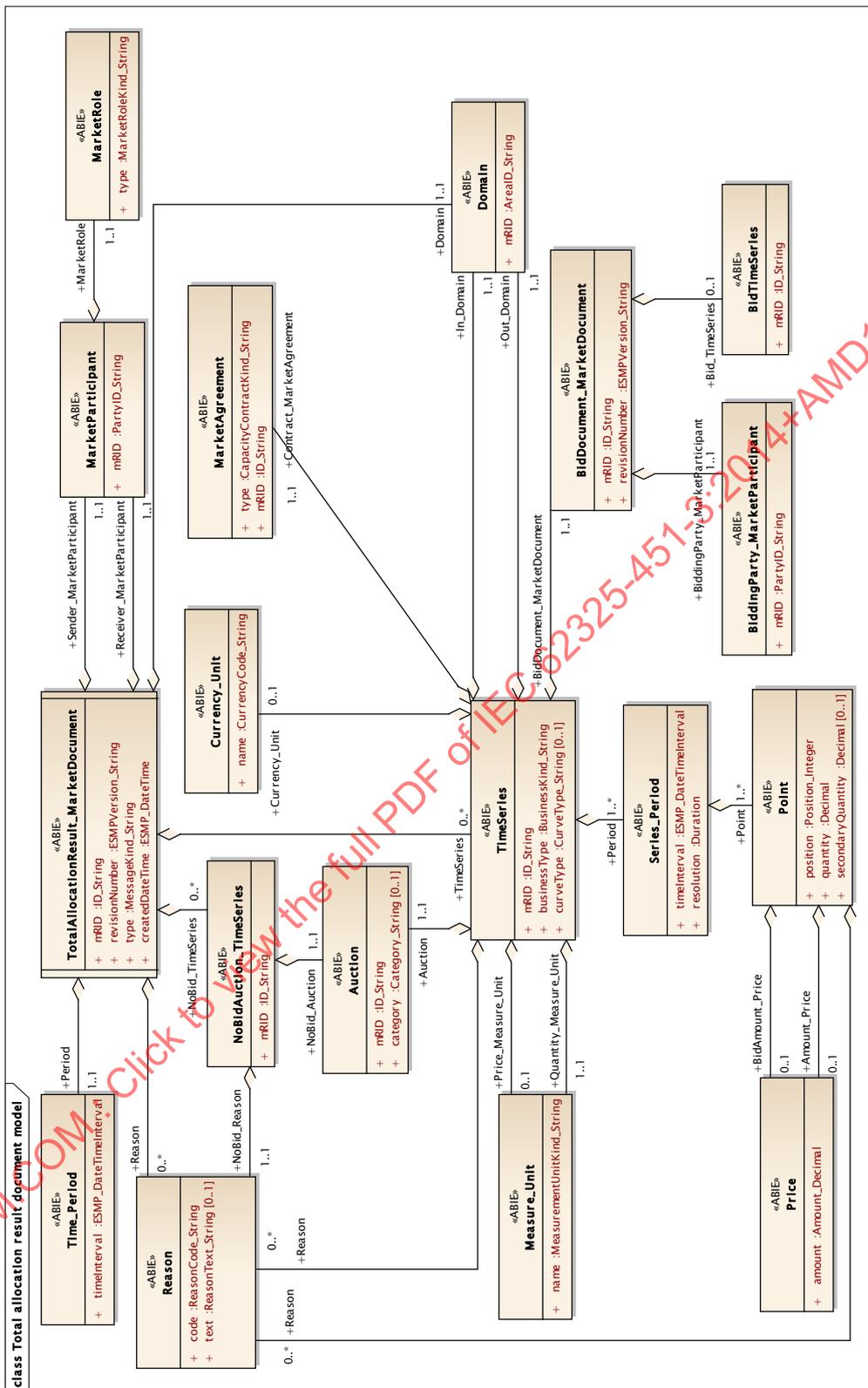
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Allocation result contextual model::Series_Period.Period[1..*] ----- Allocation result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Allocation result contextual model::Reason.Reason[0..*] ----- Allocation result contextual model::TimeSeries.[]

## 6.9 Total allocation result contextual model

### 6.9.1 Overview of the model

Figure 17 shows the model.

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IEC 2150/14

Figure 17 – Total allocation result contextual model

### 6.9.2 IsBasedOn relationships from the European style market profile

Table 123 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 123 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
BiddingParty_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
BidDocument_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
NoBidAuction_TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
TotalAllocationResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses

### 6.9.3 Detailed Total allocation result contextual model

#### 6.9.3.1 TotalAllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The total allocation result document contains the results of the auction for all the bidding parties with the same granularity information as the allocation result document.

IsBasedOn: ESMPClasses::MarketDocument

Table 124 shows all attributes of TotalAllocationResult\_MarketDocument.

**Table 124 – Attributes of Total allocation result contextual model::TotalAllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.

mult.	Attribute name	Attribute type	Description
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 125 shows all association ends of TotalAllocationResult\_MarketDocument with other classes.

**Table 125 – Association ends of Total allocation result contextual model::TotalAllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the document, i.e. the border. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	This specific time series is to be used when there is no bid submitted at an auction. In such a case, the time series provides the identification of the cancelled auction. A reason class is to be provided with the value corresponding to the information "no bid". Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.9.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 126 shows all attributes of Auction.

**Table 126 – Attributes of Total allocation result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[0..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.9.3.3 BiddingParty\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 127 shows all attributes of BiddingParty\_MarketParticipant.

**Table 127 – Attributes of Total allocation result contextual model::BiddingParty\_MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

### 6.9.3.4 BidDocument\_MarketDocument

An electronic document containing the information necessary to satisfy the requirements of a given business process.

IsBasedOn: ESMPClasses::MarketDocument

Table 128 shows all attributes of BidDocument\_MarketDocument.

**Table 128 – Attributes of Total allocation result contextual model::BidDocument\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.

Table 129 shows all association ends of BidDocument\_MarketDocument with other classes.

**Table 129 – Association ends of Total allocation result contextual model::BidDocument\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Bid_TimeSeries	BidTimeSeries	The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	BiddingParty_MarketParticipant	BiddingParty_MarketParticipant	The identification of the party who bid for the capacity or resold it. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.9.3.5 BidTimeSeries

The formal specification of specific characteristics related to a bid.

IsBasedOn: ESMPClasses::BidTimeSeries

Table 130 shows all attributes of BidTimeSeries.

**Table 130 – Attributes of Total allocation result contextual model::BidTimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

### 6.9.3.6 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 131 shows all attributes of Currency\_Unit.

**Table 131 – Attributes of Total allocation result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.9.3.7 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 132 shows all attributes of Domain.

**Table 132 – Attributes of Total allocation result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.9.3.8 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 133 shows all attributes of MarketAgreement.

**Table 133 – Attributes of Total allocation result contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.9.3.9 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 134 shows all attributes of MarketParticipant.

**Table 134 – Attributes of Total allocation result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 135 shows all association ends of MarketParticipant with other classes.

**Table 135 – Association ends of Total allocation result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant. ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.9.3.10 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 136 shows all attributes of MarketRole.

**Table 136 – Attributes of Total allocation result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.9.3.11 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 137 shows all attributes of Measure\_Unit.

**Table 137 – Attributes of Total allocation result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.9.3.12 NoBidAuction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 138 shows all attributes of NoBidAuction\_TimeSeries.

**Table 138 – Attributes of Total allocation result contextual model::NoBidAuction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 139 shows all association ends of NoBidAuction\_TimeSeries with other classes.

**Table 139 – Association ends of Total allocation result contextual model::NoBidAuction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	NoBid_Auction	Auction	It provides the auction identification when there is no bid submitted. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	NoBid_Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.9.3.13 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 140 shows all attributes of Point.

**Table 140 – Attributes of Total allocation result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid document. The secondary quantity identified for a point.

Table 141 shows all association ends of Point with other classes.

**Table 141 – Association ends of Total allocation result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Amount_Price	Price	The price expressed for each unit of quantity allocated. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..1]	BidAmount_Price	Price	The original price expressed in the original bid or resale for each unit of quantity requested. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

### 6.9.3.14 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 142 shows all attributes of Price.

**Table 142 – Attributes of Total allocation result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.9.3.15 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 143 shows all attributes of Reason.

**Table 143 – Attributes of Total allocation result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.9.3.16 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 144 shows all attributes of Series\_Period.

**Table 144 – Attributes of Total allocation result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 145 shows all association ends of Series\_Period with other classes.

**Table 145 – Association ends of Total allocation result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.9.3.17 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 146 shows all attributes of Time\_Period.

**Table 146 – Attributes of Total allocation result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.9.3.18 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 147 shows all attributes of TimeSeries.

**Table 147 – Attributes of Total allocation result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 148 shows all association ends of TimeSeries with other classes.

**Table 148 – Association ends of Total allocation result contextual model::TimeSeries with other classes**

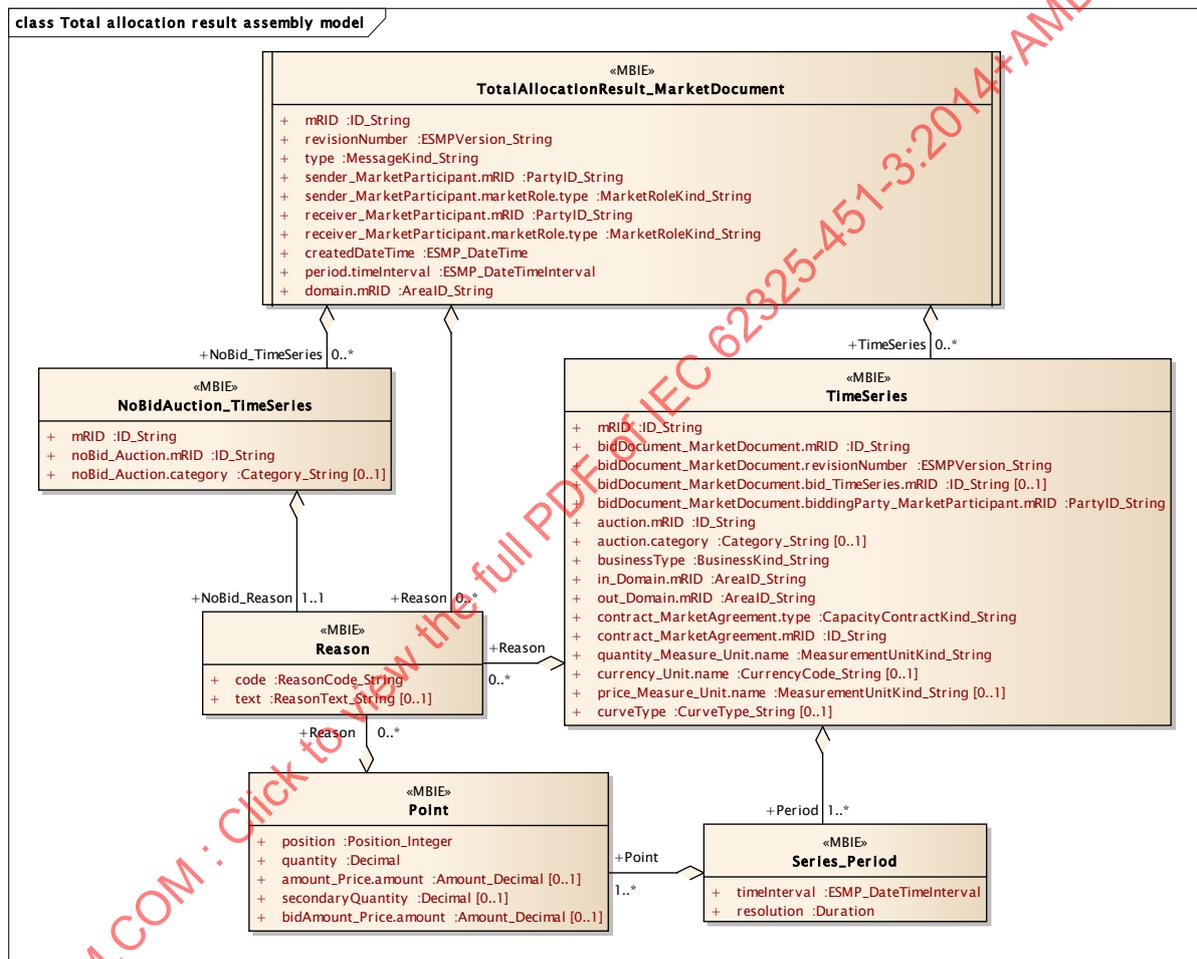
mult.	Role	Class type name	Description
[1..1]	Auction	Auction	The identification linking the allocation to a set of specifications created by the auction operator. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	BidDocument_MarketDocument	BidDocument_MarketDocument	The identification of the document that contains the bids or resales referenced in the BidTimeSeries. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketDocument.Original_MarketDocument[0..1]
[1..1]	Contract_MarketAgreement	MarketAgreement	The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.10 Total allocation result assembly model

### 6.10.1 Overview of the model

Figure 18 shows the model.



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Figure 18 – Total allocation result assembly model

### 6.10.2 IsBasedOn relationships from the European style market profile

Table 149 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 149 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
NoBidAuction_TimeSeries	Total allocation result contextual model::NoBidAuction_TimeSeries	Total Allocation Result Document\Total allocation result contextual model
Point	Total allocation result contextual model::Point	Total Allocation Result Document\Total allocation result contextual model
Reason	Total allocation result contextual model::Reason	Total Allocation Result Document\Total allocation result contextual model
Series_Period	Total allocation result contextual model::Series_Period	Total Allocation Result Document\Total allocation result contextual model
TimeSeries	Total allocation result contextual model::TimeSeries	Total Allocation Result Document\Total allocation result contextual model
TotalAllocationResult_MarketDocument	Total allocation result contextual model::TotalAllocationResult_MarketDocument	Total Allocation Result Document\Total allocation result contextual model

### 6.10.3 Detailed Total allocation result assembly model

#### 6.10.3.1 TotalAllocationResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The total allocation result document contains the results of the auction for all the bidding parties with the same granularity information as the allocation result document.

IsBasedOn: Total allocation result contextual model::TotalAllocationResult\_MarketDocument

Table 150 shows all attributes of TotalAllocationResult\_MarketDocument.

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**Table 150 – Attributes of Total allocation result assembly  
 model::TotalAllocationResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the document, i.e. the border.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 151 shows all association ends of TotalAllocationResult\_MarketDocument with other classes.

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**Table 151 – Association ends of Total allocation result assembly  
model::TotalAllocationResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	NoBid_TimeSeries	NoBidAuction_TimeSeries	This specific time series is to be used when there is no bid submitted at an auction. In such a case, the time series provides the identification of the cancelled auction. A reason class is to be provided with the value corresponding to the information "no bid". Association Based On: Total allocation result contextual model::NoBidAuction_TimeSeries.NoBid_TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Total allocation result contextual model::TimeSeries.TimeSeries[0..*] ----- Total allocation result contextual model::TotalAllocationResult_MarketDocument.[]

### 6.10.3.2 NoBidAuction\_TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Total allocation result contextual model::NoBidAuction\_TimeSeries

Table 152 shows all attributes of NoBidAuction\_TimeSeries.

**Table 152 – Attributes of Total allocation result assembly  
model::NoBidAuction\_TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	A unique identification of the time series.
[0..1]	noBid_Auction.category	Category_String	The product category of an auction. --- It provides the auction identification when there is no bid submitted.
[1..1]	noBid_Auction.mRID	ID_String	The unique identification of the auction. --- It provides the auction identification when there is no bid submitted.

Table 153 shows all association ends of NoBidAuction\_TimeSeries with other classes.

**Table 153 – Association ends of Total allocation result assembly model::NoBidAuction\_TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..1]	NoBid_Reason	Reason	Association Based On: Total allocation result contextual model::Reason.NoBid_Reason[1..1] ----- Total allocation result contextual model::NoBidAuction_TimeSeries.[]

### 6.10.3.3 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Total allocation result contextual model::Point

Table 154 shows all attributes of Point.

**Table 154 – Attributes of Total allocation result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[0..1]	amount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity allocated.
[0..1]	bidAmount_Price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The original price expressed in the original bid or resale for each unit of quantity requested.
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	The principal quantity identified for a point.
[0..1]	secondaryQuantity	Decimal	The quantity that was in the original bid document. The secondary quantity identified for a point.

Table 155 shows all association ends of Point with other classes.

**Table 155 – Association ends of Total allocation result assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::Point.[]

### 6.10.3.4 Reason

The motivation of an act.

IsBasedOn: Total allocation result contextual model::Reason

Table 156 shows all attributes of Reason.

**Table 156 – Attributes of Total allocation result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.10.3.5 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Total allocation result contextual model::Series\_Period

Table 157 shows all attributes of Series\_Period.

**Table 157 – Attributes of Total allocation result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 158 shows all association ends of Series\_Period with other classes.

**Table 158 – Association ends of Total allocation result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Total allocation result contextual model::Point.Point[1..*] ----- Total allocation result contextual model::Series_Period.[]

### 6.10.3.6 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Total allocation result contextual model::TimeSeries

Table 159 shows all attributes of TimeSeries.

**Table 159 – Attributes of Total allocation result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[1..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the allocation to a set of specifications created by the auction operator.
[0..1]	bidDocument_MarketDocument.bid_TimeSeries.mRID	ID_String	A unique identification of the time series. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the time series that was used in the original bid or resale. This is the unique number that is assigned by the bidder when he made his original bid or resale.
[1..1]	bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries. --- The identification of the party who bid for the capacity or resold it.
[1..1]	bidDocument_MarketDocument.mRID	ID_String	The unique identification of the document being exchanged within a business process flow. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	bidDocument_MarketDocument.revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another. --- The identification of the document that contains the bids or resales referenced in the BidTimeSeries.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	contract_MarketAgreement.mRID	ID_String	The unique identification of the agreement. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[1..1]	contract_MarketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the transmission capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.

mult.	Attribute name	Attribute type	Description
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.

Table 160 shows all association ends of TimeSeries with other classes.

**Table 160 – Association ends of Total allocation result assembly model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Total allocation result contextual model::Series_Period.Period[1..*] ----- Total allocation result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Total allocation result contextual model::Reason.Reason[0..*] ----- Total allocation result contextual model::TimeSeries.[]

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## 6.11 Implicit auction result contextual model

### 6.11.1 Overview of the model

Figure 19 shows the model.

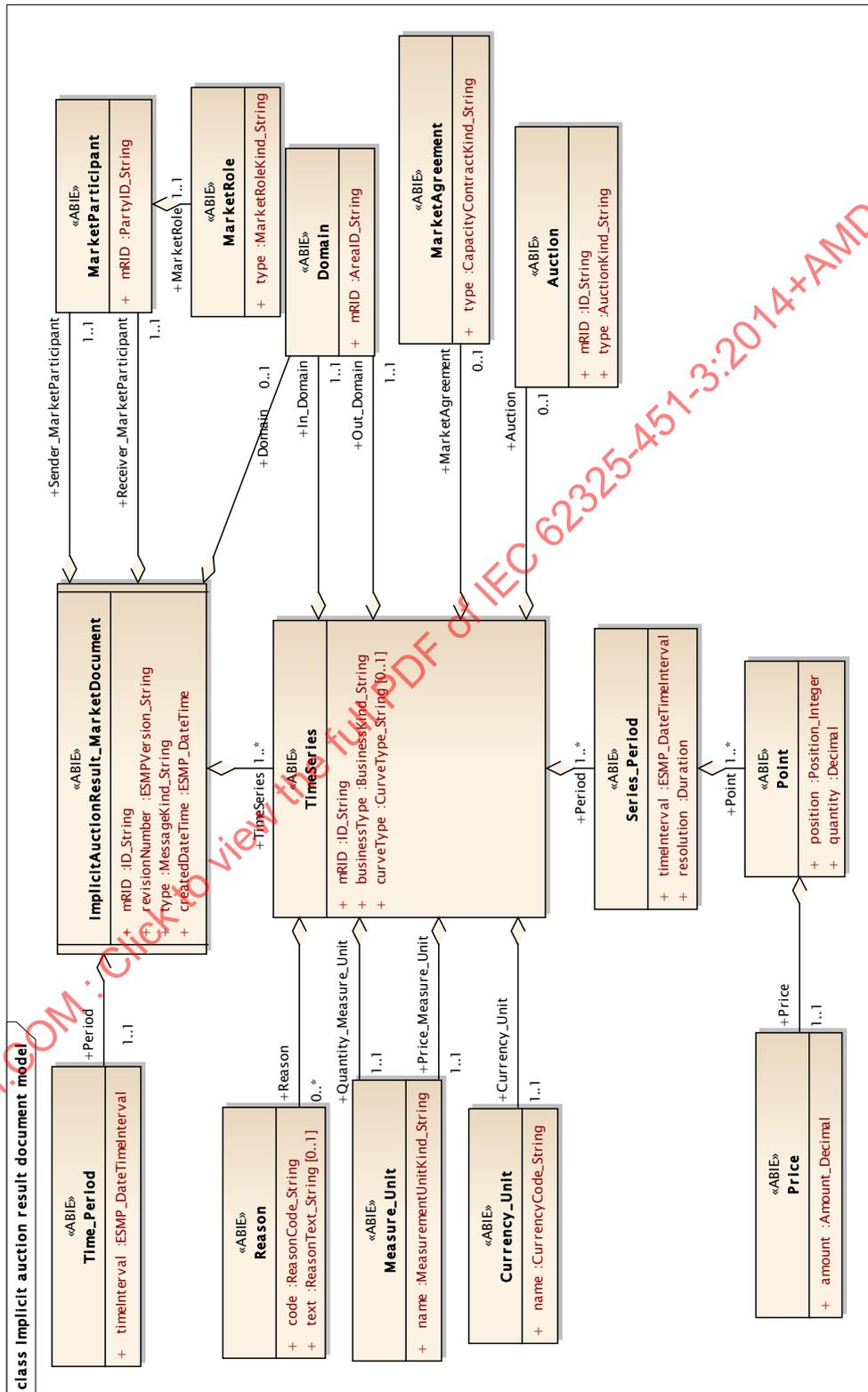


Figure 19 – Implicit auction result contextual model

### 6.11.2 IsBasedOn relationships from the European style market profile

Table 161 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 161 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
ImplicitAuctionResult_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.11.3 Detailed Implicit auction result contextual model

#### 6.11.3.1 ImplicitAuctionResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

An implicit auction result document is issued by the market operator at the end of a specific auctioning cycle or by the System Operator once the NTC values have been agreed. It could be yearly, monthly or daily auctions in addition to intraday auctions.

IsBasedOn: ESMPClasses::MarketDocument

Table 162 shows all attributes of ImplicitAuctionResult\_MarketDocument.

**Table 162 – Attributes of Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 163 shows all association ends of ImplicitAuctionResult\_MarketDocument with other classes.

**Table 163 – Association ends of Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Domain	Domain	The domain covered within the implicit auction result document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the implicit auction result document is covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.11.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 164 shows all attributes of Auction.

**Table 164 – Attributes of Implicit auction result contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

### 6.11.3.3 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 165 shows all attributes of Currency\_Unit.

**Table 165 – Attributes of Implicit auction result contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.11.3.4 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 166 shows all attributes of Domain.

**Table 166 – Attributes of Implicit auction result contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ArealID_String	The unique identification of the domain.

### 6.11.3.5 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 167 shows all attributes of MarketAgreement.

**Table 167 – Attributes of Implicit auction result contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.11.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 168 shows all attributes of MarketParticipant.

**Table 168 – Attributes of Implicit auction result contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 169 shows all association ends of MarketParticipant with other classes.

**Table 169 – Association ends of Implicit auction result contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.11.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 170 shows all attributes of MarketRole.

**Table 170 – Attributes of Implicit auction result contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.11.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 171 shows all attributes of Measure\_Unit.

**Table 171 – Attributes of Implicit auction result contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.11.3.9 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 172 shows all attributes of Point.

**Table 172 – Attributes of Implicit auction result contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	This information defines the quantity auctioned for the interval in question and that is expressed in the measurement unit quantity. The principal quantity identified for a point.

Table 173 shows all association ends of Point with other classes.

**Table 173 – Association ends of Implicit auction result contextual model::Point with other classes**

mult.	Role	Class type name	Description
[1..1]	Price	Price	This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. For market prices the price provided is always the InArea price A price may be negative in cases where it is providing the difference between in and out area market prices. Price differential calculated with the following formula: InArea – OutArea. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.11.3.10 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 174 shows all attributes of Price.

**Table 174 – Attributes of Implicit auction result contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.11.3.11 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 175 shows all attributes of Reason.

**Table 175 – Attributes of Implicit auction result contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.11.3.12 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 176 shows all attributes of Series\_Period.

**Table 176 – Attributes of Implicit auction result contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 177 shows all association ends of Series\_Period with other classes.

**Table 177 – Association ends of Implicit auction result contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.11.3.13 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 178 shows all attributes of Time\_Period.

**Table 178 – Attributes of Implicit auction result contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.11.3.14 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 179 shows all attributes of TimeSeries.

**Table 179 – Attributes of Implicit auction result contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 180 shows all association ends of TimeSeries with other classes.

**Table 180 – Association ends of Implicit auction result contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[1..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[0..1]	MarketAgreement	MarketAgreement	The contract type defines the conditions under which the capacity was allocated and handled, e.g. daily auction, weekly auction, monthly auction, yearly auction, Long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[1..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]

## 6.12 Implicit auction result assembly model

### 6.12.1 Overview of the model

Figure 20 shows the model.

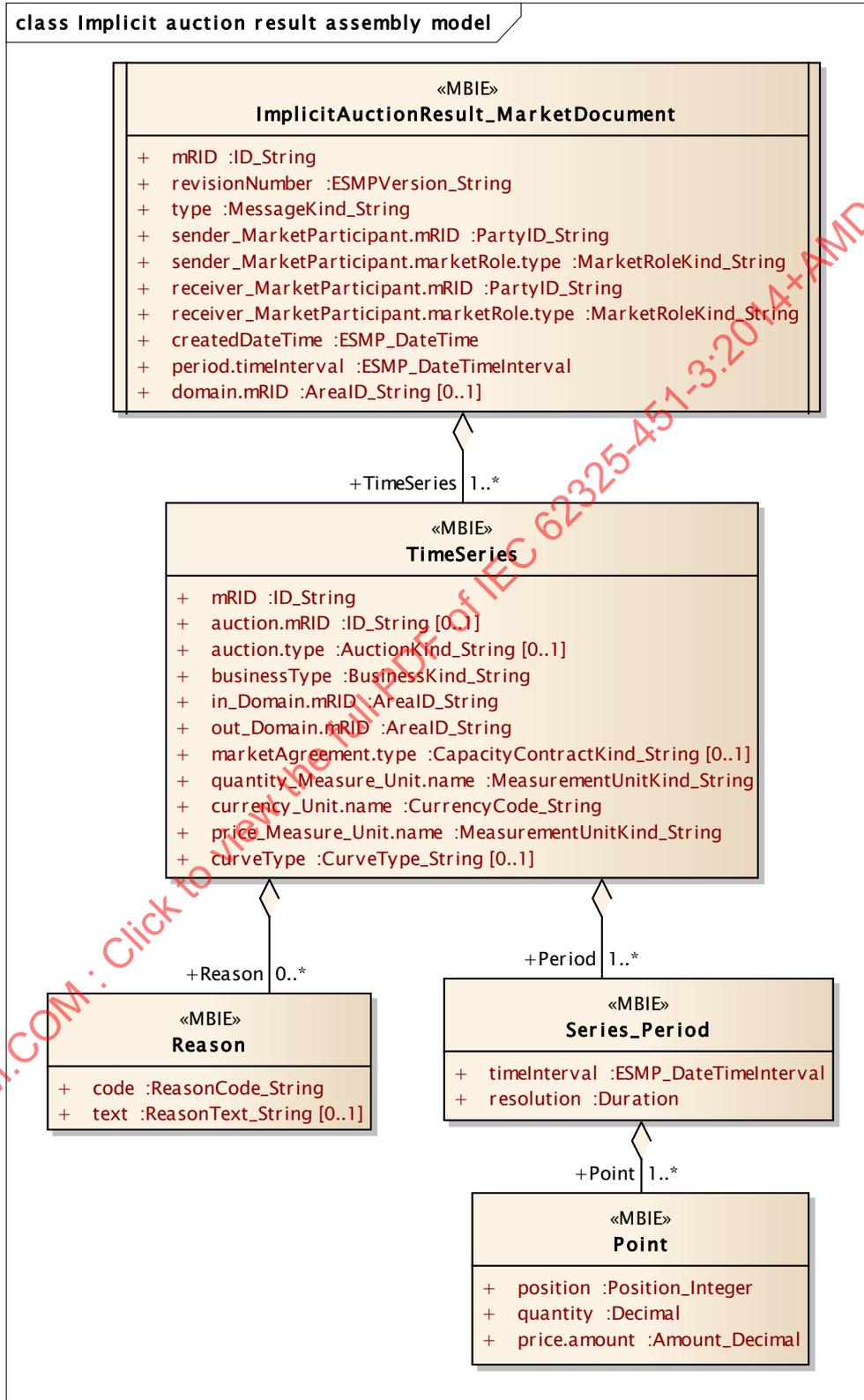


Figure 20 – Implicit auction result assembly model

### 6.12.2 IsBasedOn relationships from the European style market profile

Table 181 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 181 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
ImplicitAuctionResult_MarketDocument	Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument	Implicit Auction Result Document\Implicit auction result contextual model
Point	Implicit auction result contextual model::Point	Implicit Auction Result Document\Implicit auction result contextual model
Reason	Implicit auction result contextual model::Reason	Implicit Auction Result Document\Implicit auction result contextual model
Series_Period	Implicit auction result contextual model::Series_Period	Implicit Auction Result Document\Implicit auction result contextual model
TimeSeries	Implicit auction result contextual model::TimeSeries	Implicit Auction Result Document\Implicit auction result contextual model

### 6.12.3 Detailed Implicit auction result assembly model

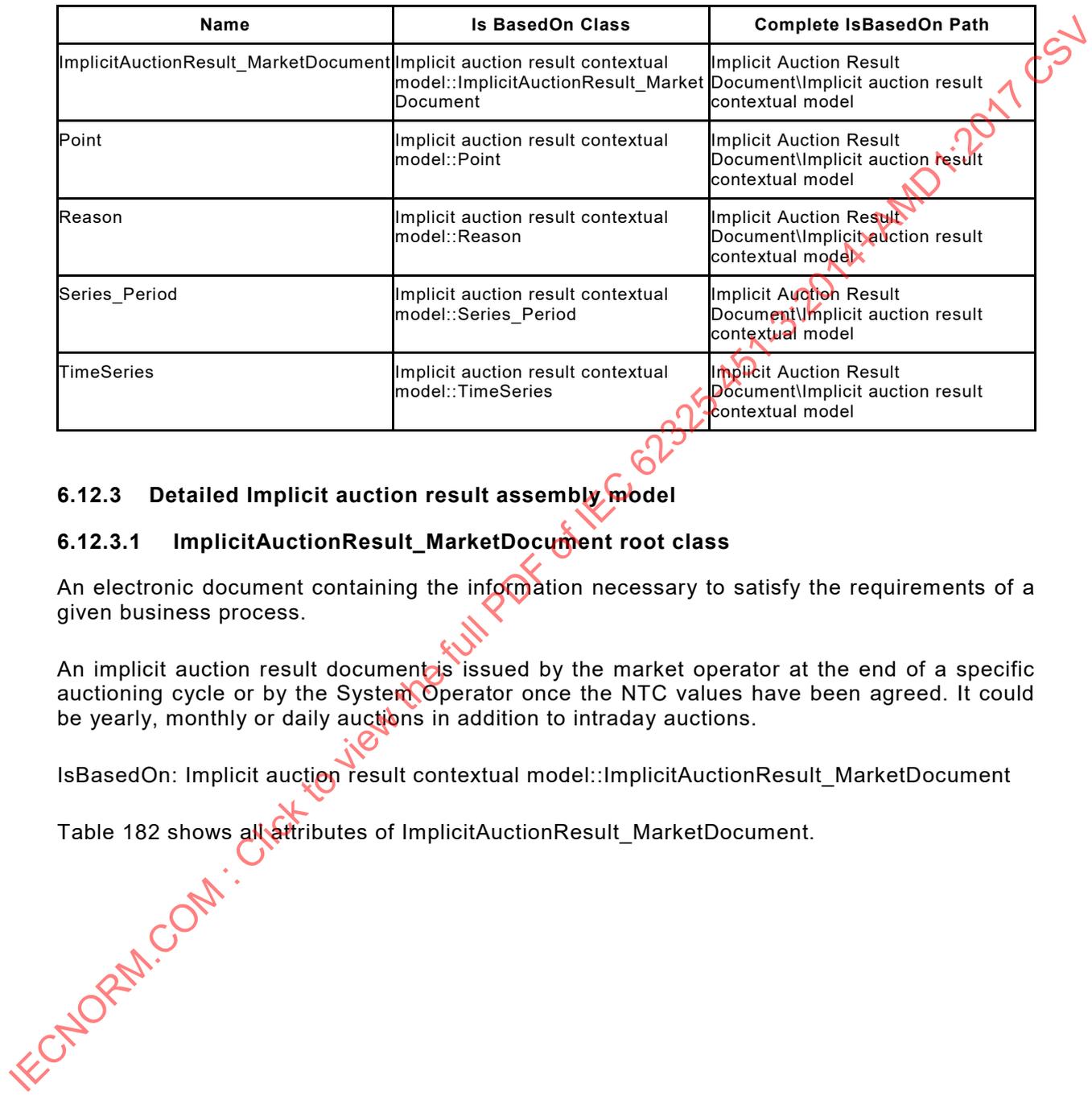
#### 6.12.3.1 ImplicitAuctionResult\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

An implicit auction result document is issued by the market operator at the end of a specific auctioning cycle or by the System Operator once the NTC values have been agreed. It could be yearly, monthly or daily auctions in addition to intraday auctions.

IsBasedOn: Implicit auction result contextual model::ImplicitAuctionResult\_MarketDocument

Table 182 shows all attributes of ImplicitAuctionResult\_MarketDocument.



**Table 182 – Attributes of Implicit auction result assembly  
model::ImplicitAuctionResult\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[0..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the implicit auction result document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the implicit auction result document is covering.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 183 shows all association ends of ImplicitAuctionResult\_MarketDocument with other classes.

**Table 183 – Association ends of Implicit auction result assembly  
model::ImplicitAuctionResult\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Implicit auction result contextual model::TimeSeries.TimeSeries[1..*] ----- Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument.[]

### 6.12.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Implicit auction result contextual model::Point

Table 184 shows all attributes of Point.

**Table 184 – Attributes of Implicit auction result assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. For market prices the price provided is always the InArea price A price may be negative in cases where it is providing the difference between in and out area market prices. Price differential calculated with the following formula: InArea – OutArea.
[1..1]	quantity	Decimal	This information defines the quantity auctioned for the interval in question and that is expressed in the measurement unit quantity. The principal quantity identified for a point.

### 6.12.3.3 Reason

The motivation of an act.

IsBasedOn: Implicit auction result contextual model::Reason

Table 185 shows all attributes of Reason.

**Table 185 – Attributes of Implicit auction result assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.12.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Implicit auction result contextual model::Series\_Period

Table 186 shows all attributes of Series\_Period.

**Table 186 – Attributes of Implicit auction result assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 187 shows all association ends of Series\_Period with other classes.

**Table 187 – Association ends of Implicit auction result assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Implicit auction result contextual model::Point.Point[1..*] ----- Implicit auction result contextual model::Series_Period.[]

### 6.12.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Implicit auction result contextual model::TimeSeries

Table 188 shows all attributes of TimeSeries.

**Table 188 – Attributes of Implicit auction result assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...). --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[1..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[0..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, Long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[1..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.).

mult.	Attribute name	Attribute type	Description
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed, e.g. MAW.

Table 189 shows all association ends of TimeSeries with other classes.

**Table 189 – Association ends of Implicit auction result assembly model::TimeSeries with other classes**

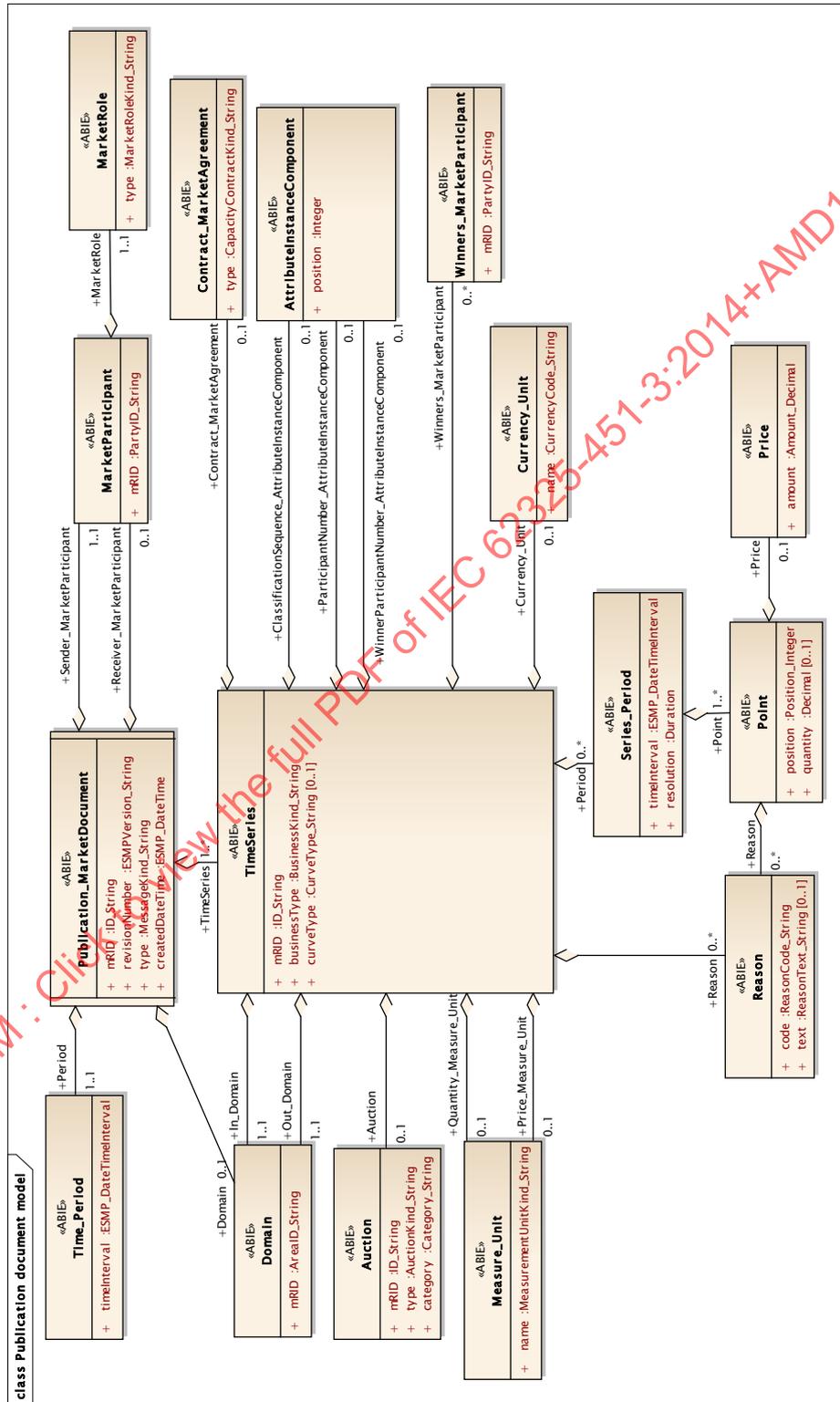
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Implicit auction result contextual model::Series_Period.Period[1..*] ----- Implicit auction result contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Implicit auction result contextual model::Reason.Reason[0..*] ----- Implicit auction result contextual model::TimeSeries.[]

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### 6.13 Publication contextual model

#### 6.13.1 Overview of the model

Figure 21 shows the model.



IEC 2154/14

Figure 21 – Publication contextual model

### 6.13.2 IsBasedOn relationships from the European style market profile

Table 190 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 190 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
AttributeInstanceComponent	ESMPClasses::AttributeInstanceComponent	IEC62325-351\ESMPClasses
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Contract_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Publication_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses
Winners_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses

### 6.13.3 Detailed Publication contextual model

#### 6.13.3.1 Publication\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

A publication document is issued by the transmission capacity allocator at the end of a specific auctioning cycle or by the system operator once the NTC values have been agreed.

IsBasedOn: ESMPClasses::MarketDocument

Table 191 shows all attributes of Publication\_MarketDocument.

**Table 191 – Attributes of Publication contextual model::Publication\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 192 shows all association ends of Publication\_MarketDocument with other classes.

**Table 192 – Association ends of Publication contextual model::Publication\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..1]	Domain	Domain	The domain covered within the publication document Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period that the publication document is covering. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.13.3.2 AttributeInstanceComponent

A class used to provide information about an attribute.

IsBasedOn: ESMPClasses::AttributeInstanceComponent

Table 193 shows all attributes of AttributeInstanceComponent.

**Table 193 – Attributes of Publication contextual model::AttributeInstanceComponent**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Integer	A sequential value representing a relative sequence number.

### 6.13.3.3 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 194 shows all attributes of Auction.

**Table 194 – Attributes of Publication contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	category	Category_String	The product category of an auction.
[1..1]	mRID	ID_String	The unique identification of the auction.
[1..1]	type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...).

### 6.13.3.4 Contract\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 195 shows all attributes of Contract\_MarketAgreement.

**Table 195 – Attributes of Publication contextual model::Contract\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.13.3.5 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 196 shows all attributes of Currency\_Unit.

**Table 196 – Attributes of Publication contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.13.3.6 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 197 shows all attributes of Domain.

**Table 197 – Attributes of Publication contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.13.3.7 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 198 shows all attributes of MarketParticipant.

**Table 198 – Attributes of Publication contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 199 shows all association ends of MarketParticipant with other classes.

**Table 199 – Association ends of Publication contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.13.3.8 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 200 shows all attributes of MarketRole.

**Table 200 – Attributes of Publication contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.13.3.9 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 201 shows all attributes of Measure\_Unit.

**Table 201 – Attributes of Publication contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.13.3.10 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 202 shows all attributes of Point.

**Table 202 – Attributes of Publication contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	quantity	Decimal	The quantity auctioned for the interval in question. The principal quantity identified for a point.

Table 203 shows all association ends of Point with other classes.

**Table 203 – Association ends of Publication contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed per currency per unit of price measure. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. A price may be negative in cases where it is providing the difference between in and out area market prices. The price is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Reason.Reason[0..*]

#### 6.13.3.11 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 204 shows all attributes of Price.

**Table 204 – Attributes of Publication contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

#### 6.13.3.12 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 205 shows all attributes of Reason.

**Table 205 – Attributes of Publication contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

#### 6.13.3.13 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 206 shows all attributes of Series\_Period.

**Table 206 – Attributes of Publication contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 207 shows all association ends of Series\_Period with other classes.

**Table 207 – Association ends of Publication contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

#### 6.13.3.14 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 208 shows all attributes of Time\_Period.

**Table 208 – Attributes of Publication contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

#### 6.13.3.15 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 209 shows all attributes of TimeSeries.

**Table 209 – Attributes of Publication contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 210 shows all association ends of TimeSeries with other classes.

**Table 210 – Association ends of Publication contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	ClassificationSequence_AttributeInstanceComponent	AttributeInstanceComponent	The sequence of a time series within a given auction category and contract type. A classification sequence is only provided in the case where there are several auctions in the same category and contract type. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..1]	Contract_MarketAgreement	Contract_MarketAgreement	The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

mult.	Role	Class type name	Description
[0..1]	ParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	The number of parties that participated in the auction. It is only provided if the auction rules permit it. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure in which the quantities in the time series are expressed., e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	WinnerParticipantNumber_AttributeInstanceComponent	AttributeInstanceComponent	The number of parties that had successful bids in the auction. This information is only provided if the auction rules permit it. Association Based On: ESMPClasses::AttributeInstanceComponent.AttributeInstanceComponent[0..*] ----- ESMPClasses::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	The identification of the market participants who get something at the auction. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.13.3.16 Winners\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 211 shows all attributes of Winners\_MarketParticipant.

**Table 211 – Attributes of Publication contextual  
model::Winners\_MarketParticipant**

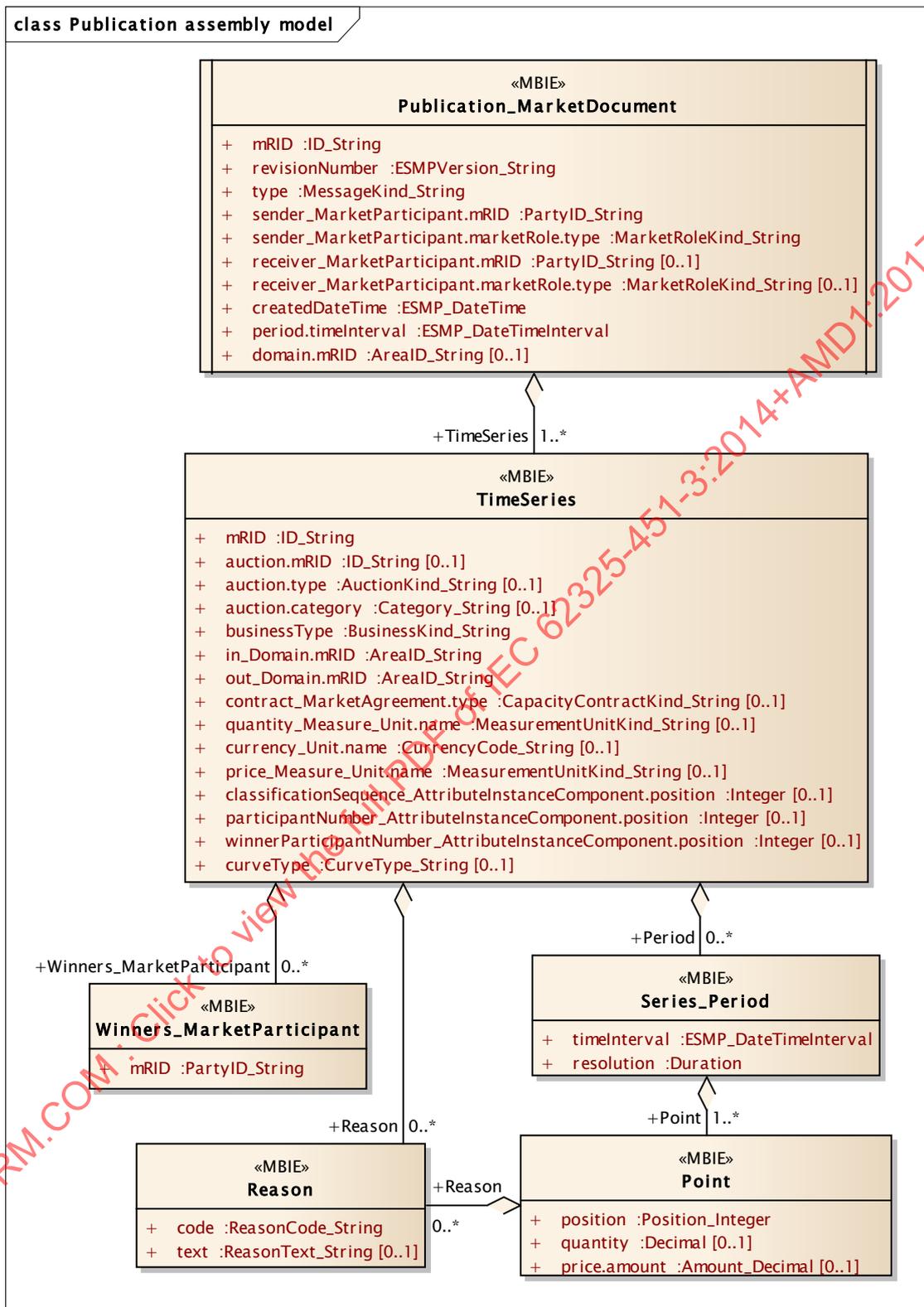
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

## 6.14 Publication assembly model

### 6.14.1 Overview of the model

Figure 22 shows the model.

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Figure 22 – Publication assembly model

### 6.14.2 IsBasedOn relationships from the European style market profile

Table 212 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 212 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	Publication contextual model::Point	Publication Document\Publication contextual model
Publication_MarketDocument	Publication contextual model::Publication_MarketDocument	Publication Document\Publication contextual model
Reason	Publication contextual model::Reason	Publication Document\Publication contextual model
Series_Period	Publication contextual model::Series_Period	Publication Document\Publication contextual model
TimeSeries	Publication contextual model::TimeSeries	Publication Document\Publication contextual model
Winners_MarketParticipant	Publication contextual model::Winners_MarketParticipant	Publication Document\Publication contextual model

### 6.14.3 Detailed Publication assembly model

#### 6.14.3.1 Publication\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

A publication document is issued by the transmission capacity allocator at the end of a specific auctioning cycle or by the system operator once the NTC values have been agreed.

IsBasedOn: Publication contextual model::Publication\_MarketDocument

Table 213 shows all attributes of Publication\_MarketDocument.

**Table 213 – Attributes of Publication assembly model::Publication\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[0..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the publication document
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period that the publication document is covering.
[0..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[0..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.

mult.	Attribute name	Attribute type	Description
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 214 shows all association ends of Publication\_MarketDocument with other classes.

**Table 214 – Association ends of Publication assembly model::Publication\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..*]	TimeSeries	TimeSeries	Association Based On: Publication contextual model::TimeSeries.TimeSeries[1..*] ----- Publication contextual model::Publication_MarketDocument.[]

### 6.14.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Publication contextual model::Point

Table 215 shows all attributes of Point.

**Table 215 – Attributes of Publication assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed per currency per unit of price measure. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. A price may be negative in cases where it is providing the difference between in and out area market prices. The price is mandatory in the case of capacity auctions and shall not be provided in the case of rule based allocations depending on local market rules.
[0..1]	quantity	Decimal	The quantity auctioned for the interval in question. The principal quantity identified for a point.

Table 216 shows all association ends of Point with other classes.

**Table 216 – Association ends of Publication assembly model::Point with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Publication contextual model::Reason.Reason[0..*] ----- Publication contextual model::Point.[]

### 6.14.3.3 Reason

The motivation of an act.

IsBasedOn: Publication contextual model::Reason

Table 217 shows all attributes of Reason.

**Table 217 – Attributes of Publication assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.14.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Publication contextual model::Series\_Period

Table 218 shows all attributes of Series\_Period.

**Table 218 – Attributes of Publication assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 219 shows all association ends of Series\_Period with other classes.

**Table 219 – Association ends of Publication assembly model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Publication contextual model::Point.Point[1..*] ----- Publication contextual model::Series_Period.[]

### 6.14.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Publication contextual model::TimeSeries

Table 220 shows all attributes of TimeSeries.

**Table 220 – Attributes of Publication assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.category	Category_String	The product category of an auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[0..1]	auction.type	AuctionKind_String	The kind of the auction (e.g. implicit, explicit, ...). --- A unique identification of the set of specifications that clearly defines the allocation process to which the time series is addressed.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	classificationSequence_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The sequence of a time series within a given auction category and contract type. A classification sequence is only provided in the case where there are several auctions in the same category and contract type.
[0..1]	contract_MarketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract. --- The contract type defines the conditions under which the capacity was allocated and handled, e.g.: daily auction, weekly auction, monthly auction, yearly auction, long term contract, etc. The significance of this type is dependent on the in area and out area specific coded working methods.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.

mult.	Attribute name	Attribute type	Description
[0..1]	participantNumber_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The number of parties that participated in the auction. It is only provided if the auction rules permit it.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed per unit of currency (MW per unit, MWh per unit, etc.).
[0..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the quantities in the time series are expressed., e.g. MAW.
[0..1]	winnerParticipantNumber_AttributeInstanceComponent.position	Integer	A sequential value representing a relative sequence number. --- The number of parties that had successful bids in the auction. This information is only provided if the auction rules permit it.

Table 221 shows all association ends of TimeSeries with other classes.

**Table 221 – Association ends of Publication assembly model::TimeSeries with other classes**

mult	Role	Class type name	Description
[0..*]	Period	Series_Period	Association Based On: Publication contextual model::Series_Period.Period[0..*] ----- Publication contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Publication contextual model::Reason.Reason[0..*] ----- Publication contextual model::TimeSeries.[]
[0..*]	Winners_MarketParticipant	Winners_MarketParticipant	The identification of the market participants who get something at the auction. Association Based On: Publication contextual model::Winners_MarketParticipant.Winners_MarketParticipant[0..*] ----- Publication contextual model::TimeSeries.[]

### 6.14.3.6 Winners\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: Publication contextual model::Winners\_MarketParticipant

Table 222 shows all attributes of Winners\_MarketParticipant.

**Table 222 – Attributes of Publication assembly model::Winners\_MarketParticipant**

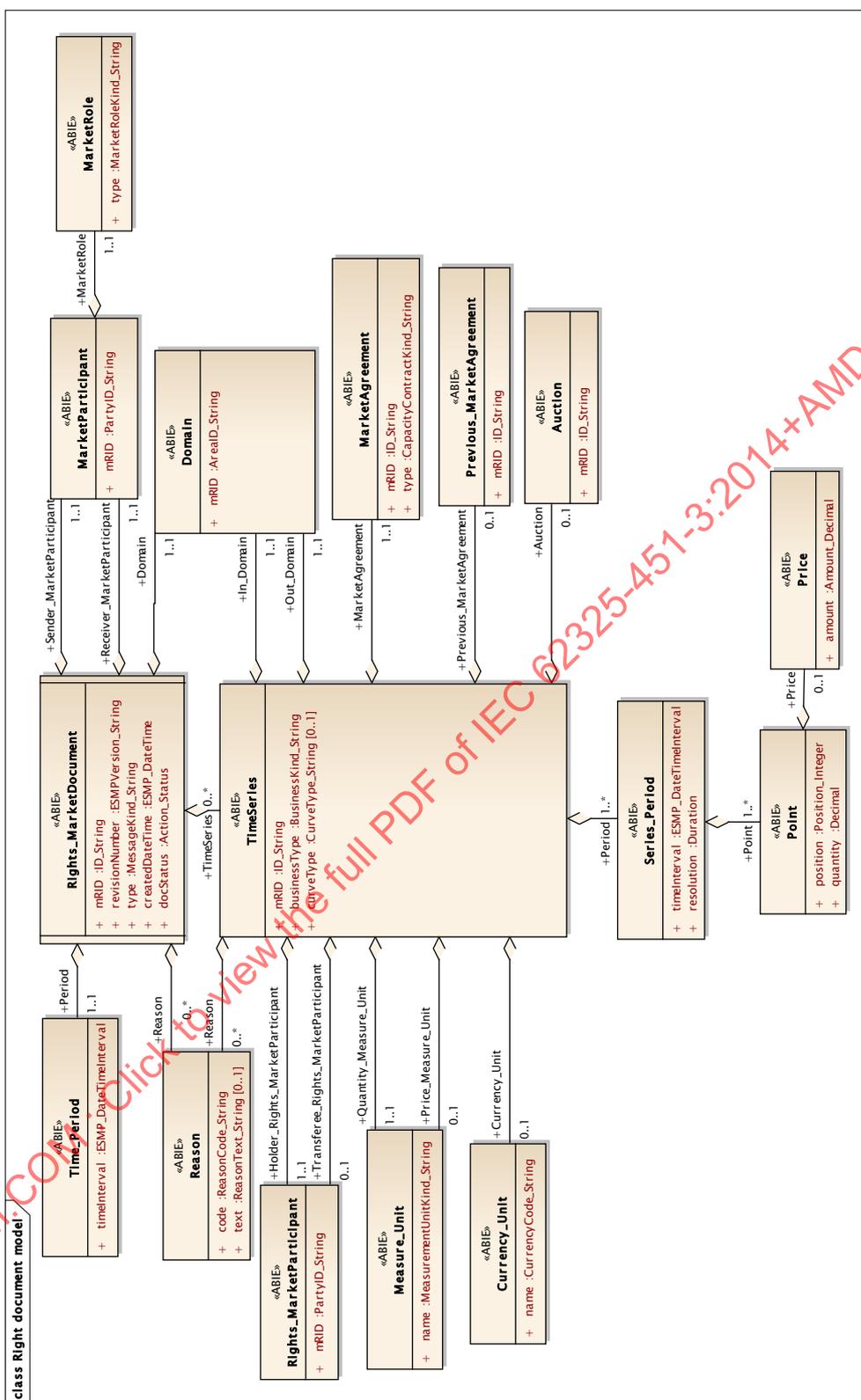
mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

## 6.15 Rights contextual model

### 6.15.1 Overview of the model

Figure 23 shows the model.

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IEC 2156/14

Figure 23 – Rights contextual model

### 6.15.2 IsBasedOn relationships from the European style market profile

Table 223 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 223 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Previous_MarketAgreement	ESMPClasses::MarketAgreement	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Reason	ESMPClasses::Reason	IEC62325-351\ESMPClasses
Rights_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
Rights_MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses
TimeSeries	ESMPClasses::TimeSeries	IEC62325-351\ESMPClasses

### 6.15.3 Detailed Rights contextual model

#### 6.15.3.1 Rights\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The rights document may be sent by a capacity trader to inform the auction office of a transfer of rights.

It may also be sent by the auction office to inform the nomination validator of the parties who have transmission rights for a given period.

The nomination validator may also use this document to inform an interconnection trade responsible of the rights he may use for nomination.

IsBasedOn: ESMPClasses::MarketDocument

Table 224 shows all attributes of Rights\_MarketDocument.

**Table 224 – Attributes of Rights contextual model::Rights\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	docStatus	Action_Status	The identification of the condition or position of the document with regard to its standing.

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 225 shows all association ends of Rights\_MarketDocument with other classes.

**Table 225 – Association ends of Rights contextual model::  
Rights\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[1..1]	Domain	Domain	The domain covered within the rights document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	The beginning and ending date and time of the period covered by the document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Reason.Reason[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Document recipient. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Document owner. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[0..*]	TimeSeries	TimeSeries	Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]

### 6.15.3.2 Auction

The identification of a formal specification of an energy product that is offered for sale.

IsBasedOn: ESMPClasses::Auction

Table 226 shows all attributes of Auction.

**Table 226 – Attributes of Rights contextual model::Auction**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the auction.

### 6.15.3.3 Currency\_Unit

The code specifying a monetary unit.

IsBasedOn: ESMPClasses::Currency\_Unit

Table 227 shows all attributes of Currency\_Unit.

**Table 227 – Attributes of Rights contextual model::Currency\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217).

### 6.15.3.4 Domain

A domain covering a number of related objects, such as market balance area, grid area, borders etc.

IsBasedOn: ESMPClasses::Domain

Table 228 shows all attributes of Domain.

**Table 228 – Attributes of Rights contextual model::Domain**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	AreaID_String	The unique identification of the domain.

### 6.15.3.5 MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 229 shows all attributes of MarketAgreement.

**Table 229 – Attributes of Rights contextual model::MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.
[1..1]	type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.

### 6.15.3.6 MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 230 shows all attributes of MarketParticipant.

**Table 230 – Attributes of Rights contextual model::MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

Table 231 shows all association ends of MarketParticipant with other classes.

**Table 231 – Association ends of Rights contextual model::MarketParticipant with other classes**

mult.	Role	Class type name	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.15.3.7 MarketRole

The identification of the intended behaviour of a market participant played within a given business process.

IsBasedOn: ESMPClasses::MarketRole

Table 232 shows all attributes of MarketRole.

**Table 232 – Attributes of Rights contextual model::MarketRole**

mult.	Attribute name	Attribute type	Description
[1..1]	type	MarketRoleKind_String	The identification of the role played by a market player.

### 6.15.3.8 Measure\_Unit

A particular quantity, defined and adopted by convention, with which other quantities of the same kind are compared in order to express their magnitudes relative to that quantity.

IsBasedOn: ESMPClasses::Measure\_Unit

Table 233 shows all attributes of Measure\_Unit.

**Table 233 – Attributes of Rights contextual model::Measure\_Unit**

mult.	Attribute name	Attribute type	Description
[1..1]	name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20).

### 6.15.3.9 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: ESMPClasses::Point

Table 234 shows all attributes of Point.

**Table 234 – Attributes of Rights contextual model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[1..1]	quantity	Decimal	This information defines the quantity that has been assigned to the nomination party for the interval in question and that is expressed in the measurement unit. The principal quantity identified for a point.

Table 235 shows all association ends of Point with other classes.

**Table 235 – Association ends of Rights contextual model::Point with other classes**

mult.	Role	Class type name	Description
[0..1]	Price	Price	The price expressed for each unit of quantity as the minimum selling price. The price indicated in a resale document equal to or above which the quantity may be sold. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. The price amount is mandatory in the case of the resale of capacity for a minimum price depending on local market rules. Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.15.3.10 Previous\_MarketAgreement

A formal agreement between two parties defining the terms and conditions for a set of services. The specifics of the services are, in turn, defined via one or more service agreements.

IsBasedOn: ESMPClasses::MarketAgreement

Table 236 shows all attributes of Previous\_MarketAgreement.

**Table 236 – Attributes of Rights contextual model::Previous\_MarketAgreement**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	ID_String	The unique identification of the agreement.

### 6.15.3.11 Price

The cost corresponding to a specific entity expressed in a currency.

IsBasedOn: ESMPClasses::Price

Table 237 shows all attributes of Price.

**Table 237 – Attributes of Rights contextual model::Price**

mult.	Attribute name	Attribute type	Description
[1..1]	amount	Amount_Decimal	A number of monetary units specified in a unit of currency.

### 6.15.3.12 Reason

The motivation of an act.

IsBasedOn: ESMPClasses::Reason

Table 238 shows all attributes of Reason.

**Table 238 – Attributes of Rights contextual model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.15.3.13 Rights\_MarketParticipant

The identification of the party participating in energy market business processes.

IsBasedOn: ESMPClasses::MarketParticipant

Table 239 shows all attributes of Rights\_MarketParticipant.

**Table 239 – Attributes of Rights contextual model::Rights\_MarketParticipant**

mult.	Attribute name	Attribute type	Description
[1..1]	mRID	PartyID_String	The identification of a party in the energy market.

### 6.15.3.14 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: ESMPClasses::Series\_Period

Table 240 shows all attributes of Series\_Period.

**Table 240 – Attributes of Rights contextual model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 241 shows all association ends of Series\_Period with other classes.

**Table 241 – Association ends of Rights contextual model::Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.15.3.15 Time\_Period

The identification of a time interval.

IsBasedOn: ESMPClasses::Time\_Period

Table 242 shows all attributes of Time\_Period.

**Table 242 – Attributes of Rights contextual model::Time\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval.

### 6.15.3.16 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: ESMPClasses::TimeSeries

Table 243 shows all attributes of TimeSeries.

**Table 243 – Attributes of Rights contextual model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	mRID	ID_String	A unique identification of the time series.

Table 244 shows all association ends of TimeSeries with other classes.

**Table 244 – Association ends of Rights contextual model::TimeSeries with other classes**

mult.	Role	Class type name	Description
[0..1]	Auction	Auction	The identification linking the capacity rights to a set of specifications created by the transmission capacity allocator. A unique identification of the set of specifications that clearly defines the auction to which the capacity rights submitted by the capacity trader are to be re-auctioned. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	The currency in which the monetary amount is expressed. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	Holder_Rights_MarketParticipant	Rights_MarketParticipant	Identification of the party who is owner of, or has the right to use, the transmission rights in question. Whenever rights are transferred, the rights holder is the transferor of the rights. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	In_Domain	Domain	The area where the energy is to be put. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	MarketAgreement	MarketAgreement	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[1..1]	Out_Domain	Domain	The area where the energy is coming from. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]

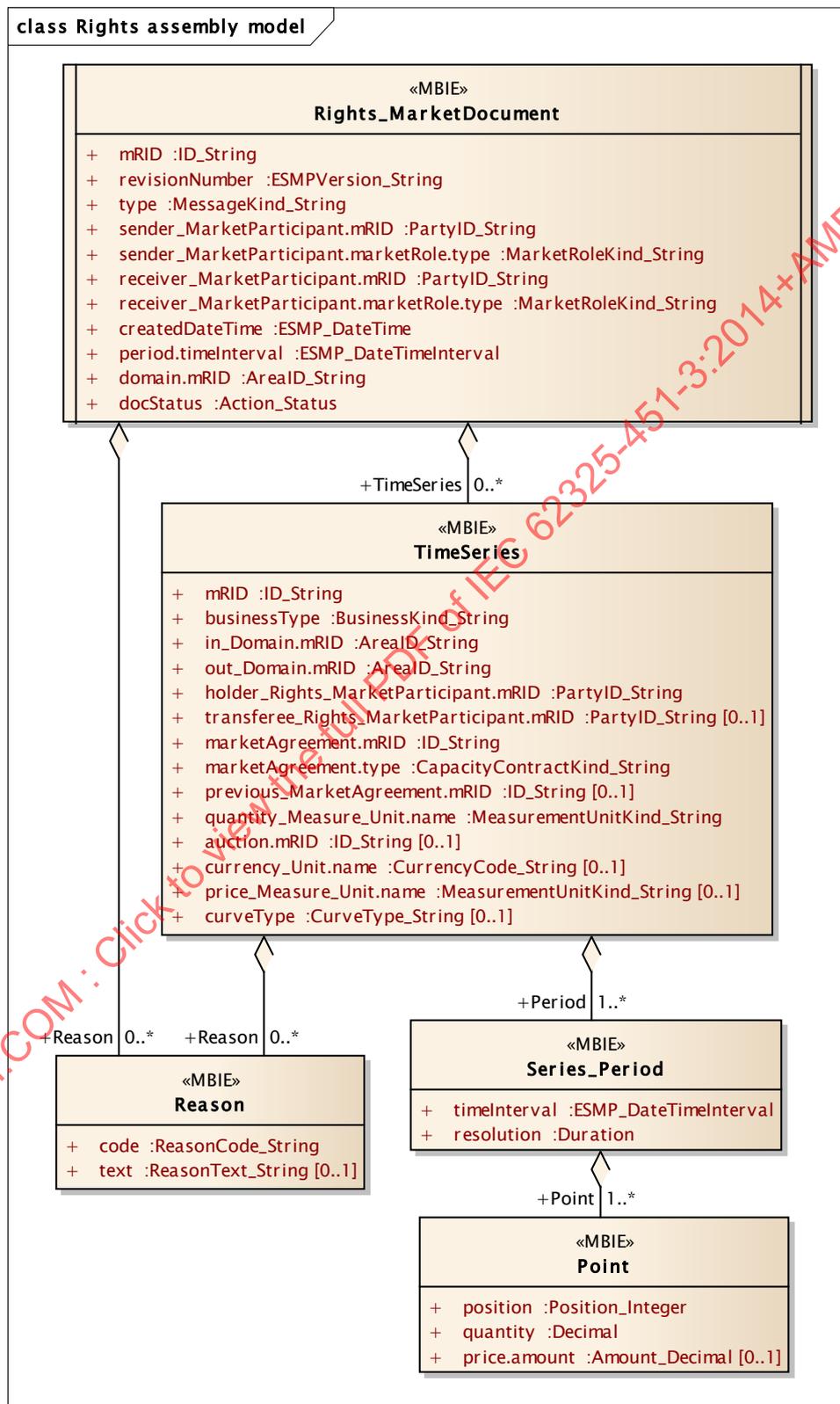
mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Previous_MarketAgreement	Previous_MarketAgreement	The identification of a previous contract used to identify the transfer rights. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketAgreement.MarketAgreement[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	The unit of measure in which the price in the time series is expressed (MW per unit, MWh per unit, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[0..*]	Reason	Reason	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Reason.Reason[0..*]
[0..1]	Transferee_Rights_MarketParticipant	Rights_MarketParticipant	Identification of the party to whom the rights are being transferred or the Interconnection Trade Responsible designated by the transferor (as designated in the RightsHolder attribute) to use the rights. In certain cases the transferee party also acts as Interconnection Trade Responsible. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

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## 6.16 Rights assembly model

### 6.16.1 Overview of the model

Figure 24 shows the model.



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Figure 24 – Rights assembly model

## 6.16.2 IsBasedOn relationships from the European style market profile

Table 245 shows the traceability dependency of the classes used in this package towards the upper level.

**Table 245 – IsBasedOn dependency**

Name	Is BasedOn Class	Complete IsBasedOn Path
Point	Rights contextual model::Point	Rights Document\Rights contextual model
Reason	Rights contextual model::Reason	Rights Document\Rights contextual model
Rights_MarketDocument	Rights contextual model::Rights_MarketDocument	Rights Document\Rights contextual model
Series_Period	Rights contextual model::Series_Period	Rights Document\Rights contextual model
TimeSeries	Rights contextual model::TimeSeries	Rights Document\Rights contextual model

## 6.16.3 Detailed Rights assembly model

### 6.16.3.1 Rights\_MarketDocument root class

An electronic document containing the information necessary to satisfy the requirements of a given business process.

The rights document may be sent by a capacity trader to inform the auction office of a transfer of rights.

It may also be sent by the auction office to inform the nomination validator of the parties who have transmission rights for a given period.

The nomination validator may also use this document to inform an interconnection trade responsible of the rights he may use for nomination.

IsBasedOn: Rights contextual model::Rights\_MarketDocument

Table 246 shows all attributes of Rights\_MarketDocument.

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**Table 246 – Attributes of Rights assembly model::Rights\_MarketDocument**

mult.	Attribute name	Attribute type	Description
[1..1]	createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
[1..1]	docStatus	Action_Status	The identification of the condition or position of the document with regard to its standing.
[1..1]	domain.mRID	AreaID_String	The unique identification of the domain. --- The domain covered within the rights document.
[1..1]	mRID	ID_String	The unique identification of the document being exchanged within a business process flow.
[1..1]	period.timeInterval	ESMP_DateTimeInterval	The start and end date and time for a given interval. --- The beginning and ending date and time of the period covered by the document.
[1..1]	receiver_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document recipient.
[1..1]	receiver_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document recipient.
[1..1]	revisionNumber	ESMPVersion_String	The identification of the version that distinguishes one evolution of a document from another.
[1..1]	sender_MarketParticipant.marketRole.type	MarketRoleKind_String	The identification of the role played by a market player. --- Document owner.
[1..1]	sender_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Document owner.
[1..1]	type	MessageKind_String	The coded type of a document. The document type describes the principal characteristic of the document.

Table 247 shows all association ends of Rights\_MarketDocument with other classes.

**Table 247 – Association ends of Rights assembly model::Rights\_MarketDocument with other classes**

mult.	Role	Class type name	Description
[0..*]	Reason	Reason	Association Based On: Rights contextual model::Reason.Reason[0..*] ----- Rights contextual model::Rights_MarketDocument.[]
[0..*]	TimeSeries	TimeSeries	Association Based On: Rights contextual model::TimeSeries.TimeSeries[0..*] ----- Rights contextual model::Rights_MarketDocument.[]

### 6.16.3.2 Point

The identification of the values being addressed within a specific interval of time.

IsBasedOn: Rights contextual model::Point

Table 248 shows all attributes of Point.

**Table 248 – Attributes of Rights assembly model::Point**

mult.	Attribute name	Attribute type	Description
[1..1]	position	Position_Integer	A sequential value representing the relative position within a given time interval.
[0..1]	price.amount	Amount_Decimal	A number of monetary units specified in a unit of currency. --- The price expressed for each unit of quantity as the minimum selling price. The price indicated in a resale document equal to or above which the quantity may be sold. This information defines the price expressed in the unit of measurement of price per unit of quantity in compliance with the pricing scheme based on local market rules. The price amount is mandatory in the case of the resale of capacity for a minimum price depending on local market rules.
[1..1]	quantity	Decimal	This information defines the quantity that has been assigned to the nomination party for the interval in question and that is expressed in the measurement unit. The principal quantity identified for a point.

### 6.16.3.3 Reason

The motivation of an act.

IsBasedOn: Rights contextual model::Reason

Table 249 shows all attributes of Reason.

**Table 249 – Attributes of Rights assembly model::Reason**

mult.	Attribute name	Attribute type	Description
[1..1]	code	ReasonCode_String	The motivation of an act in coded form.
[0..1]	text	ReasonText_String	The textual explanation corresponding to the reason code.

### 6.16.3.4 Series\_Period

The identification of the period of time corresponding to a given time interval and resolution.

IsBasedOn: Rights contextual model::Series\_Period

Table 250 shows all attributes of Series\_Period.

**Table 250 – Attributes of Rights assembly model::Series\_Period**

mult.	Attribute name	Attribute type	Description
[1..1]	resolution	Duration	The definition of the number of units of time that compose an individual step within a period.
[1..1]	timeInterval	ESMP_DateTimeInterval	The start and end time of the period.

Table 251 shows all association ends of Series\_Period with other classes.

**Table 251 – Association ends of Rights assembly model:: Series\_Period with other classes**

mult.	Role	Class type name	Description
[1..*]	Point	Point	Association Based On: Rights contextual model::Point.Point[1..*] ----- Rights contextual model::Series_Period.[]

### 6.16.3.5 TimeSeries

A set of time-ordered quantities being exchanged in relation to a product.

IsBasedOn: Rights contextual model::TimeSeries

Table 252 shows all attributes of TimeSeries.

**Table 252 – Attributes of Rights assembly model::TimeSeries**

mult.	Attribute name	Attribute type	Description
[0..1]	auction.mRID	ID_String	The unique identification of the auction. --- The identification linking the capacity rights to a set of specifications created by the transmission capacity allocator. A unique identification of the set of specifications that clearly defines the auction to which the capacity rights submitted by the capacity trader are to be re-auctioned.
[1..1]	businessType	BusinessKind_String	The identification of the nature of the time series.
[0..1]	currency_Unit.name	CurrencyCode_String	The identification of the formal code for a currency (ISO 4217). --- The currency in which the monetary amount is expressed.
[0..1]	curveType	CurveType_String	The identification of the coded representation of the type of curve being described.
[1..1]	holder_Rights_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Identification of the party who is owner of, or has the right to use, the transmission rights in question. Whenever rights are transferred, the rights holder is the transferor of the rights.
[1..1]	in_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is to be put.

mult.	Attribute name	Attribute type	Description
[1..1]	marketAgreement.mRID	ID_String	The unique identification of the agreement.
[1..1]	marketAgreement.type	CapacityContractKind_String	The specification of the kind of the agreement, e.g. long term, daily contract.
[1..1]	mRID	ID_String	A unique identification of the time series.
[1..1]	out_Domain.mRID	AreaID_String	The unique identification of the domain. --- The area where the energy is coming from.
[0..1]	previous_MarketAgreement.mRID	ID_String	The unique identification of the agreement. --- The identification of a previous contract used to identify the transfer rights.
[0..1]	price_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure in which the price in the time series is expressed (MW per unit, MWh per unit, etc.).
[1..1]	quantity_Measure_Unit.name	MeasurementUnitKind_String	The identification of the formal code for a measurement unit (UN/ECE Recommendation 20). --- The unit of measure that is applied to the quantities in which the time series is expressed, e.g. MAW.
[0..1]	transferee_Rights_MarketParticipant.mRID	PartyID_String	The identification of a party in the energy market. --- Identification of the party to whom the rights are being transferred or the Interconnection Trade Responsible designated by the transferor (as designated in the RightsHolder attribute) to use the rights. In certain cases the transferee party also acts as Interconnection Trade Responsible.

Table 253 shows all association ends of TimeSeries with other classes.

**Table 253 – Association ends of Rights assembly model:  
 TimeSeries with other classes**

mult.	Role	Class type name	Description
[1..*]	Period	Series_Period	Association Based On: Rights contextual model::Series_Period.Period[1..*] ----- Rights contextual model::TimeSeries.[]
[0..*]	Reason	Reason	Association Based On: Rights contextual model::Reason.Reason[0..*] ----- Rights contextual model::TimeSeries.[]

## 7 XML schema

### 7.1 XML schema URN Namespace rules

In order to provide a generic and stable means of declaring a URN for the European style market profile XML schemas, the namespace will be composed in the following manner:

**urn:iec62325.351:tc57wg16:<process>:<document>:<version>:<release>**

where:

- iec62325.351 shall be the stem of all European style market profile XML schema namespaces.
- tc57wg16 identifies the organisation or group of organisations within IEC that owns the object being referenced. In the case of Technical Committee 57 this shall be the Working Group 16.
- <process> identifies the specific process where the object is situated, e.g. the part of the IEC 62325 standards in which the XML schema is defined, e.g. 451-1, 451-2, 451-3, etc.
- <document> identifies the electronic document schema.
- <version> identifies the version of the document schema.
- <release> identifies the release of the document schema.

Every XML schema representing an electronic document shall have a default namespace corresponding to the namespace that identifies the document and respects the above URI namespace construction.

Every XML schema representing an electronic document shall have a targetNamespace corresponding to the default namespace.

Every XML schema shall have an elementFormDefault as “qualified”.

Every XML schema shall have an attributeFormDefault as “unqualified”.

### 7.2 Code list URN namespace rules

In the case of the codelist library that shall be used for the European style market profile the URN shall be as follows **urn:entsoe.eu:wgedi:codelists**.

### 7.3 URI rules for model documentation

#### 7.3.1 Datatype

In the case of the base data type library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[datatype-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile.
- <cimxx> is the CIM version name.
- [datatype-name] is the name of the CIM datatype or primitive.

EXAMPLES:

`http://iec.ch/TC57/2012/CIM-schema-cim16#String`

`http://iec.ch/TC57/2012/CIM-schema-cim16#Money`

#### 7.3.2 Class

In the case of the base class library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class

EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries`

#### 7.3.3 Attribute

In the case of the base attribute library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[attribute-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class
- [attribute-name] is the name of a class attribute

EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#TimeSeries.product`

#### 7.3.4 Association end role name

In the case of the base association library that shall be used for the European style market profile, the URI shall use the sawsdl:modelReference as follows:

**`http://iec.ch/TC57/<CIM-version-year>/CIM-schema-<cimxx>#[class-name].[association-end-role-name]`**

where:

- <CIM-version-year> is the year of the released CIM version used for generating market profile
- <cimxx> is the CIM version name
- [class-name] is the name of the CIM class
- [association-end-role-name]

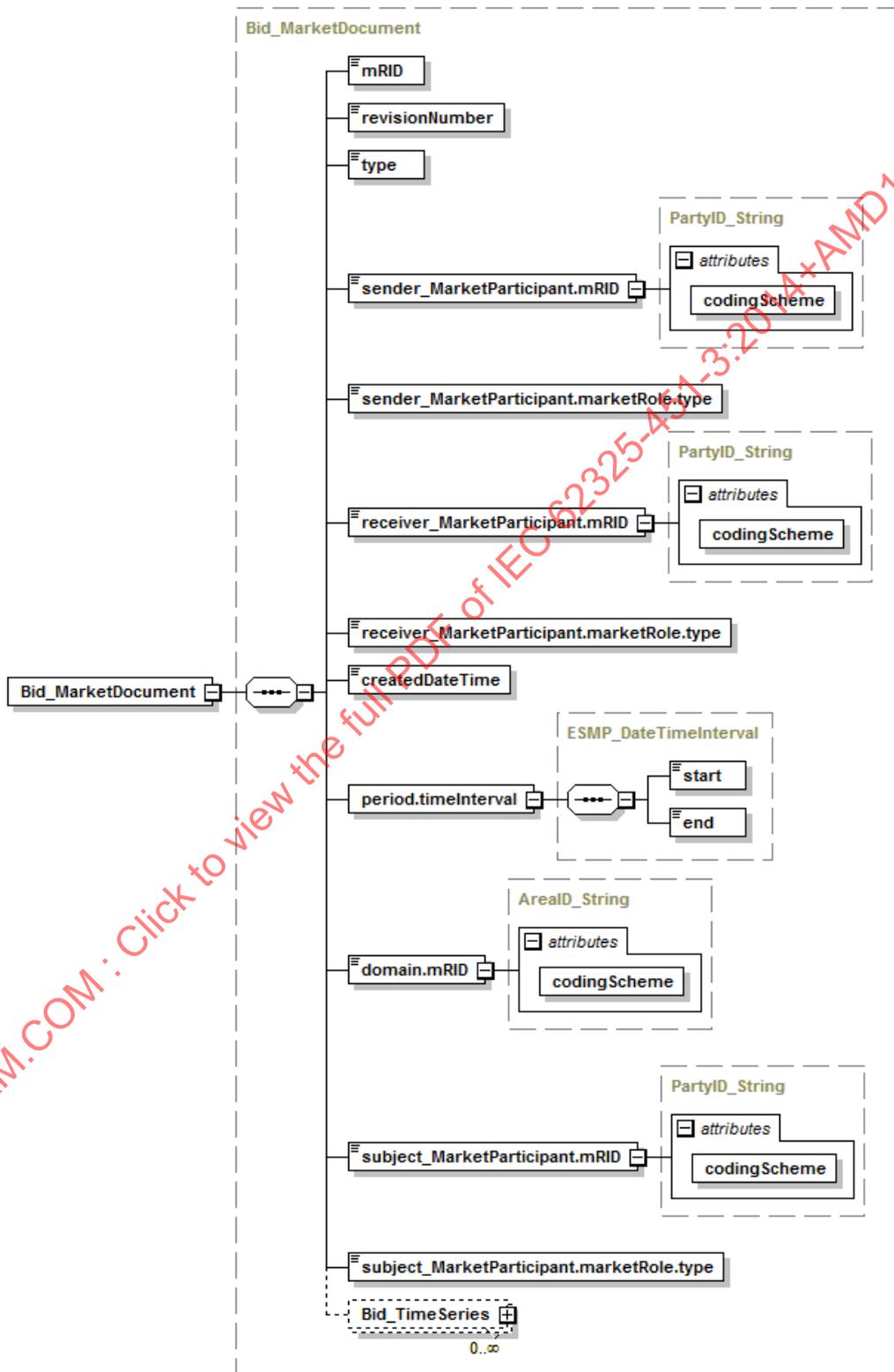
EXAMPLE: `http://iec.ch/TC57/2012/CIM-schema-cim16#MarketDocument.TimeSeries`

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## 7.4 Bid\_MarketDocument schema

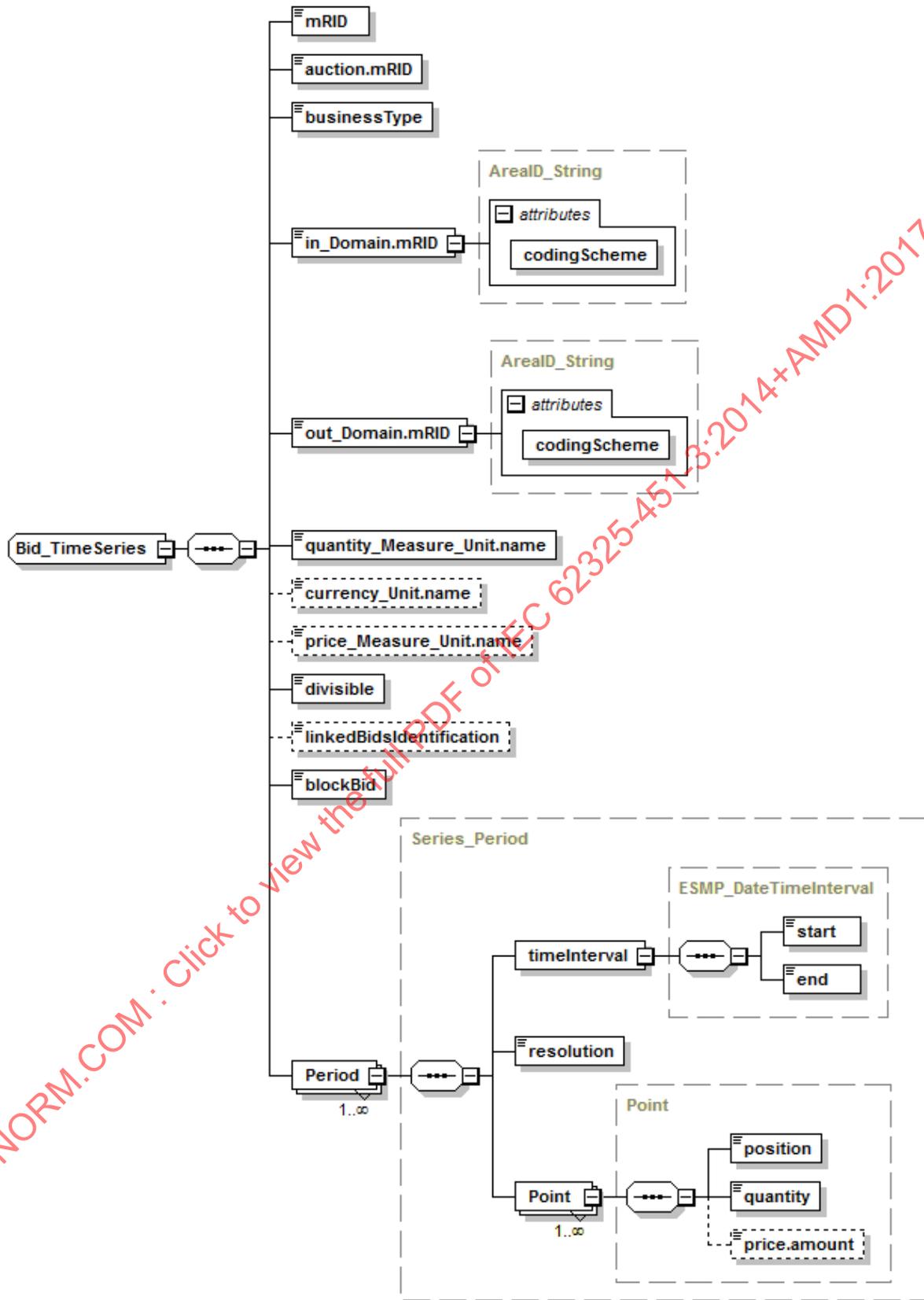
### 7.4.1 Schema Structure

Figure 25 and Figure 26 provide the structure of the schema.



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Figure 25 – Bid\_MarketDocument XML schema structure – 1/2



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Figure 26 – Bid\_MarketDocument XML schema structure – 2/2

#### 7.4.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:biddocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:biddocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Bid_MarketDocument" type="Bid_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) \- (0[13578] | 1[02] ) \- (0[1-
9] | 12) [0-9]{2} ) | ( [0-9]{4} ) \- ((0[469] ) | (11) ) \- (0[1-9] | 12) [0-9]{2} ) | (0[1-
9] | 2[0-3] ) : [0-5] [0-9]{2} : [0-5] [0-
9] ) Z | ((( [13579] [26] [02468] [048] | [13579] [01345789] (0) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] (0) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) \- (02) \- (0[1-9] | 1[0-9] | 2[0-9] ) T ( ([01] [0-9] | 2[0-3] ) : [0-5] [0-
9] ) : [0-5] [0-
9] ) Z | ((( [13579] [26] [02468] [1235679] | [13579] [01345789] (0) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] (0) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) \- (02) \- (0[1-9] | 1[0-9] | 2[0-
8] ) T ( ([01] [0-9] | 2[0-3] ) : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
```



```
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="subject_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="Bid_TimeSeries" type="Bid_TimeSeries"
minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.Bid_TimeSeries"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:IndicatorTypeList"/>
</xs:simpleType>
<xs:complexType name="Bid_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="divisible" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries.divisible"/>
    <xs:element name="linkedBidsIdentification" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries.linkedBidsIdentification"/>
    <xs:element name="blockBid" type="ESMPBoolean_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries.blockBid"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#BidTimeSeries.Period"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
```

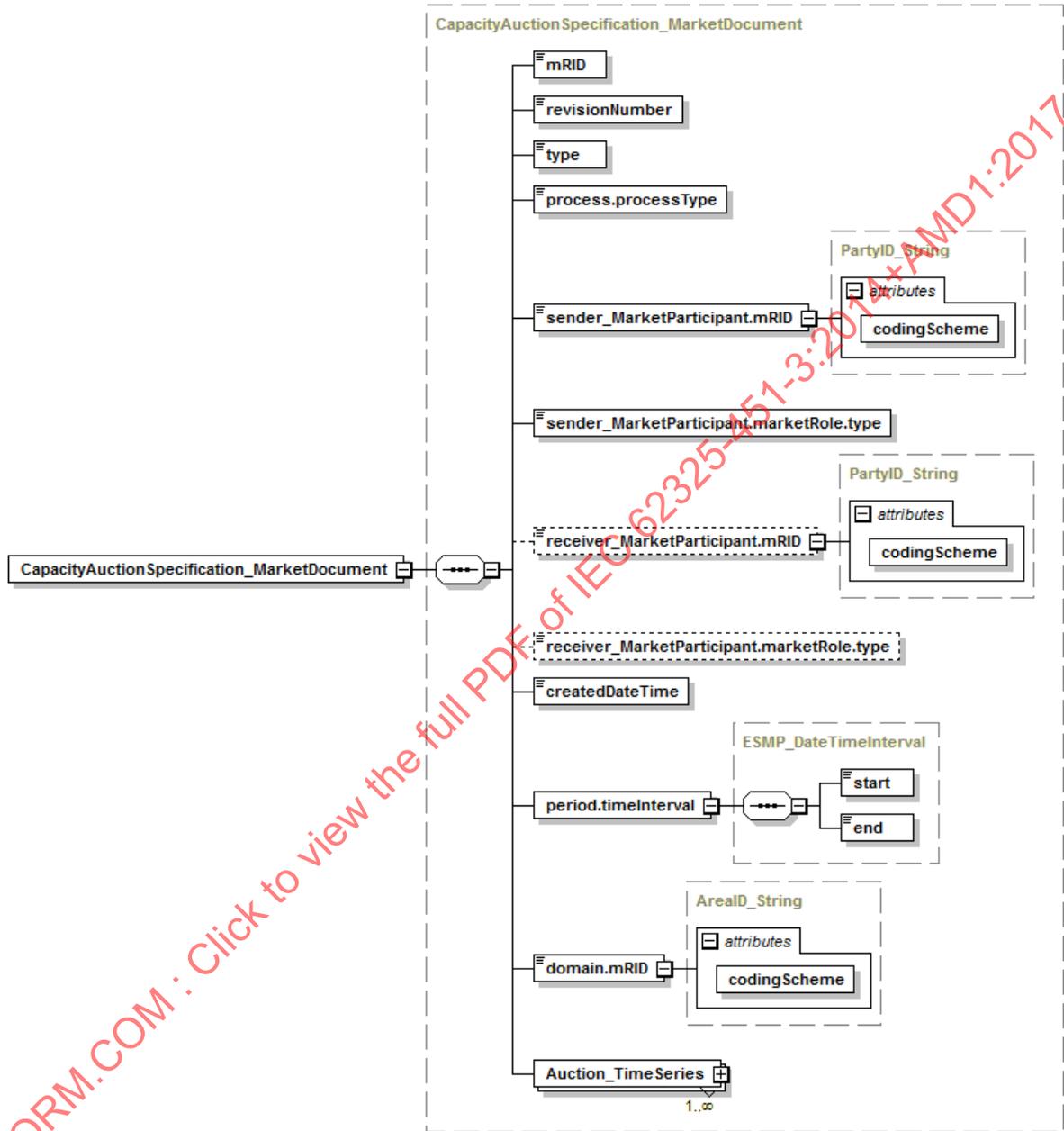
```
<xs:restriction base="xs:integer">
  <xs:minInclusive value="1"/>
  <xs:maxInclusive value="999999"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.5 CapacityAuctionSpecification\_MarketDocument schema

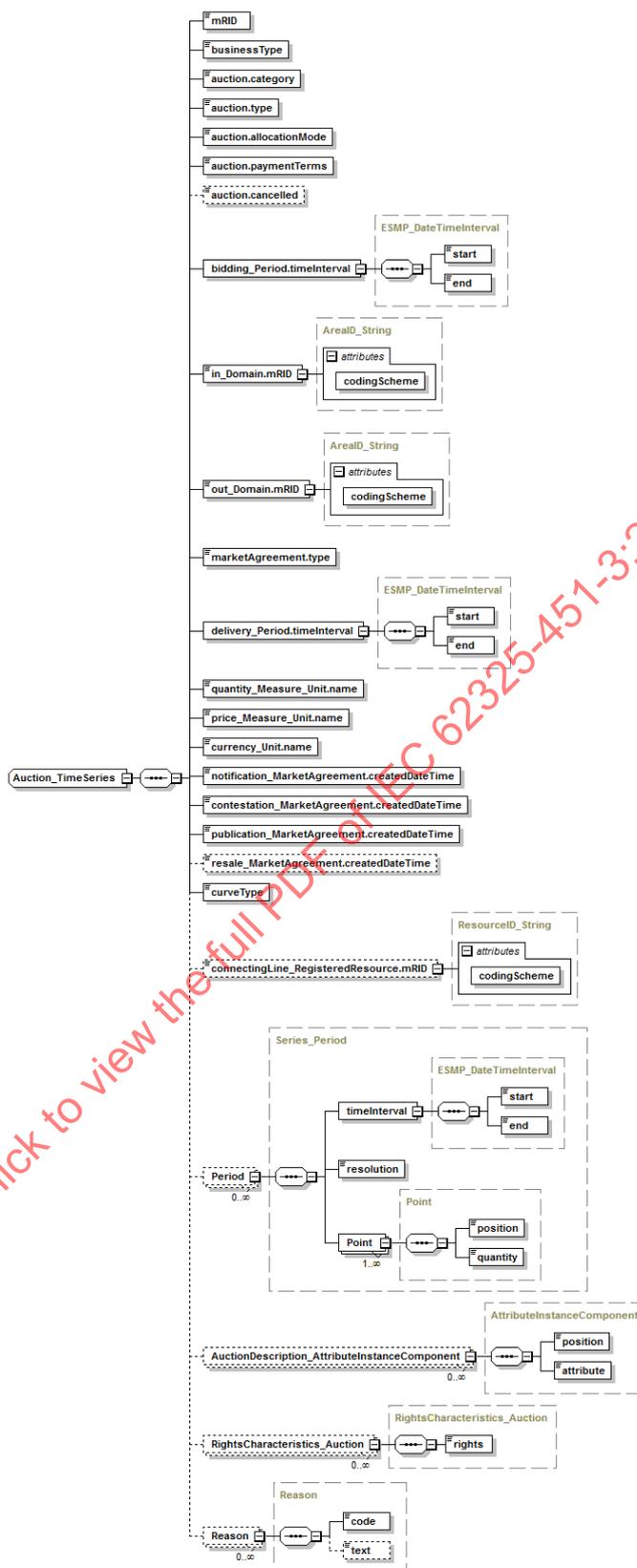
### 7.5.1 Schema Structure

Figure 27 and Figure 28 provide the structure of the schema.



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Figure 27 – CapacityAuctionSpecification\_MarketDocument XML schema structure – 1/2



IEC

Figure 28 – CapacityAuctionSpecification\_MarketDocument XML schema structure – 2/2

### 7.5.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:capacityspecificationdocument:7:1" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacityspecificationdocument:7:1"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="CapacityAuctionSpecification_MarketDocument"
type="CapacityAuctionSpecification_MarketDocument"/>
  <xs:complexType name="AttributeInstanceComponent"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent">
    <xs:sequence>
      <xs:element name="position" type="xs:integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent.position"/>
      <xs:element name="attribute" type="xs:string" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#AttributeInstanceComponent.attribute"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:BusinessTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AuctionTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AllocationMode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:AllocationModeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PaymentTerms_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:PaymentTermsTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMPBoolean_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:IndicatorTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ContractTypeList"/>
  </xs:simpleType>
```

```
</xs:simpleType>
  <xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:UnitOfMeasureTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CurrencyTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CurveTypeList"/>
  </xs:simpleType>
<xs:simpleType name="ResourceID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ResourceID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="ResourceID_String-base">
      <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
  <xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:string">
      <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-
9]|12) [0-9]|3[01])|((0-9){4}) [\-] ((0[469])|(11)) [\-] (0[1-9]|12) [0-9]|30))T((([01][0-
9]|2[0-3]):[0-5][0-
9])Z|((([13579][26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0-
9)[0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9])Z|((([13579][26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][123
5679][2468][1235679]|0-9)[0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
    <xs:sequence>
      <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
      <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Auction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
      <xs:element name="auction.category" type="Category_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
      <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
    </xs:sequence>
  </xs:complexType>

```

```
<xs:element name="auction.allocationMode"
type="AllocationMode_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.allocationMode"/>
  <xs:element name="auction.paymentTerms"
type="PaymentTerms_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.paymentTerms"/>
  <xs:element name="auction.cancelled" type="ESMPBoolean_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.cancelled"/>
  <xs:element name="bidding_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
  <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
  <xs:element name="delivery_Period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
  <xs:element name="notification_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
  <xs:element name="contestation_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
  <xs:element name="publication_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
  <xs:element name="resale_MarketAgreement.createdDateTime"
type="xs:dateTime" minOccurs="0" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.createdDateTime"/>
  <xs:element name="curveType" type="CurveType_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
  <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID">
</xs:element>
  <xs:element name="Period" type="Series_Period" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
  <xs:element name="AuctionDescription_AttributeInstanceComponent"
type="AttributeInstanceComponent" minOccurs="0" maxOccurs="unbounded"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.AuctionDescription_AttributeInstanceComponent"/>
  <xs:element name="RightsCharacteristics_Auction"
type="RightsCharacteristics_Auction" minOccurs="0" maxOccurs="unbounded"
```

```
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.RightsCharacteristics_Auction"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ESMPVersion_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="ProcessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ProcessTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
  <xs:restriction base="xs:dateTime">
    <xs:pattern value="(((0-9){4})[\-]([\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01]))((0-9){4})[\-](((0[469])|(11))[\-](0[1-9]|12)[0-9]|30))T(((01)[0-
9]|2[0-3]):[0-5][0-9]:[0-5][0-
9])Z)|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579][01345789][2468][048]
|[02468][048][02468][048]|02468][1235679](0)[48]|02468][1235679][2468][048]|0[0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T(((01)[0-9]|2[0-3]):[0-5][0-
9]:[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579][01345789](0)[01235679]|13579][01345789][
2468][1235679]|02468][048][02468][1235679]|02468][1235679](0)[01235679]|02468][123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T(((01)[0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CapacityAuctionSpecification_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
    <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
  </xs:sequence>

```

```
<xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Process.processType"/>
  <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
  <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
  <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="Auction_TimeSeries" type="Auction_TimeSeries"
minOccurs="1" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Auction_TimeSeries"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
      <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="RightsKind String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="cl:RightsTypeList"/>
      </xs:simpleType>
      <xs:complexType name="RightsCharacteristics_Auction"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Auction">
        <xs:sequence>
          <xs:element name="rights" type="RightsKind String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Auction.rights"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="Series_Period"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
        <xs:sequence>
          <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
          <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
          <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
        </xs:sequence>
      </xs:complexType>
    </xs:schema>
```

## 7.6 Capacity\_MarketDocument schema

### 7.6.1 Schema Structure

Figure 29 and Figure 30 provide the structure of the schema.

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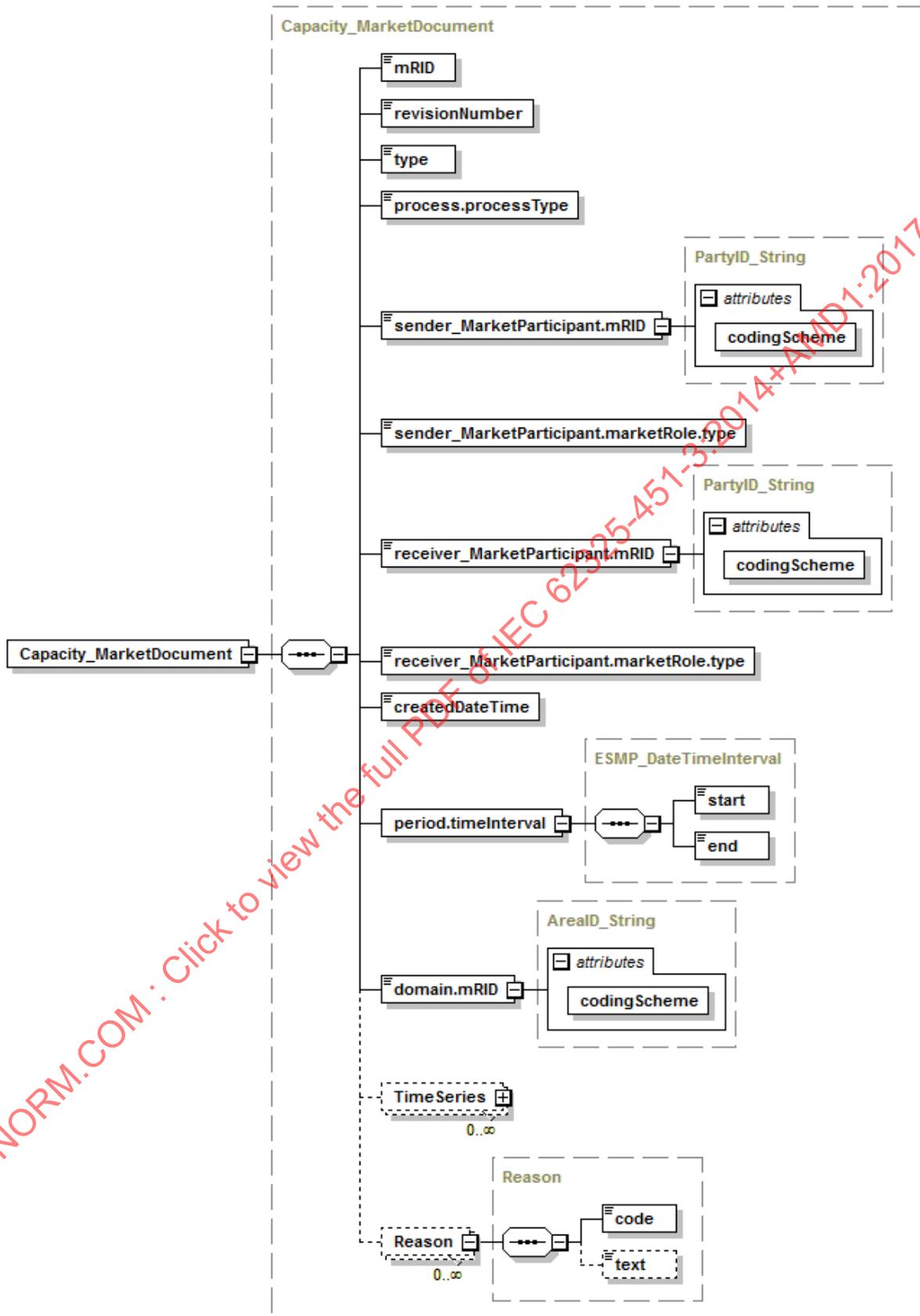


Figure 29 – Capacity\_MarketDocument XML schema structure – 1/2

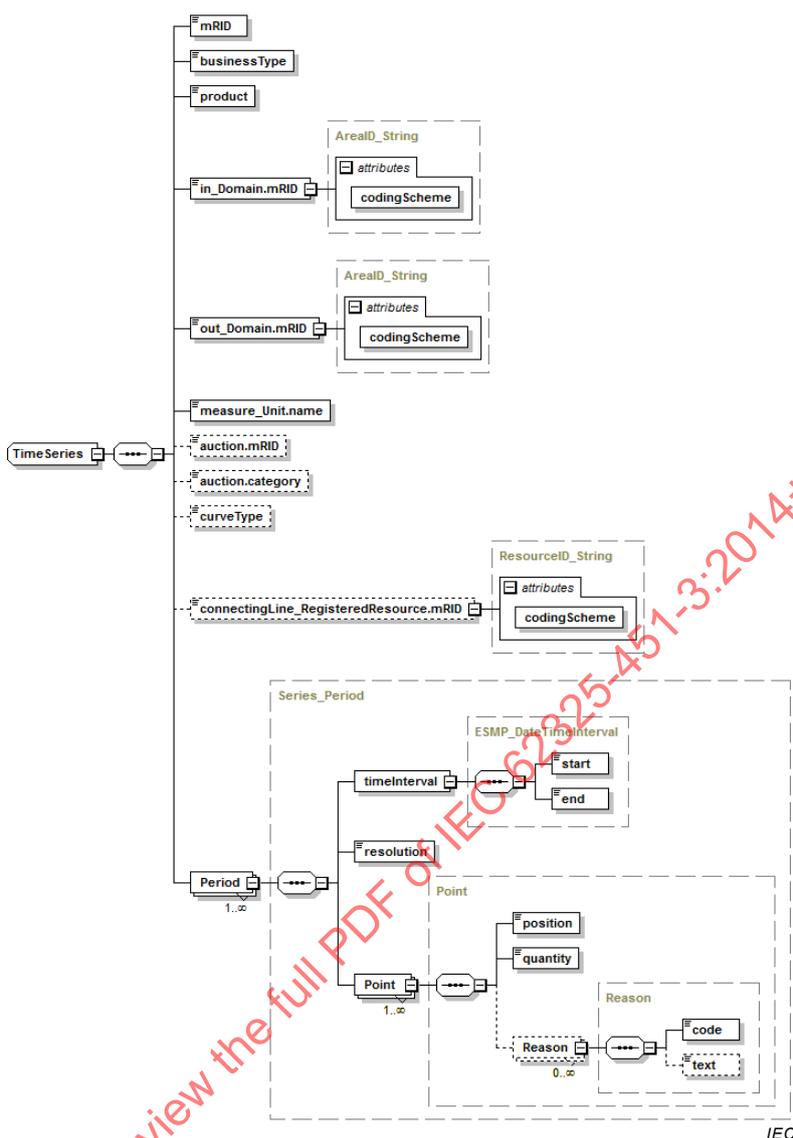


Figure 30 – Capacity\_MarketDocument XML schema structure – 2/2

## 7.6.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:capacitydocument:7:1" xmlns:cimp="http://www.iec.ch/cimprofile"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:capacitydocument:7:1"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-
wgedi-codelists.xsd"/>
<xs:element name="Capacity_MarketDocument" type="Capacity_MarketDocument"/>
<xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="35"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:pattern value="[1-9]([0-9]){0,2}"/>
</xs:restriction>
```

```
</xs:simpleType>
  <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ProcessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ProcessTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-9]|
[12][0-9]|3[01]) | (([0-9]{4}) [\-] ((0[469])|(11)) [\-] (0[1-9]| [12][0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)|(((13579)[26][02468][048]| [13579][01345789] (0) [48]| [13579][01345789][2468][048]| [02468][048][02468][048]| [02468][1235679] (0) [48]| [02468][1235679][2468][048]| [0-9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)|(((13579)[26][02468][1235679]| [13579][01345789] (0) [01235679]| [13579][01345789][2468][1235679]| [02468][048][02468][1235679]| [02468][1235679] (0) [01235679]| [02468][1235679][2468][1235679]| [0-9][0-9][13579][01345789]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-8])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="AreaID_String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:string">
      <xs:pattern value="((([0-9]{4}) [\-] (0[13578]|1[02]) [\-] (0[1-9]|
[12][0-9]|3[01]) | (([0-9]{4}) [\-] ((0[469])|(11)) [\-] (0[1-9]| [12][0-9]|30))T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)|(((13579)[26][02468][048]| [13579][01345789] (0) [48]| [13579][01345789][2468][048]| [02468][048][02468][048]| [02468][1235679] (0) [48]| [02468][1235679][2468][048]| [0-9][0-9][13579][26]) [\-] (02) [\-] (0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)|(((13579)[26][02468][1235679]| [13579][01345789] (0) [01235679]| [13579][01345789][2468][1235679]| [02468][048][02468][1235679]| [02468][1235679] (0) [01235679]| [02468][123
```

```
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789]) [\-] (02) [\-] (0 [1-9] | 1 [0-9] | 2 [0-8]) T (( [01] [0-9] | 2 [0-3]) : [0-5] [0-9]) Z)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ESMP_DateTimeInterval"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
    <xs:sequence>
      <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.start"/>
      <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval.end"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Capacity_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.revisionNumber"/>
      <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
      <xs:element name="process.processType" type="ProcessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Process.processType"/>
      <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.createdDateTime"/>
      <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period.timeInterval"/>
      <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.TimeSeries"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="Position_Integer"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
```

```
<xs:complexType name="Point">
  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String">
    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
      <xs:restriction base="cl:ReasonCodeTypeList"/>
    </xs:simpleType>
    <xs:simpleType name="ReasonText_String">
      sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
        <xs:restriction base="xs:string">
          <xs:maxLength value="512"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:complexType name="Reason">
        sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
          <xs:sequence>
            <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
            <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
          </xs:sequence>
        </xs:complexType>
        <xs:complexType name="Series_Period">
          sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
            <xs:sequence>
              <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
              <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
              <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
            </xs:sequence>
          </xs:complexType>
          <xs:simpleType name="BusinessKind_String">
            sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
              <xs:restriction base="cl:BusinessTypeList"/>
            </xs:simpleType>
            <xs:simpleType name="EnergyProductKind_String">
              sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                <xs:restriction base="cl:EnergyProductTypeList"/>
              </xs:simpleType>
              <xs:simpleType name="MeasurementUnitKind_String">
                sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
                </xs:simpleType>
                <xs:simpleType name="Category_String">
                  sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                    <xs:restriction base="cl:CategoryTypeList"/>
                  </xs:simpleType>
                  <xs:simpleType name="CurveType_String">
                    sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                      <xs:restriction base="cl:CurveTypeList"/>
                    </xs:simpleType>

```

```
<xs:simpleType name="ResourceID_String-base"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="ResourceID_String-base">
      <xs:attribute name="codingScheme" type="cl:CodingSchemeTypeList"
use="required" />
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="TimeSeries"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="product" type="EnergyProductKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.product"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element minOccurs="0" maxOccurs="1"
name="connectingLine_RegisteredResource.mRID" type="ResourceID_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```



## 7.7 AllocationResult\_MarketDocument schema

### 7.7.1 Schema Structure

Figure 31 and Figure 32 provide the structure of the schema.

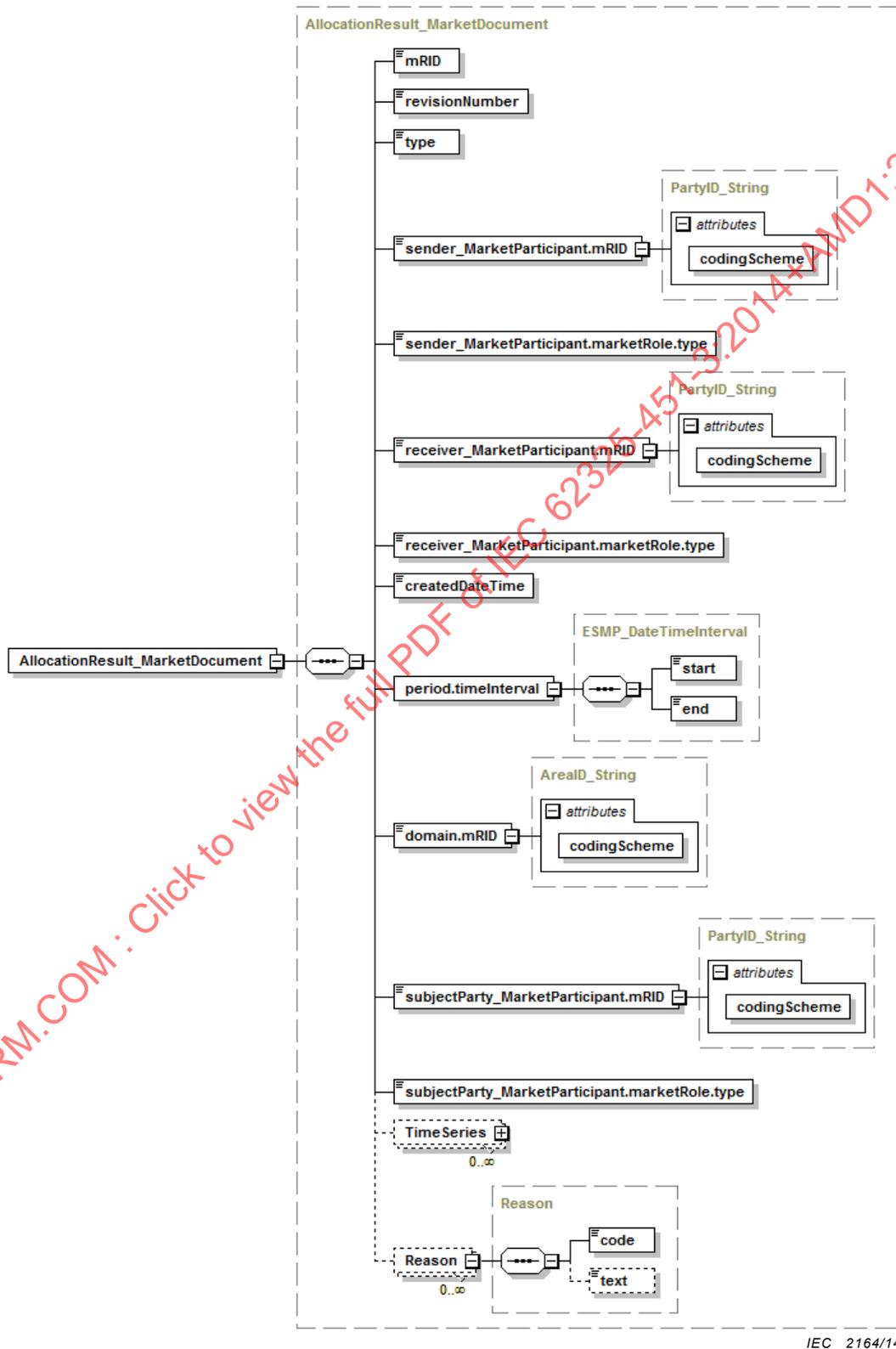
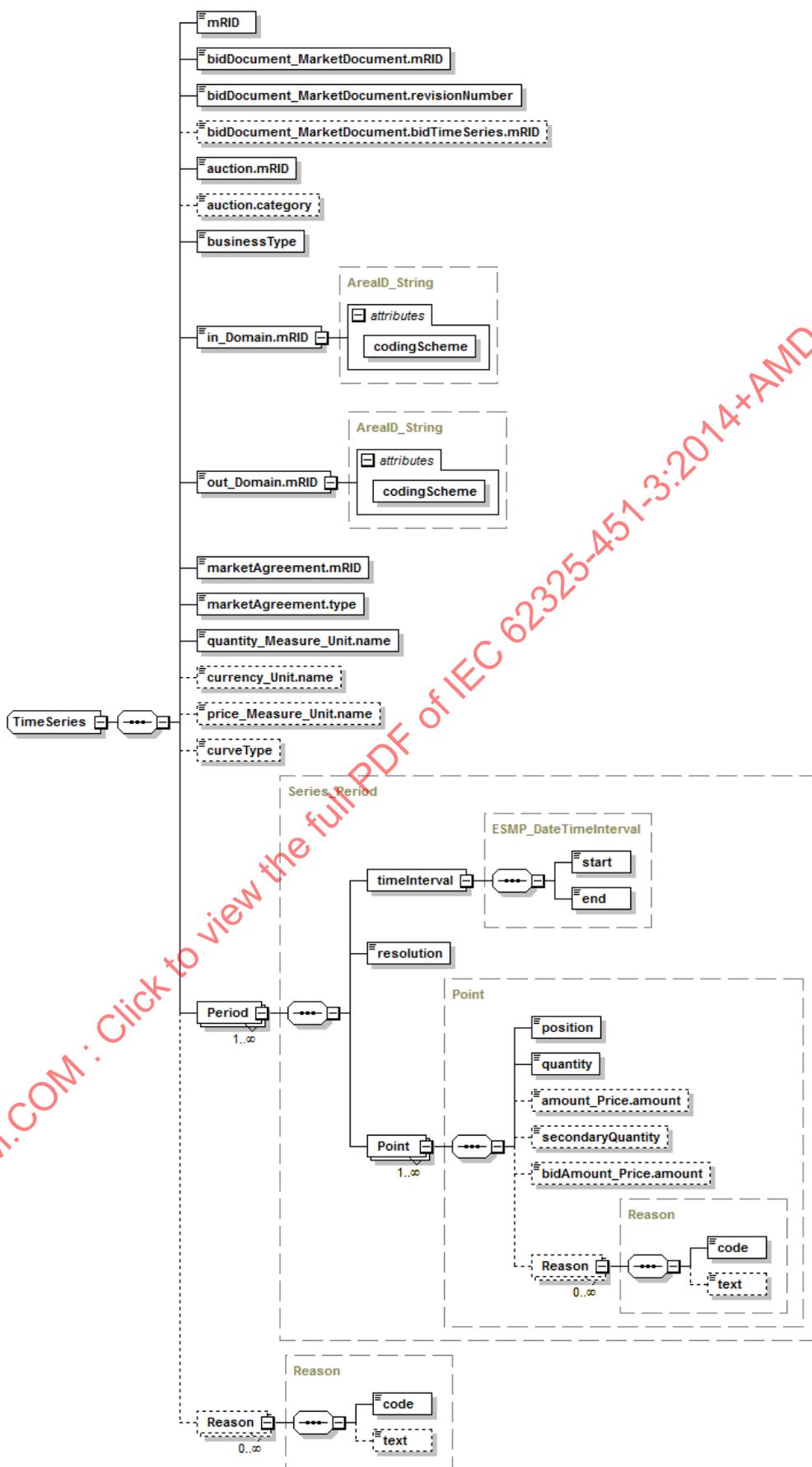


Figure 31 – AllocationResult\_MarketDocument XML schema structure – 1/2



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Figure 32 – AllocationResult\_MarketDocument XML schema structure – 2/2

## 7.7.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:allocationresultdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe.eu-wgedi-codelists.xsd"/>
  <xs:element name="AllocationResult_MarketDocument"
type="AllocationResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ \- ] ( ( 0 [469] ) | ( 11 ) ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048] | [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [1235679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```



```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="subjectParty_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Point.secondaryQuantity"/>
    <xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
  </xs:sequence>
</xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
```

```
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
```

```
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
<xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## 7.8 TotalAllocationResult\_MarketDocument schema

### 7.8.1 Schema Structure

Figure 33 and Figure 34 provide the structure of the schema.

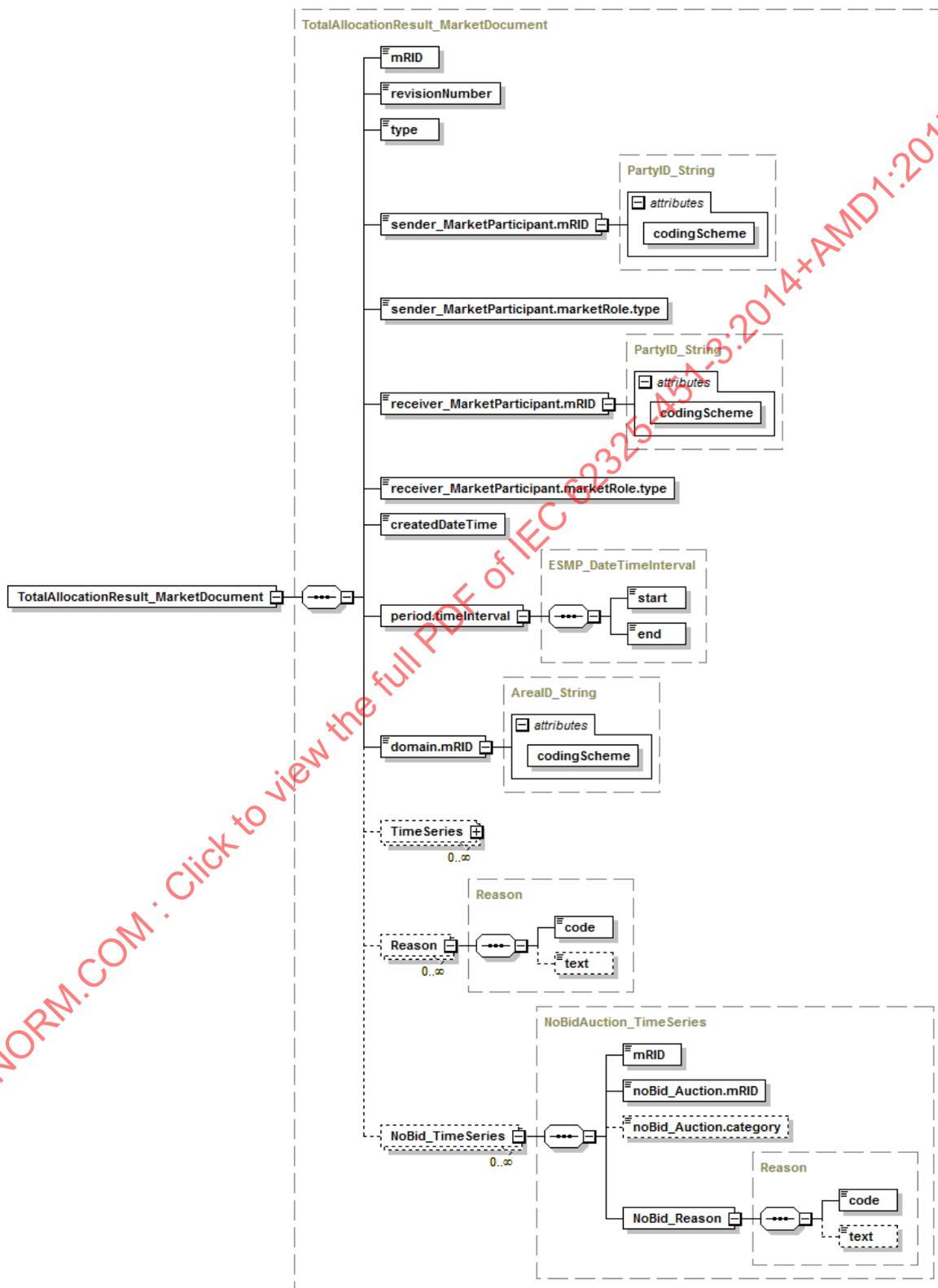


Figure 33 – TotalAllocationResult\_MarketDocument XML schema structure – 1/2

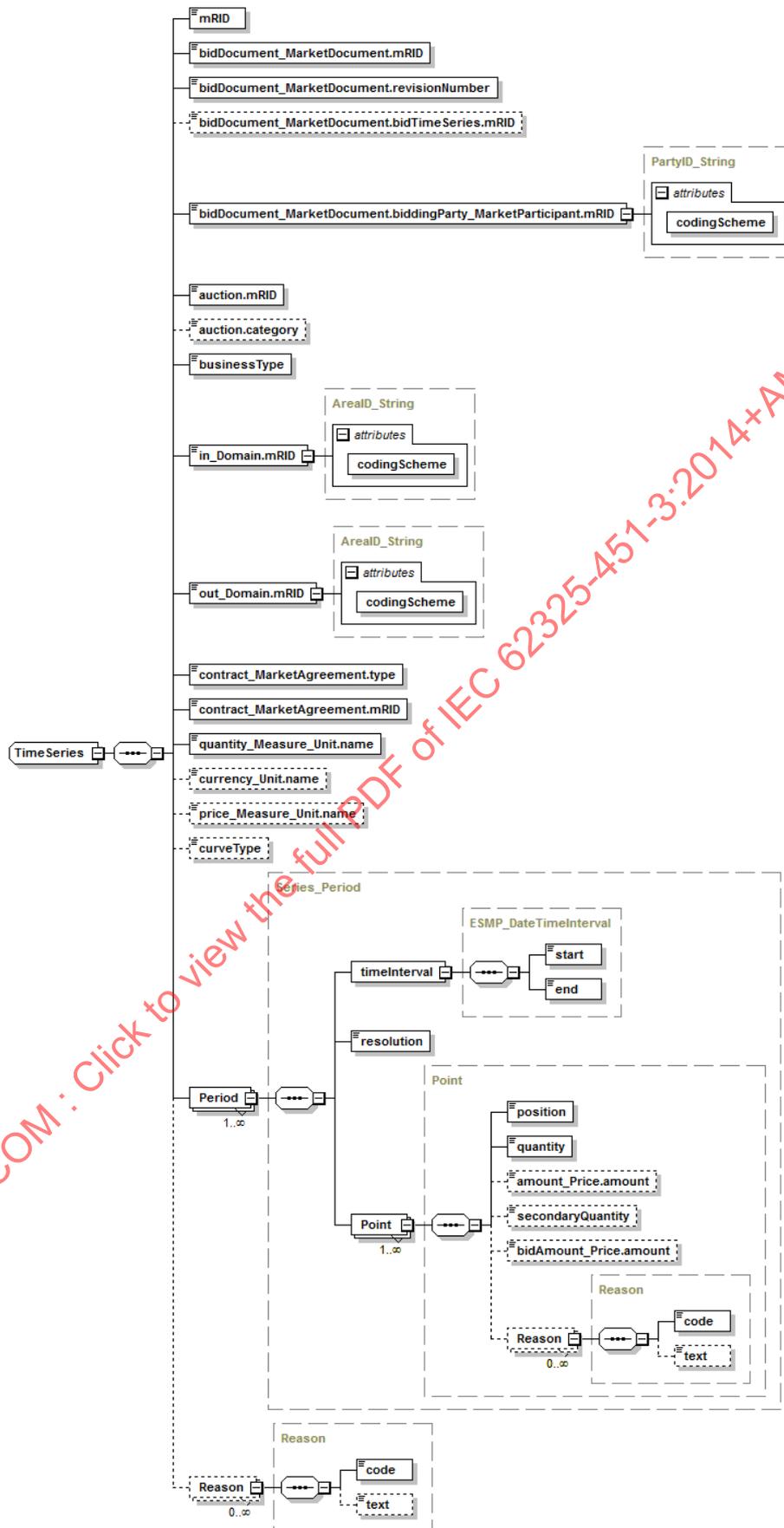


Figure 34 – TotalAllocationResult\_MarketDocument XML schema structure – 2/2

## 7.8.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:totalallocationresultdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:totalallocationresultdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="TotalAllocationResult_MarketDocument"
type="TotalAllocationResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:CategoryTypeList"/>
  </xs:simpleType>
  <xs:complexType name="NoBidAuction_TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
      <xs:element name="noBid Auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
      <xs:element name="NoBid Reason" type="Reason" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.NoBid_Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
      <xs:element name="amount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
      <xs:element name="secondaryQuantity" type="xs:decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Point.secondaryQuantity"/>
    </xs:sequence>
  </xs:complexType>

```

```
<xs:element name="bidAmount_Price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
      <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:string">
      <xs:pattern value="(((0-9){4})[\-](0[13578]|1[02])[\-](0[1-
9]|12)[0-9]|3[01])|((0-9){4})[\-]((0[469])|(11))[\-](0[1-9]|12)[0-9]|30)T((01)[0-
9]|2[0-3]):[0-5][0-
9])Z|(((13579)[26][02468][048]|13579][01345789](0)[48]|13579)[01345789][2468][048]
|[02468][048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|0-
9)[0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((01)[0-9]|2[0-3]):[0-5][0-
9])Z|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][
2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|02468)[123
5679][2468][1235679]|0-9)[0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((01)[0-9]|2[0-3]):[0-5][0-9])Z)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
    <xs:sequence>
      <xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
      <xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
    <xs:sequence>
      <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
      <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
      <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
    </xs:sequence>
  </xs:complexType>
```



```
<xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:pattern value="[1-9]([0-9]){0,2}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="PartyID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="18"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:simpleContent>
    <xs:extension base="AreaID_String-base">
      <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.mRID"
type="ID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="bidDocument_MarketDocument.revisionNumber"
type="ESMPVersion_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.revisionNumber"/>
  </xs:sequence>
</xs:complexType>

```

```
<xs:element name="bidDocument_MarketDocument.bidTimeSeries.mRID"
type="ID_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element
name="bidDocument_MarketDocument.biddingParty_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
        <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
          <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
            <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
              <xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
                <xs:element name="contract_MarketAgreement.mRID" type="ID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
                  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
                      <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
                        <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
                          <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
                            <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
                                </xs:sequence>
                                  </xs:complexType>
                                    <xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                                      <xs:restriction base="cl:MessageTypeList"/>
                                        </xs:simpleType>
                                          <xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
                                            <xs:restriction base="cl:RoleTypeList"/>
                                              </xs:simpleType>
                                                <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
                                                  <xs:restriction base="xs:dateTime">
                                                    <xs:pattern value="((( [0-9] {4} ) [\ -] (0 [13578] |1 [02] ) [\ -] (0 [1-
9] | [12] [0-9] |3 [01] ) | ([0-9] {4} ) [\ -] ((0 [469] ) | (11) ) [\ -] (0 [1-9] | [12] [0-9] |30) ) T (( [01] [0-
9] ) Z | (( [13579] [26] [02468] [048] | [13579] [01345789] (0) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] (0) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) [\ -] (02) [\ -] (0 [1-9] |1 [0-9] |2 [0-9] ) T (( [01] [0-9] |2 [0-3] ) : [0-5] [0-
9] ) : [0-5] [0-
9] ) Z | (( [13579] [26] [02468] [1235679] | [13579] [01345789] (0) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] (0) [01235679] | [02468] [123
```

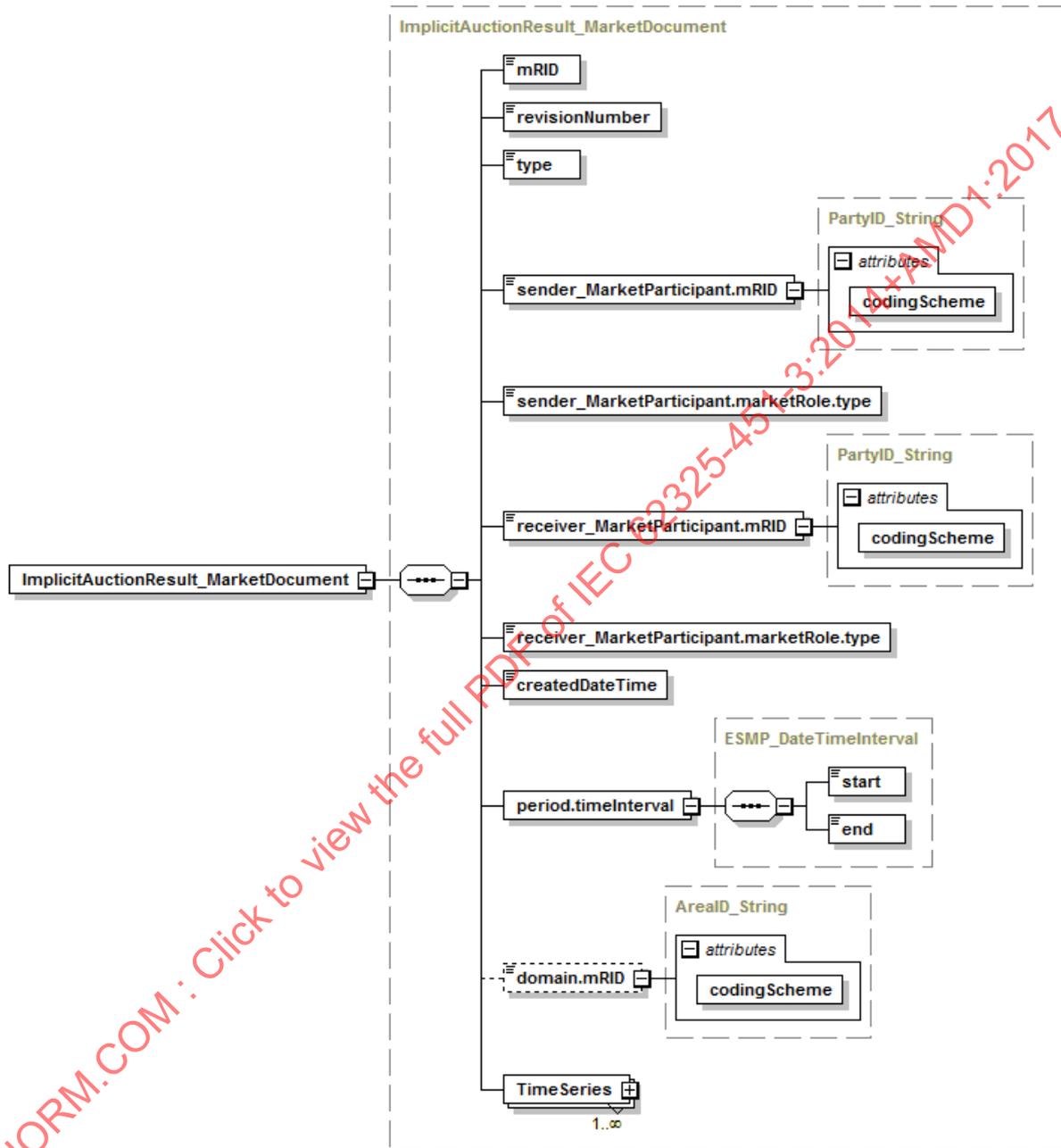
```
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [\ -] (02) [\ -] (0 [1-9] | 1 [0-9] | 2 [0-8]) T (( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="TotalAllocationResult_MarketDocument"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
    <xs:sequence>
      <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
      <xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
      <xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
      <xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
      <xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
      <xs:element name="domain.mRID" type="AreaID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
      <xs:element name="TimeSeries" type="TimeSeries" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
      <xs:element name="NoBid_TimeSeries"
type="NoBidAuction_TimeSeries" minOccurs="0" maxOccurs="unbounded"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.NoBid_TimeSeries"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```



## 7.9 ImplicitAuctionResult\_MarketDocument schema

### 7.9.1 Schema Structure

Figure 35 and Figure 36 provide the structure of the schema.



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Figure 35 – ImplicitAuctionResult\_MarketDocument XML schema structure – 1/2

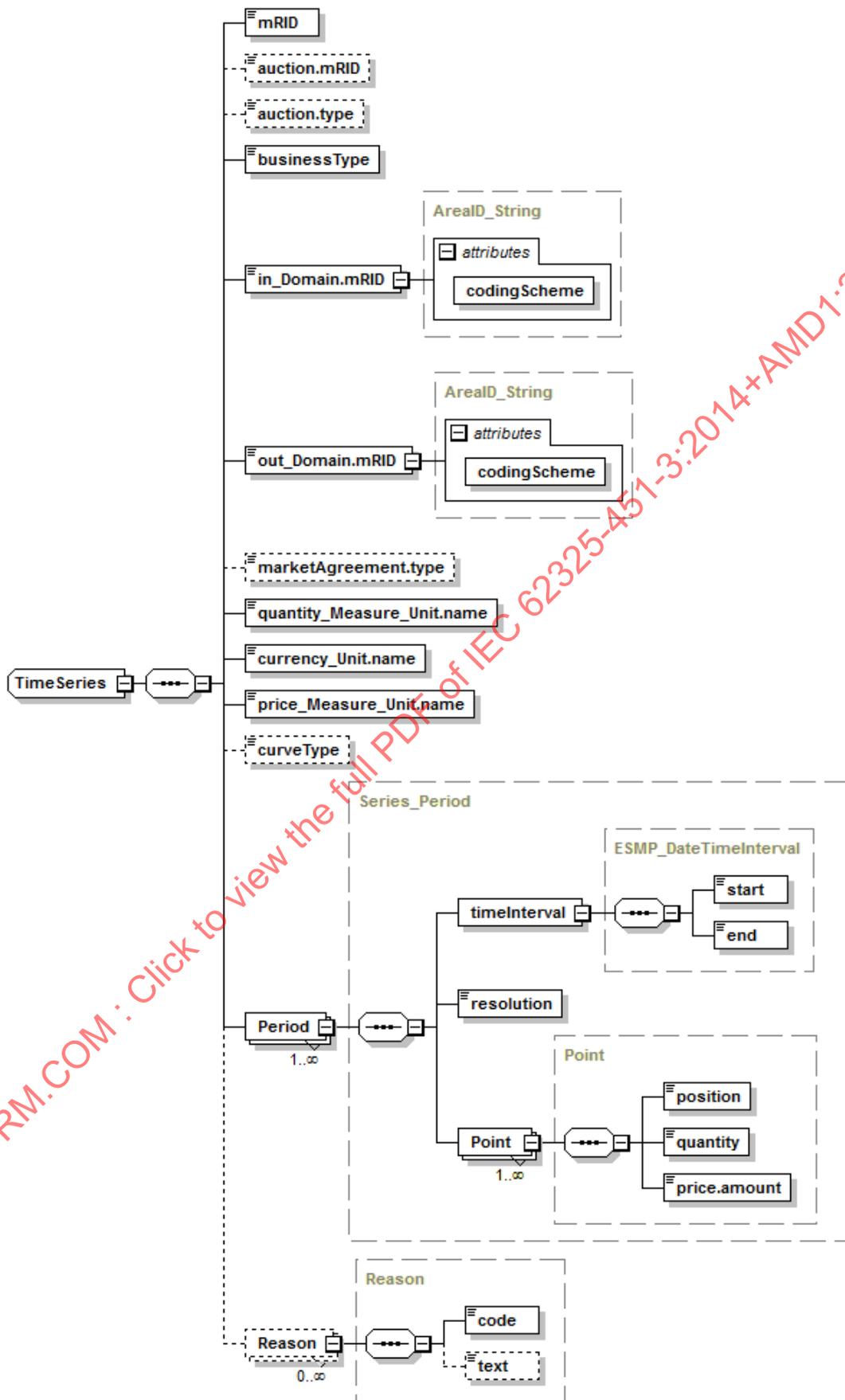


Figure 36 – ImplicitAuctionResult\_MarketDocument XML schema structure – 2/2

## 7.9.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:implicitauctiondocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:implicitauctiondocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="ImplicitAuctionResult_MarketDocument"
type="ImplicitAuctionResult_MarketDocument"/>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID String-base">
        <xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:simpleType name="MarketRoleKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
      <xs:pattern value="((( [0-9]{4} ) [ - ] ( ( [13578] | 1 [02] ) [ - ] ( [01-9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ - ] ( ( [0469] ) | ( 11 ) ) [ - ] ( [01-9] | [12] [0-9] | 30 ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048] | [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-9] [0-9] [13579] [26] ) [ - ] ( 02 ) [ - ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [1235679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ - ] ( 02 ) [ - ] ( 0 [1-9] | 1 [0-9] | 2 [0-8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z ) "/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AreaID String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="18"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```



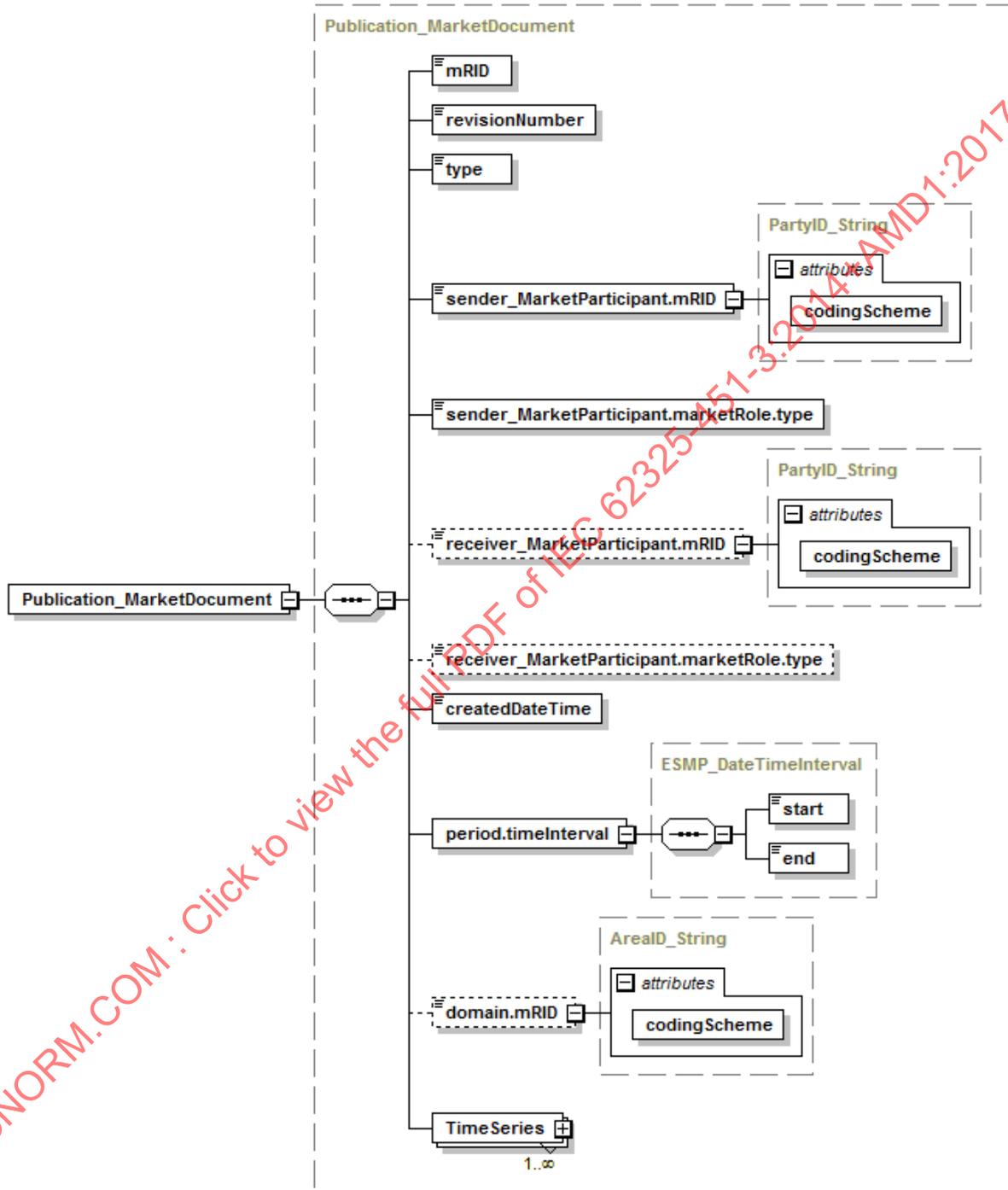
```
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="TimeSeries" type="TimeSeries" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
  <xs:restriction base="xs:decimal">
    <xs:totalDigits value="17"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
  <xs:sequence>
    <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
    <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
    <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="xs:string">
    <xs:maxLength value="512"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
  <xs:sequence>
    <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
    <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
  <xs:sequence>
    <xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
    <xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
    <xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:simpleType name="AuctionKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
  <xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
  <xs:sequence>
    <xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
    <xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
    <xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
    <xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
    <xs:element name="marketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
    <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="1" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
    <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
    <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
    <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
    <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawSDL:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

## 7.10 Publication\_MarketDocument schema

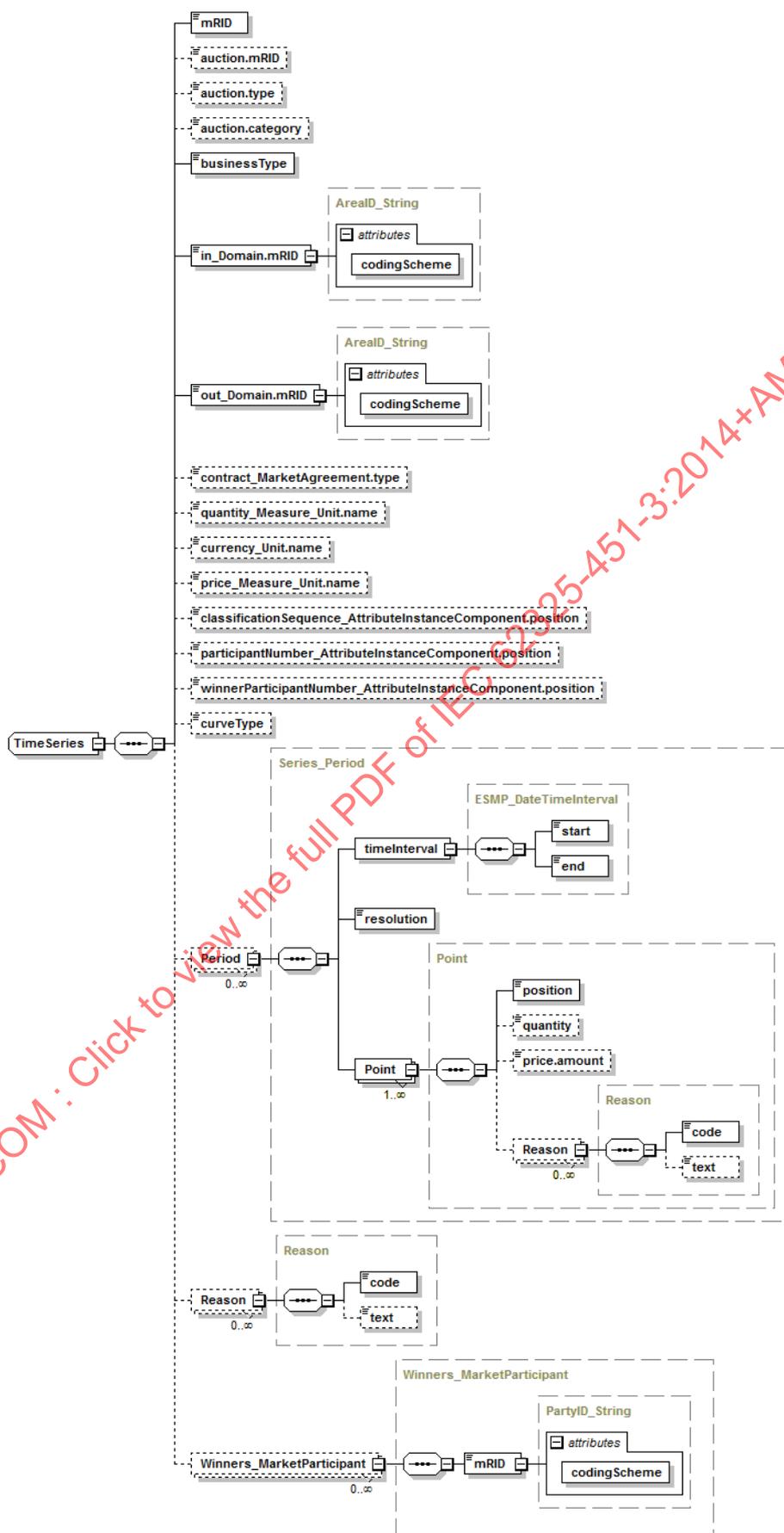
### 7.10.1 Schema Structure

Figure 37 and Figure 38 provide the structure of the schema.



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Figure 37 – Publication\_MarketDocument XML schema structure – 1/2



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Figure 38 – Publication\_MarketDocument XML schema structure – 2/2

## 7.10.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:publicationdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Publication_MarketDocument"
type="Publication_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Price.amount"/>
      <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point.Reason"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:pattern value="[1-9]([0-9]){0,2}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MessageKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="16"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
      <xs:extension base="PartyID_String-base">
```

```
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:dateTime">
<xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-9]|30))T((([01][0-
9]|2[0-3]):[0-5][0-9]:[0-5][0-
9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][048]
|[02468][048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9]:[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][
2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|02468)[123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9])Z)"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="18"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:simpleContent>
<xs:extension base="AreaID_String-base">
<xs:attribute name="codingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="YMDHM_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
<xs:restriction base="xs:string">
<xs:pattern value="((([0-9]{4})[\-](0[13578]|1[02])[\-](0[1-
9]|[12][0-9]|3[01])|([0-9]{4})[\-]((0[469])|(11))[\-](0[1-9]|[12][0-9]|30))T((([01][0-
9]|2[0-3]):[0-5][0-
9])Z)|(((13579)[26][02468][048]|13579)[01345789](0)[48]|13579)[01345789][2468][048]
|[02468][048][02468][048]|02468)[1235679](0)[48]|02468)[1235679][2468][048]|0-
9][0-9][13579][26])[\-](02)[\-](0[1-9]|1[0-9]|2[0-9])T((([01][0-9]|2[0-3]):[0-5][0-
9])Z)|(((13579)[26][02468][1235679]|13579)[01345789](0)[01235679]|13579)[01345789][
2468][1235679]|02468)[048][02468][1235679]|02468)[1235679](0)[01235679]|02468)[123
5679][2468][1235679]|0-9][0-9][13579][01345789])[\-](02)[\-](0[1-9]|1[0-9]|2[0-
8])T((([01][0-9]|2[0-3]):[0-5][0-9])Z)"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ESMP_DateTimeInterval"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTimeInterval">
<xs:sequence>
<xs:element name="start" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.start"/>
<xs:element name="end" type="YMDHM_DateTime" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#DateTimeInterval.end"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Publication_MarketDocument"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketDocument">
<xs:sequence>
```

```
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="revisionNumber" type="ESMPVersion_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.revisionNumber"/>
<xs:element name="type" type="MessageKind_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Document.type"/>
<xs:element name="sender_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="sender_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="receiver_MarketParticipant.mRID"
type="PartyID_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="receiver_MarketParticipant.marketRole.type"
type="MarketRoleKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketRole.type"/>
<xs:element name="createdDateTime" type="ESMP_DateTime"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Document.createdDateTime"/>
<xs:element name="period.timeInterval"
type="ESMP_DateTimeInterval" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.timeInterval"/>
<xs:element name="domain.mRID" type="AreaID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="TimeSeries" type="TimeSeries" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.TimeSeries"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ReasonCodeTypeList"/>
</xs:simpleType>
<xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="xs:string">
<xs:maxLength value="512"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
<xs:sequence>
<xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
<xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>

```

```
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="AuctionKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:AuctionTypeList"/>
</xs:simpleType>
<xs:simpleType name="Category_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CategoryTypeList"/>
</xs:simpleType>
<xs:simpleType name="BusinessKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="auction.type" type="AuctionKind_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.type"/>
<xs:element name="auction.category" type="Category_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Auction.category"/>
<xs:element name="businessType" type="BusinessKind_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID_String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="contract_MarketAgreement.type"
type="CapacityContractKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
<xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
<xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
<xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
```

```
<xs:element
name="classificationSequence_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
  <xs:element
name="participantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
    <xs:element
name="winnerParticipantNumber_AttributeInstanceComponent.position" type="xs:integer"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#AttributeInstanceComponent.position"/>
      <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
        <xs:element name="Period" type="Series_Period" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
          <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
            <xs:element name="Winners_MarketParticipant"
type="Winners_MarketParticipant" minOccurs="0" maxOccurs="unbounded"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Winners_MarketParticipant"/>
          </xs:sequence>
        </xs:complexType>
      <xs:complexType name="Winners_MarketParticipant"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#MarketParticipant">
        <xs:sequence>
          <xs:element name="mRID" type="PartyID_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
        </xs:sequence>
      </xs:complexType>
    </xs:schema>
```

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## 7.11 Rights\_MarketDocument schema

### 7.11.1 Schema Structure

Figure 39 and Figure 40 provide the structure of the schema.

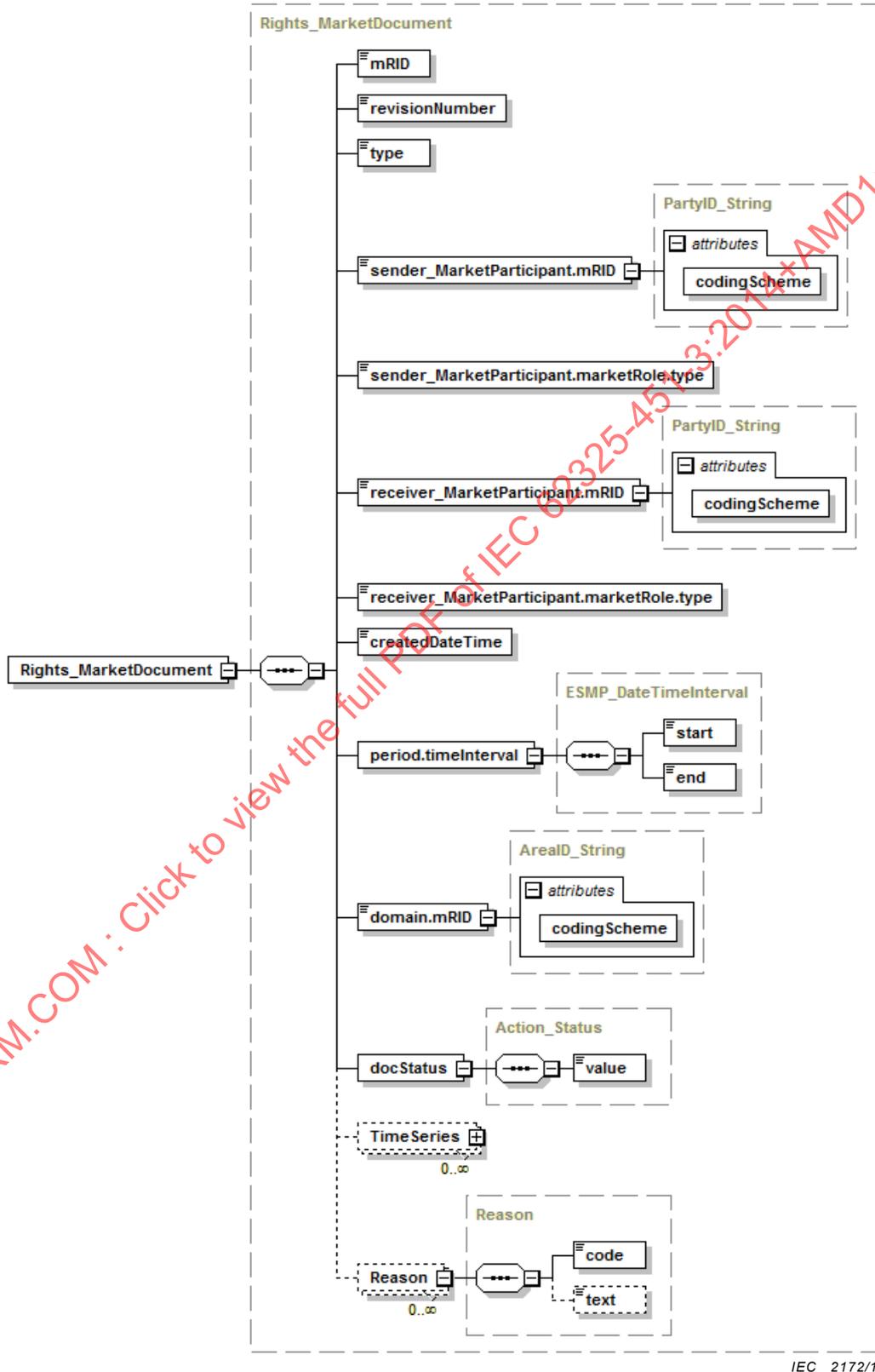


Figure 39 – Rights\_MarketDocument XML schema structure – 1/2

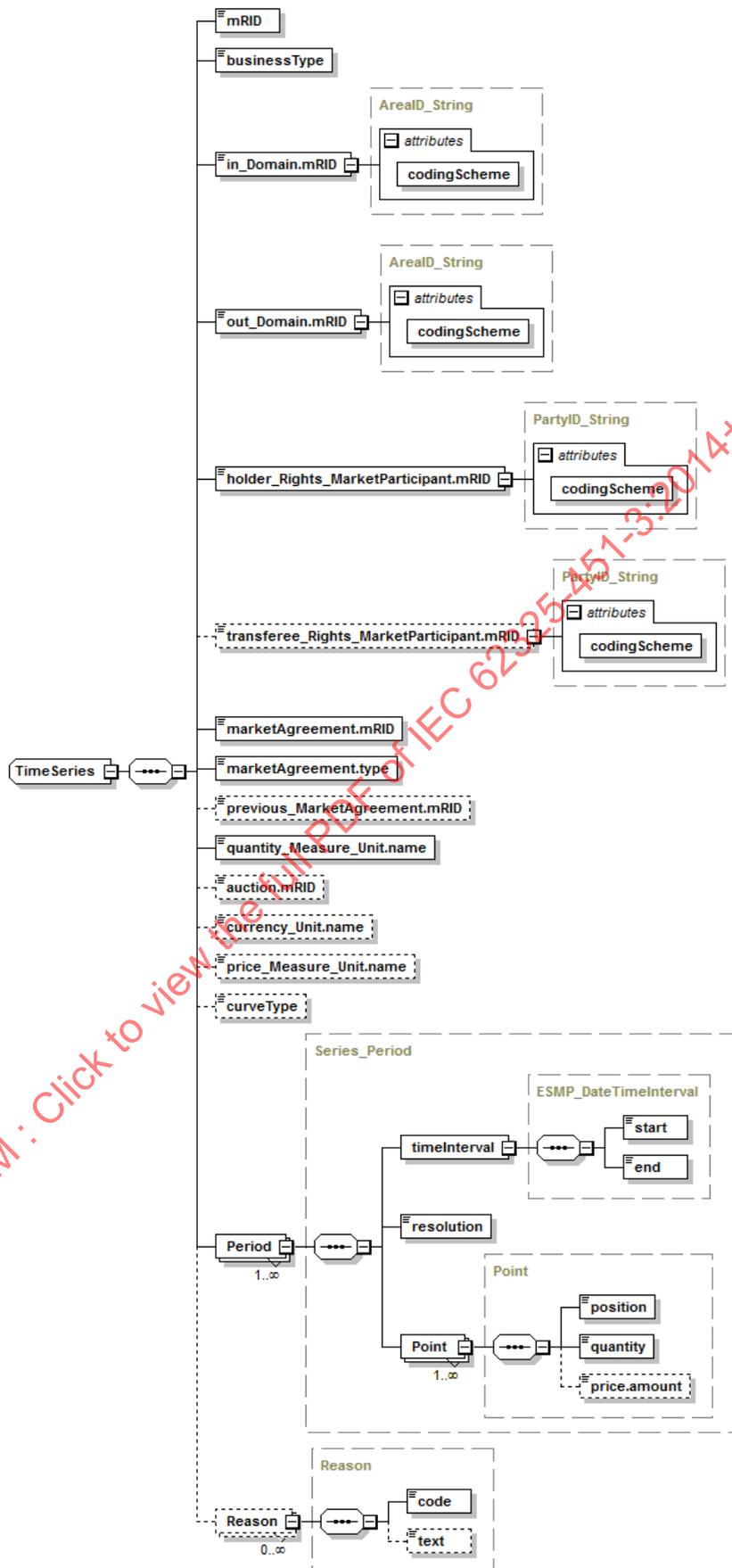


Figure 40 – Rights\_MarketDocument XML schema structure – 2/2

## 7.11.2 Schema description

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:cl="urn:entsoe.eu:wgedi:codelists"
xmlns:sawsdl="http://www.w3.org/ns/sawsdl" xmlns="urn:iec62325.351:tc57wg16:451-
3:rightsdocument:7:0" xmlns:cimp="http://www.iec.ch/cimprofile"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="urn:iec62325.351:tc57wg16:451-3:rightsdocument:7:0"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:entsoe.eu:wgedi:codelists" schemaLocation="urn-
entsoe-eu-wgedi-codelists.xsd"/>
  <xs:element name="Rights_MarketDocument" type="Rights_MarketDocument"/>
  <xs:simpleType name="Position_Integer"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Integer">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Amount_Decimal"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Decimal">
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="17"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Point"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Point">
    <xs:sequence>
      <xs:element name="position" type="Position_Integer" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.position"/>
      <xs:element name="quantity" type="xs:decimal" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Point.quantity"/>
      <xs:element name="price.amount" type="Amount_Decimal"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Price.amount"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ReasonCode_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:ReasonCodeTypeList"/>
  </xs:simpleType>
  <xs:simpleType name="ReasonText_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="512"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Reason"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Reason">
    <xs:sequence>
      <xs:element name="code" type="ReasonCode_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.code"/>
      <xs:element name="text" type="ReasonText_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Reason.text"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
      <xs:maxLength value="35"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ESMPVersion_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
```

```

        <xs:pattern value="[1-9] ([0-9]) {0,2}"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MessageKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:MessageTypeList"/>
</xs:simpleType>
<xs:simpleType name="PartyID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
        <xs:maxLength value="16"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="PartyID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
        <xs:extension base="PartyID_String-base">
            <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="MarketRoleKind_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:RoleTypeList"/>
</xs:simpleType>
<xs:simpleType name="ESMP_DateTime"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#DateTime">
    <xs:restriction base="xs:dateTime">
        <xs:pattern value="((( [0-9] {4} ) [ \- ] ( 0 [13578] | 1 [02] ) [ \- ] ( 0 [1-
9] | [12] [0-9] | 3 [01] ) | ( [0-9] {4} ) [ \- ] ( ( 0 [469] ) | ( 1 [1] ) [ \- ] ( 0 [1-9] | [12] [0-9] | 30 ) ) ) T ( ( [01] [0-
9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-
9] ) Z ) | ( ( [13579] [26] [02468] [048] | [13579] [01345789] ( 0 ) [48] | [13579] [01345789] [2468] [048]
| [02468] [048] [02468] [048] | [02468] [1235679] ( 0 ) [48] | [02468] [1235679] [2468] [048] | [0-
9] [0-9] [13579] [26] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-9] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-
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9] ) Z ) | ( ( [13579] [26] [02468] [1235679] | [13579] [01345789] ( 0 ) [01235679] | [13579] [01345789] [
2468] [1235679] | [02468] [048] [02468] [1235679] | [02468] [1235679] ( 0 ) [01235679] | [02468] [123
5679] [2468] [1235679] | [0-9] [0-9] [13579] [01345789] ) [ \- ] ( 02 ) [ \- ] ( 0 [1-9] | 1 [0-9] | 2 [0-
8] ) ) T ( ( [01] [0-9] | 2 [0-3] ) : [0-5] [0-9] : [0-5] [0-9] ) Z )"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AreaID_String-base"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="xs:string">
        <xs:maxLength value="18"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="AreaID_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:simpleContent>
        <xs:extension base="AreaID_String-base">
            <xs:attribute name="CodingScheme"
type="cl:CodingSchemeTypeList" use="required"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="Status_String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
    <xs:restriction base="cl:StatusTypeList"/>
</xs:simpleType>
<xs:complexType name="Action_Status"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Status">
    <xs:sequence>
        <xs:element name="value" type="Status_String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Status.value"/>
    </xs:sequence>
</xs:complexType>

```



```
<xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#MarketDocument.Reason"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Series_Period"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Period">
<xs:sequence>
<xs:element name="timeInterval" type="ESMP_DateTimeInterval"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Period.timeInterval"/>
<xs:element name="resolution" type="xs:duration" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.resolution"/>
<xs:element name="Point" type="Point" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#Period.Point"/>
</xs:sequence>
</xs:complexType>
<xs:simpleType name="BusinessKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:BusinessTypeList"/>
</xs:simpleType>
<xs:simpleType name="CapacityContractKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:ContractTypeList"/>
</xs:simpleType>
<xs:simpleType name="MeasurementUnitKind String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:UnitOfMeasureTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurrencyCode String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurrencyTypeList"/>
</xs:simpleType>
<xs:simpleType name="CurveType String"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#String">
<xs:restriction base="cl:CurveTypeList"/>
</xs:simpleType>
<xs:complexType name="TimeSeries"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#TimeSeries">
<xs:sequence>
<xs:element name="mRID" type="ID String" minOccurs="1"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="businessType" type="BusinessKind String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.businessType"/>
<xs:element name="in_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="out_Domain.mRID" type="AreaID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="holder_Rights_MarketParticipant.mRID"
type="PartyID String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="transferee_Rights_MarketParticipant.mRID"
type="PartyID String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.mRID" type="ID String"
minOccurs="1" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
<xs:element name="marketAgreement.type"
type="CapacityContractKind String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Document.type"/>
```

```
<xs:element name="previous_MarketAgreement.mRID" type="ID_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#IdentifiedObject.mRID"/>
  <xs:element name="quantity_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="1" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="auction.mRID" type="ID_String" minOccurs="0"
maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#IdentifiedObject.mRID"/>
  <xs:element name="currency_Unit.name" type="CurrencyCode_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#Unit.name"/>
  <xs:element name="price_Measure_Unit.name"
type="MeasurementUnitKind_String" minOccurs="0" maxOccurs="1"
sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-cim16#Unit.name"/>
  <xs:element name="curveType" type="CurveType_String"
minOccurs="0" maxOccurs="1" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-
schema-cim16#TimeSeries.curveType"/>
  <xs:element name="Period" type="Series_Period" minOccurs="1"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Period"/>
  <xs:element name="Reason" type="Reason" minOccurs="0"
maxOccurs="unbounded" sawsdl:modelReference="http://iec.ch/TC57/2013/CIM-schema-
cim16#TimeSeries.Reason"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

### CADRE POUR LES COMMUNICATIONS POUR LE MARCHÉ DE L'ÉNERGIE –

#### Partie 451-3: Processus métier d'attribution de la capacité de transport (vente aux enchères explicite ou implicite) et modèles contextuels pour le marché européen

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Cette version consolidée de l'IEC 62325-451-3 porte le numéro d'édition 1.1. Elle comprend la première édition (2014-07) [documents 57/1457/FDIS et 57/1480/RVD] et son amendement 1 (2017-05) [documents 57/1755/CDV et 57/1825/RVC]. Le contenu technique est identique à celui de l'édition de base et à son amendement.

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La Norme internationale IEC 62325-451-3 a été établie par le comité d'études 57 de l'IEC: Gestion des systèmes de puissance et échanges d'informations associés.

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62325, publiées sous le titre général *Cadre pour les communications pour le marché de l'énergie*, peut être consultée sur le site web de l'IEC.

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- remplacée par une édition révisée, ou
- amendée.

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## INTRODUCTION

La présente norme fait partie de la série de normes IEC 62325 qui définissent des protocoles pour les communications des marchés de l'énergie déréglementés.

Le principal objectif de la série de normes IEC 62325 est de produire des normes destinées à faciliter l'intégration de logiciels d'application pour le marché, développés de façon indépendante par différents fournisseurs, dans un système de gestion de marché, et entre des systèmes de gestion de marché et des systèmes participant au marché. Cela s'effectue par la définition d'échanges de messages pour permettre à ces applications ou systèmes d'accéder aux données publiques et d'échanger des informations, indépendamment de la façon dont ces informations sont représentées en interne.

Le modèle d'information commun (CIM, common information model) spécifie la base de la sémantique pour cet échange de messages.

Le Profil de marché de style européen se base sur différentes parties de la norme IEC relative au modèle CIM. Le modèle CIM est défini dans une série de normes, c'est-à-dire l'IEC 62325-301, l'IEC 61970-301 et l'IEC 61968-11.

Le présent document fournit, pour le Profil de marché de style européen, le processus métier d'attribution de la capacité de transport par vente aux enchères explicite ou implicite qui peut être utilisé dans le marché de style européen. Cette norme se basait à l'origine sur les travaux de l'Association européenne des gestionnaires de réseaux de transport d'électricité (European Transmission System Operators (ETSO)), du groupe de travail EDI (Échange de données informatisé) puis sur les travaux du Groupe de Travail EDI de l'Association des gestionnaires de réseaux électriques européens (European Network of Transmission System Operators (ENTSO-E)).

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## **CADRE POUR LES COMMUNICATIONS POUR LE MARCHÉ DE L'ÉNERGIE –**

### **Partie 451-3: Processus métier d'attribution de la capacité de transport (vente aux enchères explicite ou implicite) et modèles contextuels pour le marché européen**

#### **1 Domaine d'application**

La présente partie de l'IEC 62325-451 spécifie un paquetage pour le processus métier d'attribution de la capacité de transport par ventes aux enchères explicites ou implicites et les modèles contextuels de document, modèles d'assemblage et schéma XML associés à utiliser sur les marchés de style européen.

La présente Norme internationale est basée sur le modèle contextuel de marché de style européen (IEC 62325-351). Le processus métier de programmation couvert par la présente Norme internationale est décrit à l'Article 5.

Les composants de base agrégés (ACC – aggregate core components) pertinents définis dans l'IEC 62325-351 ont été contextualisés en entités d'information métier agrégées (ABIE – aggregated business information entities) afin de satisfaire aux exigences de ces processus métier.

Les ABIE contextualisées ont été assemblées dans les modèles contextuels de document pertinents.

Des modèles d'assemblage associés et un schéma XML pour l'échange des informations sur l'attribution de la capacité de transport entre les participants au marché sont générés automatiquement à partir des modèles contextuels de document assemblés.

#### **2 Références normatives**

Les documents suivants sont cités en référence de manière normative, en intégralité ou en partie, dans le présent document et sont indispensables pour son application. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 62325-351, *Cadre pour les communications pour le marché de l'énergie – Partie 351: Profil de modèle d'échange pour un système de gestion de marché de style européen basé sur le CIM*

IEC 62325-450:2013, *Cadre pour les communications pour le marché de l'énergie – Partie 450: Règles de modélisation de profils et de contextes*

IEC 62325-451-1, *Cadre pour les communications pour le marché de l'énergie – Partie 451-1: Processus métier d'accusé de réception et modèle contextuel pour le marché européen CIM*

IEC 62325-451-2, *Cadre pour les communications pour le marché de l'énergie – Partie 451-2: Processus métier de programmation et modèle contextuel pour le marché européen CIM*

### 3 Termes et définitions

Pour les besoins du présent document, les termes et définitions de l'IEC 61970-2 ainsi que les suivants s'appliquent.

NOTE Se référer à l'IEC 60050, Vocabulaire Electrotechnique International, pour les définitions du glossaire général.

#### 3.1

##### **capacité déjà attribuée**

##### **AAC**

quantité totale des droits de capacité de transport attribués, qu'il s'agisse de capacité ou de programmes d'échange selon la méthode d'attribution

Note 1 à l'article: L'abréviation "AAC" est dérivée du terme anglais développé correspondant "already allocated capacity".

#### 3.2

##### **entité d'information métier agrégée**

##### **ABIE**

réutilisation d'un composant de base agrégé (ACC) dans un secteur d'activité spécifié

Note 1 à l'article: L'abréviation "ABIE" est dérivée du terme anglais développé correspondant "aggregate business information entity".

[SOURCE: ISO/TS 15000-5:2005, Article 9, modifiée – modification de la définition]

#### 3.3

##### **composant de base agrégé**

##### **ACC**

collection d'informations métier connexes qui, rassemblées, expriment une signification métier particulière, indépendante de tout contexte métier spécifique

Note 1 à l'article: Exprimé en termes de modélisation, il représente une classe d'objets, indépendante de tout contexte métier spécifique.

Note 2 à l'article: L'abréviation "ACC" est dérivée du terme anglais développé correspondant "aggregate core component".

[SOURCE: ISO/TS 15000-5:2005, Article 9, modifiée – modification de la définition]

#### 3.4

##### **interface de programmation d'application**

##### **API**

ensemble des fonctions publiques qu'offre un composant exécutable d'application pour être utilisées par d'autres composants exécutables d'application

Note 1 à l'article: L'abréviation "API" est dérivée du terme anglais développé correspondant "application program interface".

#### 3.5

##### **modèle d'assemblage (assembly model)**

modèle de préparation de l'information dans un contexte métier en vue de son intégration dans des documents électroniques pour l'échange de données

---

<sup>1</sup> A l'étude.

### 3.6

#### **capacité de transport disponible**

##### **ATC**

partie de NTC qui reste disponible, après chaque phase de procédure d'attribution, pour des activités commerciales ultérieures

Note 1 à l'article: L'ATC est obtenue par l'équation suivante:  $ATC = NTC - AAC$ .

Note 2 à l'article: L'abréviation "ATC" est dérivée du terme anglais développé correspondant "available transmission capacity".

### 3.7

#### **basedOn** (*établi sur*)

#### **IsBasedOn** (*est établi sur*)

utilisation d'un artéfact restreint selon les exigences d'un contexte métier spécifique

[SOURCE: IEC 62325-450:2013, 3.4]

### 3.8

#### **offre**

demande relative à une capacité donnée à un prix donné faite par un négociant de capacité et correspondant à une seule série chronologique dans un document d'offre

### 3.9

#### **contexte métier**

description formelle d'une situation métier spécifique telle qu'identifiée par les valeurs d'un ensemble de catégories de contexte, permettant une différenciation unique de situations métier différentes

[SOURCE: ONU/Cefact, Spécification technique de méthodologie contextuelle unifiée]

### 3.10

#### **vente aux enchères explicite**

méthode de gestion de congestion dans le cadre de laquelle seuls les droits de capacité de transport d'énergie sont mis aux enchères

### 3.11

#### **profil de marché de style européen**

##### **ESMP**

profil de marché de style européen, qui fait l'objet de la présente Norme internationale

Note 1 à l'article: L'abréviation "ESMP" est dérivée du terme anglais développé correspondant "European style market profile".

### 3.12

#### **vente aux enchères implicite**

méthode de gestion de congestion dans le cadre de laquelle la capacité de transport et l'énergie électrique sont incluses de manière implicite dans l'échange commercial sur le marché

### 3.13

#### **modèle d'information**

représentation de concepts, relations, contraintes, règles et opérations permettant de spécifier une sémantique de données pour un domaine de discours donné

Note 1 à l'article: Le modèle d'information peut fournir une structure partageable, stable et organisée des exigences d'information relatives au contexte de domaine.

[SOURCE: IEC 62325-450:2013, 3.6]

### 3.14

#### **système de gestion de marché**

##### **MMS**

système informatique comprenant une plate-forme logicielle offrant les services de support de base et un ensemble d'applications qui offrent les fonctionnalités requises pour une gestion efficace du marché de l'électricité

Note 1 à l'article: Ces systèmes informatiques intégrés à un marché de l'électricité peuvent comprendre un service de support à l'attribution de la capacité, à la planification de l'énergie, aux services auxiliaires ou autres, à l'exploitation en temps réel et aux règlements en temps réel.

Note 2 à l'article: L'abréviation "MMS" est dérivée du terme anglais développé correspondant "market management system".

### 3.15

#### **entité d'information métier pour les messages**

##### **MBIE**

agrégation d'un ensemble d'ABIE qui respecte un ensemble défini de règles d'assemblage

Note 1 à l'article: L'abréviation "MBIE" est dérivée du terme anglais développé correspondant "message business information entity".

### 3.16

#### **capacité de transfert nette**

##### **NTC**

échange maximal entre deux zones, compatible avec les normes de sécurité applicables dans les deux zones, et tenant compte des incertitudes techniques sur les conditions ultérieures du réseau

Note 1 à l'article:  $NTC = TTC - TRM$ .

Note 2 à l'article: L'abréviation "NTC" est dérivée du terme anglais développé correspondant "net transfer capacity".

### 3.17

#### **nomination**

déclaration ferme des droits de capacité de transport à utiliser

### 3.18

#### **profil**

caractère de base de l'ensemble des informations exigées pour satisfaire à un environnement spécifique

[SOURCE: IEC 62325-450:2013, 3.7]

### 3.19

#### **droits de capacité de transport**

droits d'utilisation d'une certaine quantité de capacité de transport à une frontière potentiellement congestionnée entre des zones fonctionnelles de marché

### 3.20

#### **marge de fiabilité de transport**

##### **TRM**

marge de sécurité qui tient compte des incertitudes liées aux valeurs de TTC calculées dues à des écarts non prévus de flux physiques pendant l'exploitation en raison du fonctionnement du dispositif de régulation de la fréquence de charge ou à des échanges d'urgence entre gestionnaires de réseau pour compenser une situation de déséquilibre non prévue en temps réel

Note 1 à l'article: L'abréviation "TRM" est dérivée du terme anglais développé correspondant "transmission reliability margin".

### 3.21

#### **capacité de transfert totale**

#### **TTC**

programme d'échange maximal entre deux zones, compatible avec les normes de sécurité opérationnelles applicables à chaque réseau, si les modèles ultérieurs de conditions, de production et de charge du réseau sont parfaitement connus à l'avance

Note 1 à l'article: L'abréviation "TTC" est dérivée du terme anglais développé correspondant "total transfer capacity".

## **4 Concepts de base du modèle contextuel de document et du modèle d'assemblage de messages**

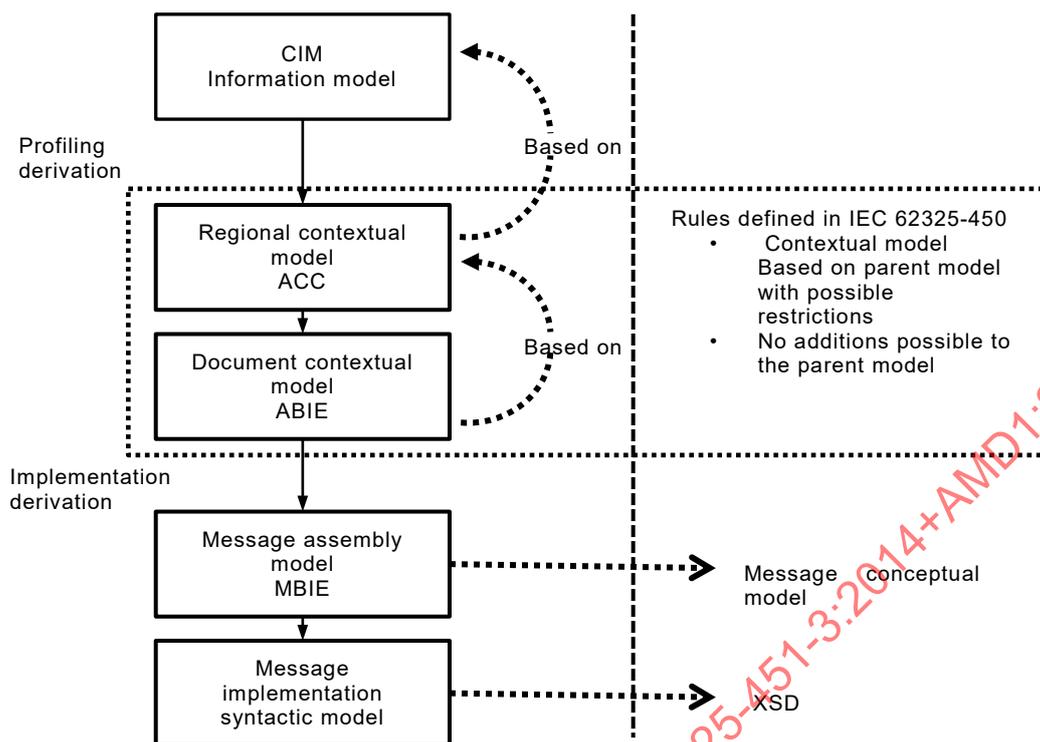
### **4.1 Présentation**

L'IEC 62325-450 définit un ensemble de profils du modèle d'information commun (CIM – common information model) qui suit un cadre de modélisation en couches comme indiqué à la Figure 1 à partir du modèle d'information commun (CIM) jusqu'aux modèles contextuels régionaux et leurs documents contextualisés ultérieurs destinés à l'échange d'information, l'étape finale étant la spécification de messages pour l'échange d'information.

Les modèles contextuels régionaux constituent les composants de base nécessaires à l'élaboration des documents électroniques pour l'échange d'informations. Ceci est défini dans le modèle contextuel de marché de style européen (IEC 62325-351). Ces composants de base sont également appelés composants de base agrégés (ACC).

Un modèle contextuel de document est basé sur une spécification particulière des exigences métier et est établi à partir de la contextualisation des ACC que l'on peut trouver dans le modèle contextuel dans un marché de style européen. Les ACC contextualisés sont appelés, à ce stade, entités d'information métier agrégées (ABIE). Ces ABIE sont les constructions regroupées dans un document électronique spécifique afin de satisfaire aux exigences informatives indiquées dans la spécification des exigences métier. La transformation d'un ACC en une ABIE doit observer les règles définies dans l'IEC 62325-450.

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IEC 2134/14

**Légende**

Anglais	Français
CIM Information model	Modèle d'information CIM
Profiling derivation	Dérivation d'établissement de profils
Based on	Etabli sur
Regional contextual model ACC	Modèle contextuel régional ACC
Document contextual model ABIE	Modèle contextuel de document ABIE
Rules defined in IEC 62325-450	Règles définies dans l'IEC 62325-450
Contextual model Based on parent model with possible restrictions	Modèle contextuel Etabli sur Modèle parent avec restrictions possibles
No additions possible to the parent model	Ajout impossible au modèle parent
Implementation derivation	Dérivation de mise en œuvre
Message assembly model MBIE	Modèle d'assemblage de messages MBIE
Message conceptual model	Modèle conceptuel de message
Message implementation syntactic model	Modèle syntaxique de mise en œuvre de message
XSD	XSD

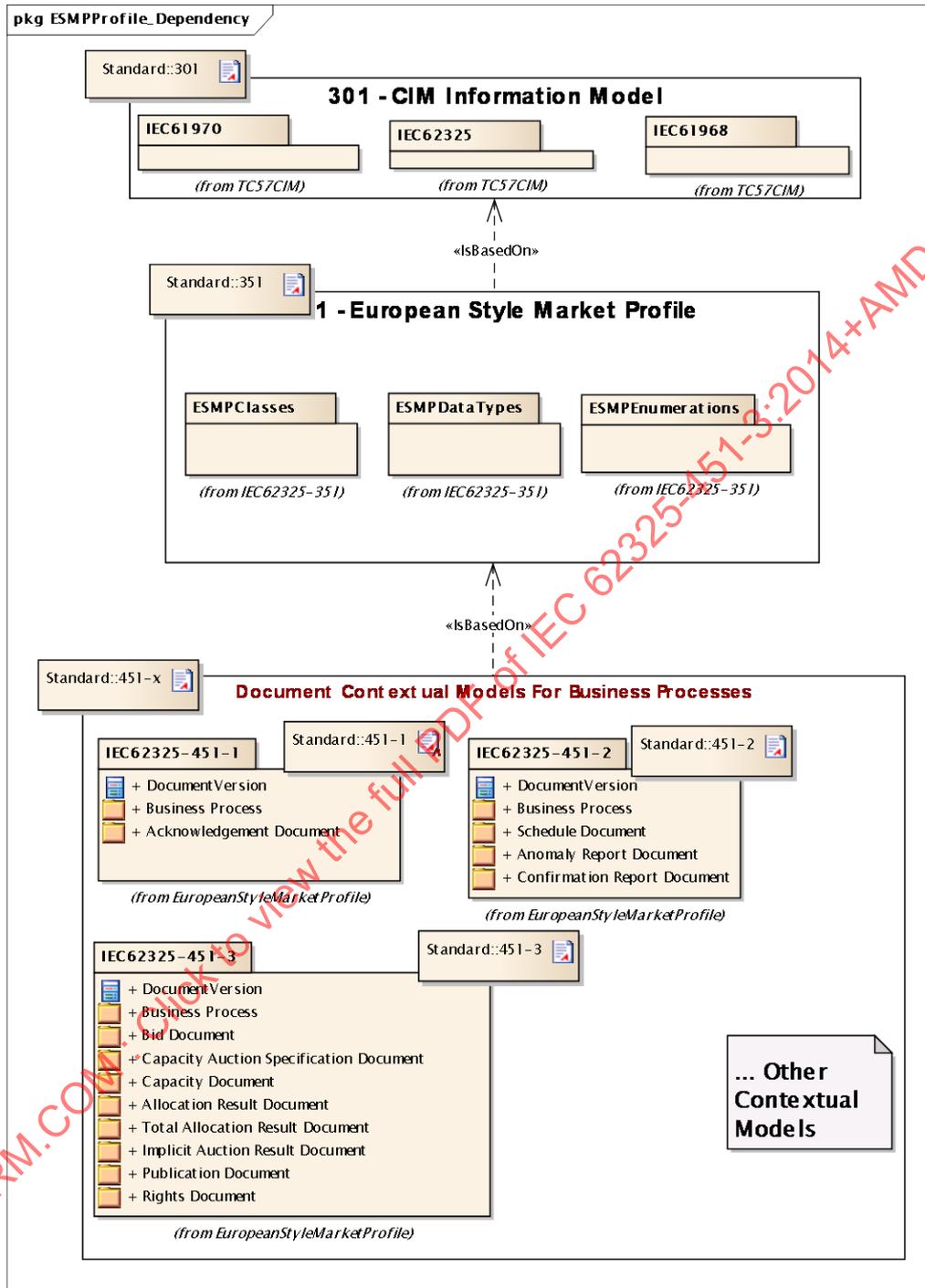
**Figure 1 – Cadre de modélisation défini dans l'IEC 62325-450**

Une fois élaboré un modèle contextuel de document, qui satisfait aux exigences métier, on peut générer automatiquement un modèle d'assemblage de messages à partir de celui-ci. La génération automatique observe les règles définies dans l'IEC 62325-450.

Le schéma XML peut alors être généré automatiquement à partir du modèle d'assemblage de messages. Si nécessaire, une mise en correspondance spécifique peut se produire à ce stade afin de transformer les noms de classes et d'attributs CIM en noms plus adaptés au marché.

#### 4.2 Structure du paquetage du marché de style européen (ESMP)

La structure principale du paquetage du profil de marché de style européen est décrite à la Figure 2.



IEC 2135/14

#### Légende

Anglais	Français
CIM Information Model	Modèle d'information CIM
European Style Market Profile	Profil de marché de style européen
Document Contextual Models For Business Processes	Modèles contextuels de document pour processus métier
From Contextual Documents	De documents contextuels

Anglais	Français
From European style market profil	De profil de marché de style européen
Other Contextual Models	Autres modèles contextuels

**Figure 2 – Présentation de la dépendance du profil de marché de style européen**

Pour chaque processus métier, un paquetage de processus métier est décrit dans une norme IEC 62325-451-x (x compris entre 1 et n). Un paquetage de processus métier contient:

- Le modèle contextuel de document (ABIE) et le modèle d'assemblage de messages (MBIE) généré automatiquement pour chaque document électronique requis pour permettre la réalisation du processus métier. Chaque document représente un sous-modèle contextuel établi par restriction à partir du profil de marché de style européen.
- Le schéma XML du document métier généré automatiquement à partir du modèle d'assemblage de messages.

Le profil de marché de style européen (ESMP), tel que défini dans l'IEC 62325-351, fournit les composants de base que l'on peut utiliser dans une norme IEC 62325-451-x. Toutes les ABIE doivent être "établies sur" (based on) les composants de base définis dans l'IEC 62325-351:

- **ESMPClasses:** Définissent toutes les classes semi-contextuelles du profil de marché de style européen établies par restriction à partir du modèle d'information CIM.
- **ESMPDataTypes:** Définissent tous les types de données (Datatypes) de base utilisés au sein des classes ESMP.

Tous les composants de base utilisés dans chaque structure de document électronique ont été harmonisés et centralisés dans le profil de marché de style européen. Ces composants de base sont par conséquent les blocs de construction de base à partir desquels sont établies les ABIE de document électronique.

#### **4.3 Du profil de marché de style européen au modèle contextuel de document**

Le modèle contextuel de document pour un processus métier donné est construit par un analyste de l'information qui identifie toutes les exigences informatives nécessaires pour satisfaire au processus métier.

Une fois les exigences informatives identifiées, l'analyste de l'information identifie les ACC associés disponibles dans le profil de marché de style européen et les contextualise afin de satisfaire aux exigences informatives. Cette étape de contextualisation génère un ensemble d'entités d'information métier agrégées (ABIE).

Dans une étape finale, l'analyste de l'information regroupe les ABIE dans un paquetage spécifique de modèles contextuels de document afin d'établir un modèle de document satisfaisant aux exigences métier.

#### **4.4 Du modèle contextuel de document au modèle d'assemblage de messages**

Une fois le modèle contextuel de document finalisé, le modèle d'assemblage de messages peut être généré automatiquement.

Tous les modèles contextuels de documents partagent les mêmes composants et types de données de base. Ceux-ci sont définis dans le profil de marché de style européen (IEC 62325-351) et sont contextualisés et affinés dans tous les modèles contextuels de document (série IEC 62325-451-x) qui observent les règles décrites dans l'IEC 62325-450.

#### 4.5 Du modèle d'assemblage au schéma XML

L'étape de modélisation finale applique un ensemble normalisé de critères afin de générer un schéma XML uniforme à partir du modèle d'assemblage. Ce processus de transformation observe les règles définies dans l'IEC 62361-100.

### 5 Processus métier d'attribution de capacité de transport

#### 5.1 Contexte métier global

Les processus métier décrits dans la présente norme s'appliquent aux ventes aux enchères de la capacité de transport et au marché des droits de capacité de transport.

Aucune hypothèse n'est formulée quant au mode de réalisation de la vente aux enchères ni pour ce qui concerne la méthode d'attribution ou les modalités de paiement.

Les ventes aux enchères peuvent être réalisées pour les produits selon la fréquence suivante:

- pluriannuelle,
- annuelle,
- mensuelle,
- hebdomadaire,
- journalière,
- intrajournalière.

L'attribution peut être réalisée selon l'une des méthodes suivantes:

- basée sur le prix avec application d'un prorata (order by price with pro rata),
- principe du premier arrivé, premier servi (first come, first served),
- proportionnelle (pro rata),
- etc.

et les modalités de paiement peuvent prendre différentes formes:

- paiement du montant de l'offre (pay as bid),
- paiement du montant approuvé (pay as cleared),
- pas de modalités de paiement,
- etc.

Il existe deux types différents de ventes aux enchères de capacité de transport, les ventes aux enchères explicites ou implicites. Elles sont présentées dans le cas d'utilisation (*use case*) de la Figure 3.

Le cas d'utilisation "Établir une capacité offerte" est commun aux ventes aux enchères explicites et implicites et concerne la détermination et la publication de la capacité offerte qui peut être attribuée. La capacité de transport disponible est à convenir dès le début entre les gestionnaires de réseau. Une fois la capacité offerte convenue, elle est publiée avec les informations pertinentes qui définissent la vente aux enchères, c'est-à-dire la spécification de vente aux enchères de la capacité de transport.

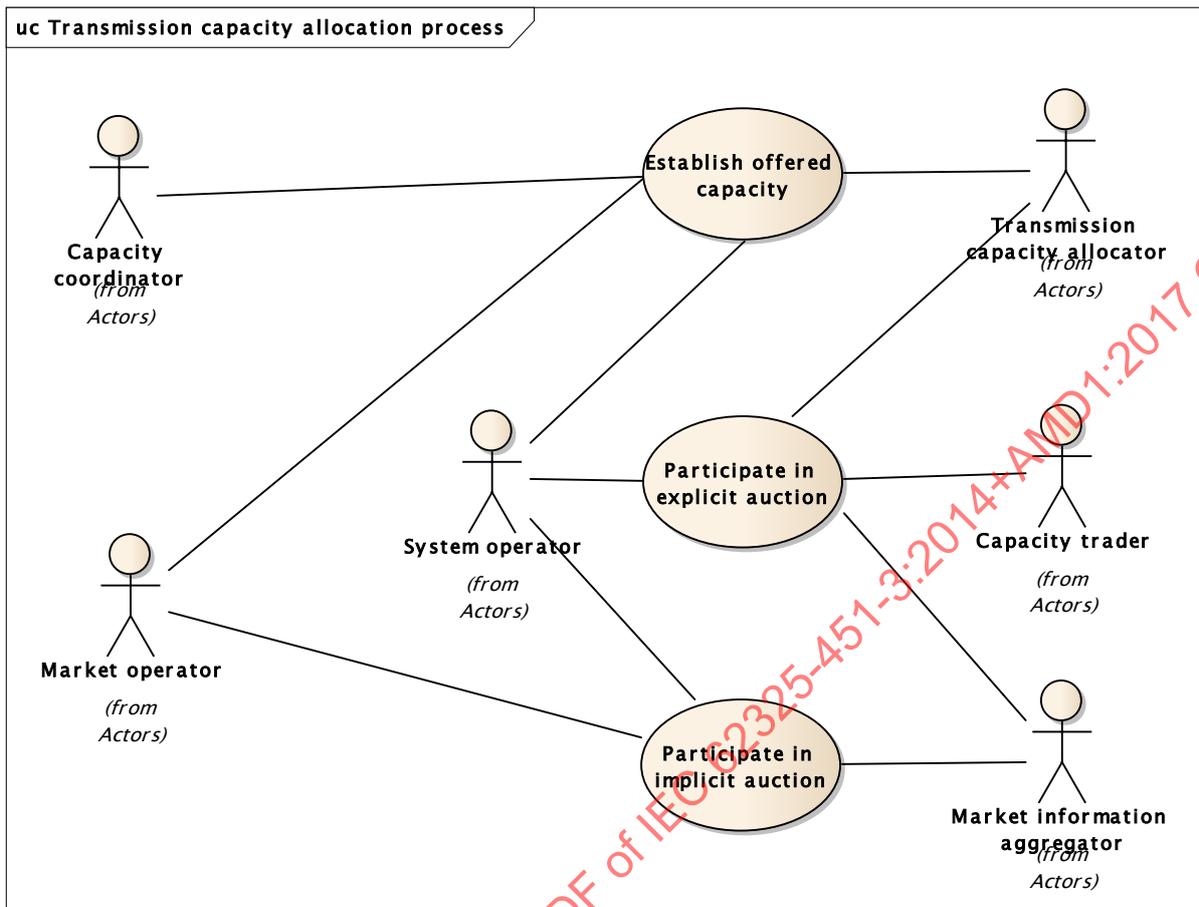
Le cas d'utilisation "Participer à des ventes aux enchères explicites" implique les étapes suivantes:

- La première étape concerne l'activité de soumission et d'attribution proprement dite. Un sous cas d'utilisation de l'activité de soumission et d'attribution peut être l'éventuel

marché secondaire et la négociation des droits de la capacité attribuée entre les négociants de capacité ou les négociants de capacité et les responsables d'échange d'interconnexion. Les principaux acteurs sont le négociant de capacité et l'allocateur de capacité de transport.

- La deuxième étape concerne la nomination, l'activité de déclaration des droits de capacité à long terme, journalière et intrajournalière à utiliser. Ceci implique le responsable d'échange d'interconnexion, le validateur de nomination et le gestionnaire de réseau. Le validateur de nomination s'assure que toutes les nominations présentées sont cohérentes. Pour réaliser ce processus de nomination, il est nécessaire d'utiliser les documents électroniques définis dans l'IEC 62325-451-2.
- La troisième et dernière étape concerne la validation et la confirmation finale de toutes les nominations. Cette étape comprend la mise en correspondance transfrontalière. Les principaux acteurs sont le validateur de nomination et les gestionnaires de réseau.

Le cas d'utilisation "Participer aux ventes à des enchères implicites" implique la publication des valeurs des échanges transfrontaliers avec ou sans prix.



IEC 2136/14

**Légende**

Anglais	Français
Transmission capacity allocation process	Processus d'attribution de la capacité de transport
Capacity coordinator	Coordinateur de capacité
Establish offered capacity	Établir une capacité offerte
Transmission capacity allocator	Allocateur d'attribution de capacité
From actors	À partir des acteurs
Participate in explicit auction	Participer à une vente aux enchères explicite
System operator	Gestionnaire de réseau
Capacity trader	Négociant de capacité
Market operator	Opérateur du marché
Participate in implicit auction	Participer à une vente aux enchères implicite
Market information aggregator	Agrégateur des informations du marché

**Figure 3 – Cas d'utilisation du processus d'attribution de la capacité de transport**

**5.2 Processus Établir une capacité offerte**

Le processus nécessaire pour constituer une spécification de vente aux enchères est déclenché par les gestionnaires de réseau qui fournissent au coordinateur de capacité toutes les informations nécessaires au calcul de la capacité offerte.

Cette capacité peut être complétée par des droits de capacité supplémentaires soumis par les négociants de capacité pour revente, pendant la période considérée, comme la revente des droits de capacité annuels à une vente aux enchères mensuelle, etc.

Cette capacité peut également être complétée par des droits de capacité supplémentaires non utilisés pour la nomination, c'est-à-dire les droits de capacité annuels, mensuels, hebdomadaires qui n'ont pas été utilisés pour la nomination journalière, et qui sont donc cédés (sous la forme "use it or lose it" – utilise la ou perd la ou "use it or get paid for it" – utilise la ou paye pour elle ou "use it or sale it" – utilise la ou vend la, etc.) à la vente aux enchères journalières.

Le coordinateur de capacité calcule ensuite la capacité offerte initiale avec les informations reçues.

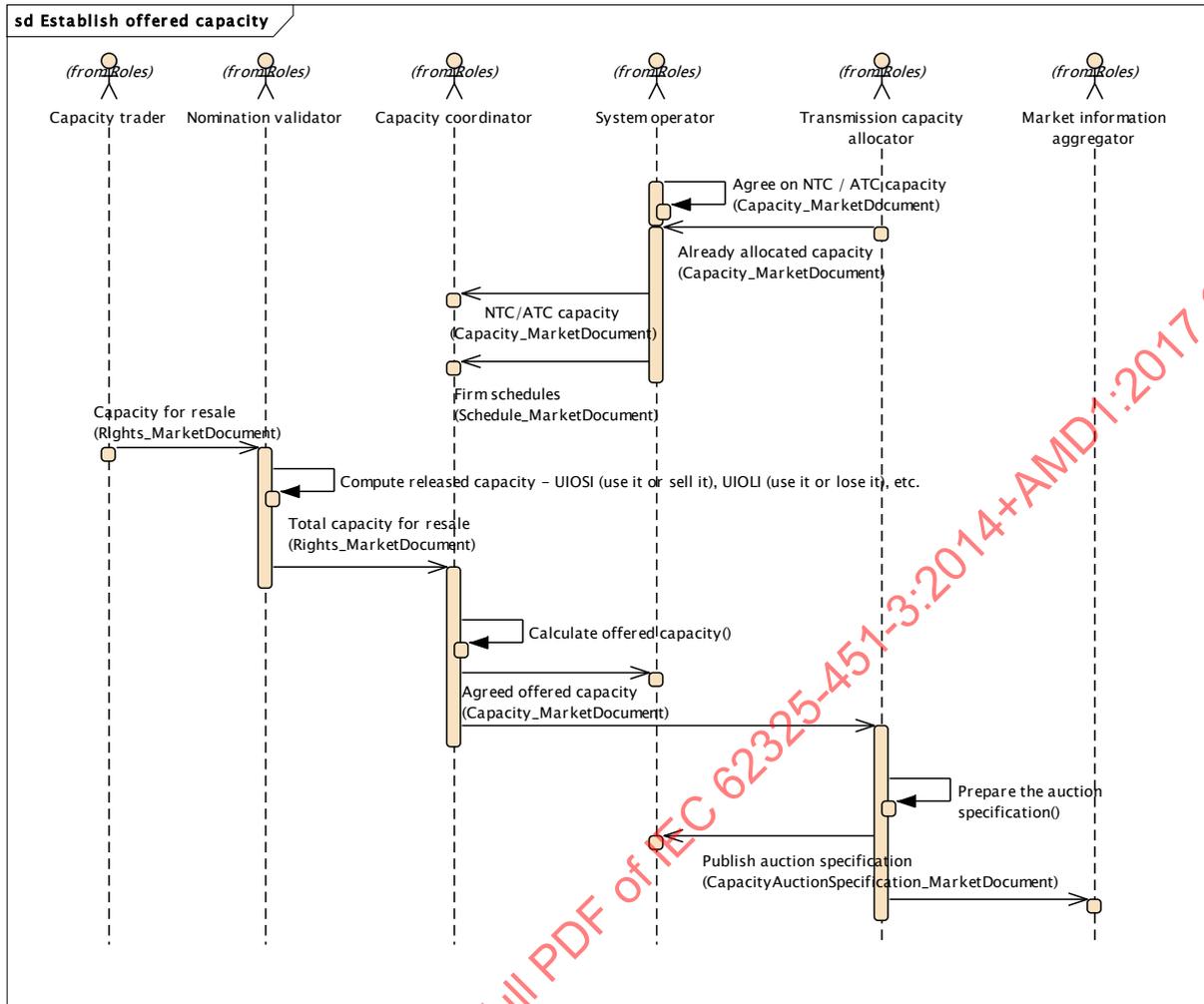
La capacité offerte est ensuite transmise à l'allocateur de capacité de transport pour lui permettre d'établir la spécification de vente aux enchères pendant la période considérée.

En dernier lieu, la spécification de vente aux enchères est publiée. Une première version du document AuctionSpecification\_MarketDocument peut être publiée avec seulement l'identification de la vente aux enchères et sa date planifiée. Une nouvelle version du document doit ensuite être émise qui comporte toutes les informations pertinentes. Il est à noter que ce document peut être mis à jour pour informer le participant au marché que la vente aux enchères est annulée.

Ce processus est décrit à la Figure 4; les documents échangés dans le cadre de ce processus sont indiqués.

L'établissement de la capacité offerte est commun au processus de ventes aux enchères explicites et implicites.

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IEC

**Légende**

Anglais	Français
From roles	À partir des rôles
Establish offered capacity	Établir une capacité offerte
Capacity trader	Négociant de capacité
Nomination validator	Valideur de nomination
Capacity coordinator	Coordinateur de capacité
System operator	Gestionnaire de réseau
Transmission capacity allocator	Allocateur d'attribution de capacité
Market information aggregator	Agrégateur des informations du marché
Agree on NTC/ATC capacity	Convenir de la capacité NTC/ATC
Already allocated capacity	Capacité déjà attribuée
Capacity for resale	Capacité pour revente
NTC/ATC capacity	Capacités NTC/ATC
Firm schedules	Programmes fixes
Compute released capacity – UIOSI (use it or sell it), UIOLU (“use it or lose it)	Calculer la capacité cédée – UIOSI (use it or sell it), UIOLU (“use it or lose it)
Total capacity for resale	Capacité totale pour revente
Calculate offered capacity	Calculer la capacité offerte
Agreed offered capacity	Capacité offerte convenue

Anglais	Français
Prepare the auction specification	Préparer la spécification de vente aux enchères
Publish auction specification	Publier la spécification de vente aux enchères

**Figure 4 – Présentation du processus Établir une capacité offerte**

### 5.3 Processus de vente aux enchères explicite

#### 5.3.1 Présentation du processus de vente aux enchères explicite

Le processus de vente aux enchères explicite se compose d'un certain nombre d'étapes décrites ci-après:

- La Figure 5 décrit la soumission des offres, le processus d'attribution des droits de capacité et la publication des droits de la capacité attribuée.
- La Figure 6 décrit la revente des droits de capacité et le processus de restriction de capacité pour des raisons de sécurité.
- La Figure 7 décrit la nomination des droits de capacité.

#### 5.3.2 Offre et attribution de capacité

Les négociants de capacité soumettent des offres pour les droits de transport à une frontière à l'allocateur de capacité de transport pendant la période de soumission.

Pendant une fenêtre de validation prédéfinie, l'allocateur de capacité de transport vérifie l'exactitude de toutes les offres pour la vente aux enchères considérée.

Après la phase de soumission, des droits de transport sont attribués aux offres considérées par l'allocateur de capacité de transport conformément aux règles de vente aux enchères publiées.

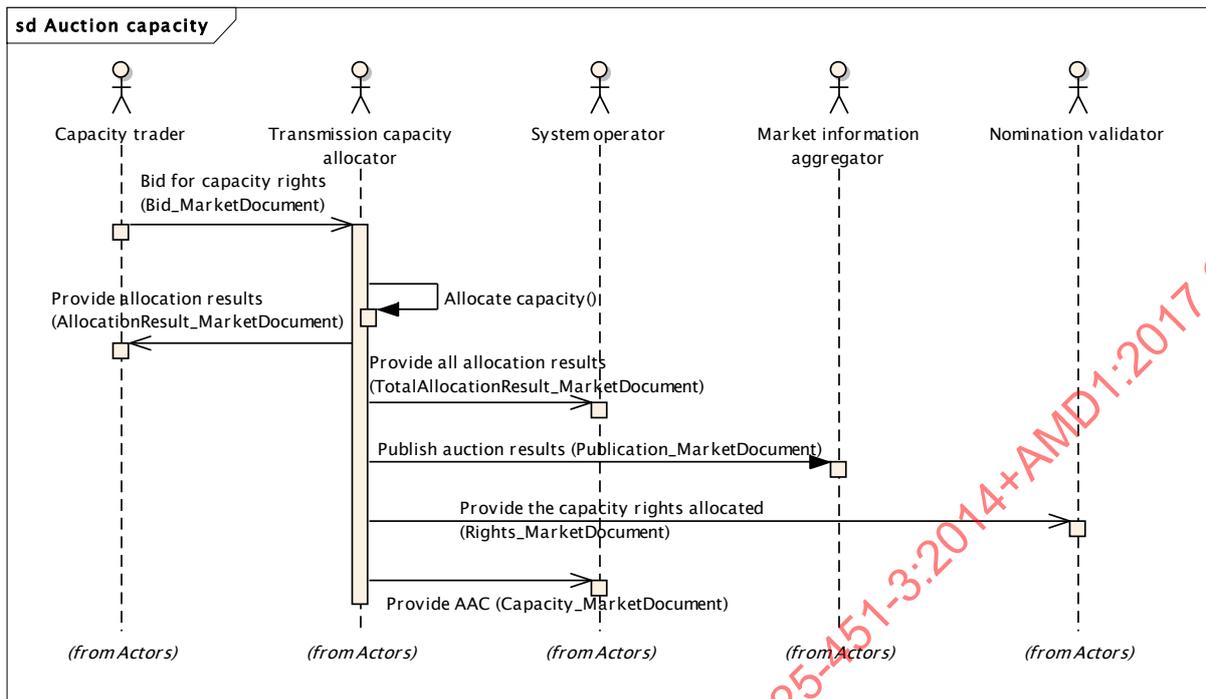
#### 5.3.3 Publication des résultats d'une vente aux enchères

A l'étape finale du processus d'attribution de capacité, l'allocateur de capacité de transport publie les résultats de la vente aux enchères comprenant ceux de toutes les offres et reventes.

Les gestionnaires de réseau impliqués sont informés de la capacité attribuée et revendue constituant le résultat de la vente aux enchères.

Chaque négociant de capacité est informé du résultat de son ou ses offres et reventes après la période de soumission conformément aux règles de vente aux enchères.

Les résultats peuvent être retransmis aux agrégateurs des informations du marché pour publication générale.



IEC 2138/14

**Légende**

Anglais	Français
auction capacity	Vente aux enchères de capacité
Capacity trader	Négociant de capacité
Transmission capacity allocator	Allocateur d'attribution de capacité
System operator	Gestionnaire de réseau
Market information aggregator	Agrégateur des informations du marché
Nomination validator	Valideur de nomination
Bid for capacity rights	Offre pour droits de capacité
Provide allocation results	Fournir les résultats d'attribution
Allocate capacity	Attribution de capacité
Provide all allocation results	Fournir tous les résultats d'attribution
Publish auction results	Publication des résultats de la vente aux enchères
Provide the capacity rights allocated	Fournir les droits de la capacité attribuée
Provide AAC	Fournir l'AAC
From actors	À partir des acteurs

**Figure 5 – Vente aux enchères de capacité**

**5.3.4 Échange et négociation de capacité attribuée**

Au cours de ce processus, les négociants de capacité échange les droits de capacité de transport entre eux et à l'issue de l'échange, ils informent l'allocateur de capacité de transport du transfert des droits.

Il s'agit d'un marché "Over The Counter (OTC)" (de gré à gré), c'est-à-dire qu'il n'existe aucune règle spécifique pour l'échange et que seules les règles convenues entre les parties impliquées dans l'échange s'appliquent. Ce marché est également appelé "marché secondaire".

L'allocateur de capacité de transport approuve le transfert en transmettant un document Rights\_MarketDocument comportant les droits de transport approuvés et transférés entre les deux parties. Ce document est transmis à l'auteur du transfert et aux destinataires du transfert.

### **5.3.5 Revente de droits de capacité**

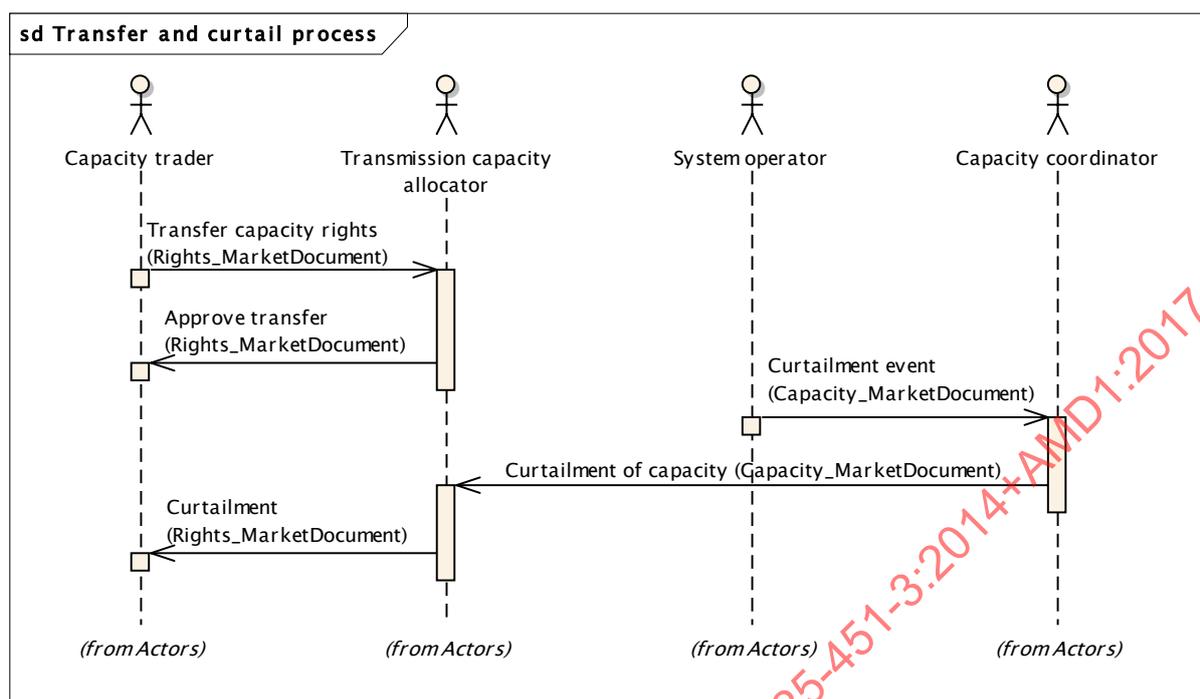
Le négociant de capacité peut, en fonction des règles locales, céder ses droits de capacité de transport précédemment acquis avant une vente aux enchères. Si la capacité est cédée à l'allocateur de capacité de transport suffisamment à l'avance, le négociant peut bénéficier de sa revente lors de la vente aux enchères à venir.

Dans un modèle "use it or sell it" (UIOSI), le négociant de capacité bénéficie de la revente des droits de capacité lors d'une ultérieure vente aux enchères pour la partie des droits de capacité n'ayant pas été préalablement nominés.

Dans un modèle "use it or lose it" (UIOLI), la capacité non nominée est généralement perdue par le négociant de capacité.

### **5.3.6 Possibilité de restriction de capacité attribuée**

Si, pour des raisons de sécurité du réseau, le gestionnaire de réseau juge nécessaire de limiter les droits de capacité de transport d'une précédente vente aux enchères, le gestionnaire de réseau informe l'allocateur de capacité de transport correspondant de la restriction qu'il est tenu d'imposer. L'allocateur de capacité de transport informe les négociants de capacité des nouveaux droits de capacité de transport limités.



**Légende**

Anglais	Français
Transfer and curtail process	Processus de transfert et de restriction
Capacity trader	Négociant de capacité
Transmission capacity allocator	Allocateur d'attribution de capacité
System operator	Gestionnaire de réseau
Capacity coordinator	Coordinateur de capacité
Transfer capacity rights	Transfert des droits de capacité
Approve transfer	Approbation du transfert
Curtailment event	Événement de restriction
Curtailment of capacity	Restriction de capacité
Curtailment	Restriction
From actors	À partir des acteurs

**Figure 6 – Transfert et restriction**

**5.3.7 Désigner le responsable d'échange d'interconnexion pour la désignation**

Le négociant de capacité indique à l'allocateur de capacité de transport le responsable d'échange d'interconnexion qui effectuera la nomination des droits de capacité de transport en son nom.

La désignation du responsable d'échange d'interconnexion qui désignera les droits de capacité est transmise pour l'attribution de la capacité de transport avec un document Rights\_MarketDocument.

**5.3.8 Nommer l'utilisation de capacité pour une frontière**

Le validateur de nomination reçoit les attributions finales (droits de capacité) de l'allocateur de capacité de transport, qui identifie les responsables d'échange d'interconnexion autorisés

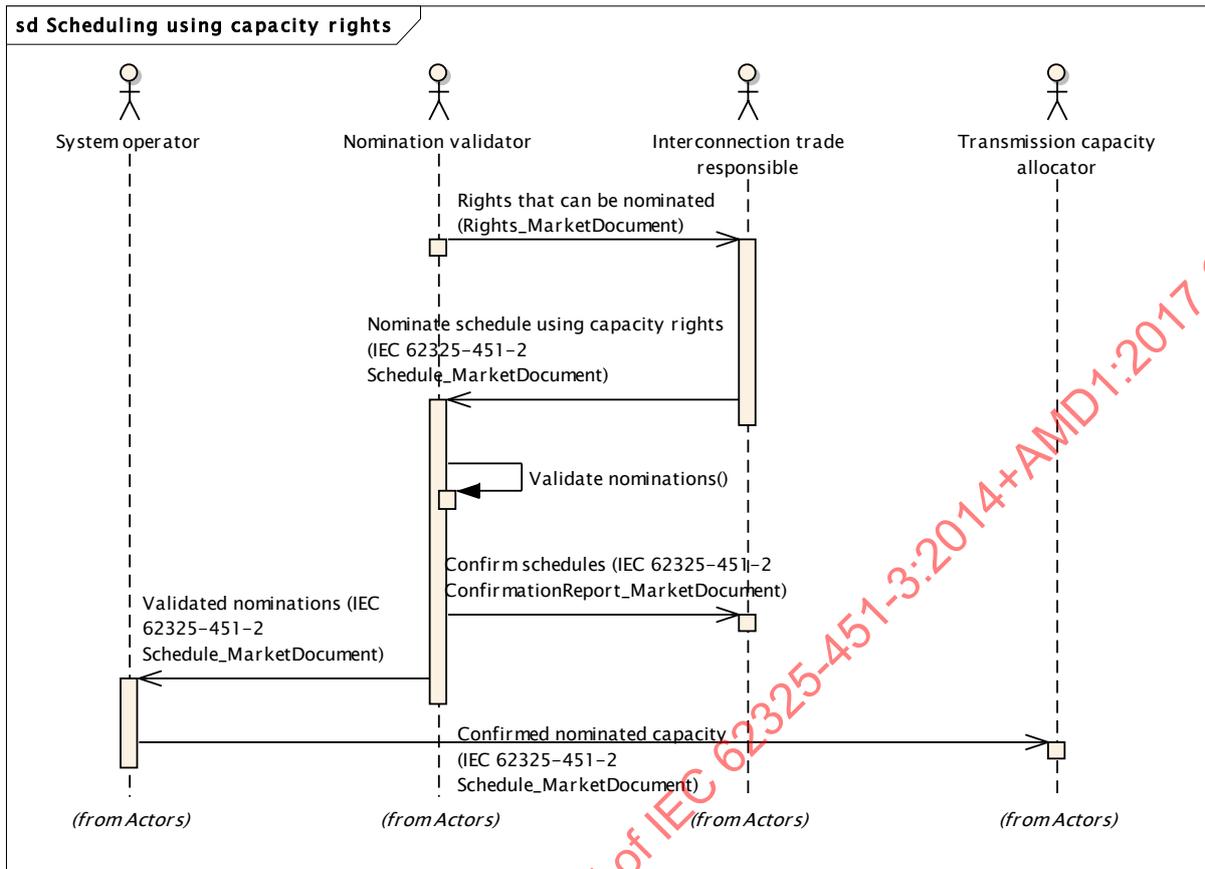
à nommer la capacité et transmet la capacité de nomination autorisée aux responsables d'échange d'interconnexion concernés.

### **5.3.9 Validation des nominations**

Le processus de validation des nominations peut être réalisé d'un côté ou des deux côtés de la frontière.

Le validateur de nomination doit vérifier que les nominations provenant des responsables d'échange d'interconnexion ne dépassent pas la quantité de capacité communiquée par l'allocateur de capacité de transport. Lorsque les nominations dépassent la quantité des droits de capacité, le validateur de nomination applique les règles locales du marché.

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IEC 2140/14

**Légende**

Anglais	Français
Scheduling using capacity rights	Programmation utilisant les droits de capacité
System operator	Gestionnaire de réseau
Nomination validator	Valideur de nomination
Interconnection trade responsible	Responsable d'échange d'interconnexion
Transmission capacity allocator	Allocateur d'attribution de capacité
Rights that can be nominated	Droits pouvant être désignés
Nominate schedule using capacity rights	Nominer un programme utilisant les droits de capacité
Validate nomination	Valider de la désignation
Confirm schedules	Confirmer des programmes
Validated nomination	Nomination validée
Confirmed nominated capacity	Capacité désignée confirmée
From actors	À partir des acteurs

**Figure 7 – Nomination des droits de capacité**

**5.4 Processus de vente aux enchères implicite**

**5.4.1 Présentation du processus de vente aux enchères implicite**

La vente aux enchères implicite est caractérisée par le fait que le responsable d'échange achète la capacité de transport et l'énergie en même temps.

Ainsi, pour ce processus métier, il n'y a pas de distinction à faire entre le rôle du négociant de capacité et celui du responsable d'échange d'interconnexion.

Les règles régissant le mécanisme de vente aux enchères déterminent le prix de l'énergie sur le marché pour la zone d'équilibre du marché après application des contraintes techniques du gestionnaire de réseau.

La Figure 8 fournit une présentation du processus de vente aux enchères implicite et la liste des documents échangés.

#### **5.4.2 Soumission d'offres pour échange local**

Les responsables d'échange soumettent à leur opérateur du marché leur offre (vente ou achat) d'énergie. Le document à utiliser pour effectuer cet échange n'est pas développé plus explicitement dans le présent document.

#### **5.4.3 Vente aux enchères implicite**

L'opérateur du marché définit, sur la base des règles du marché convenues, le "point d'équilibre du marché", c'est-à-dire les flux transfrontaliers, les prix de l'énergie et les échanges mis en correspondance.

#### **5.4.4 Publication des résultats des échanges**

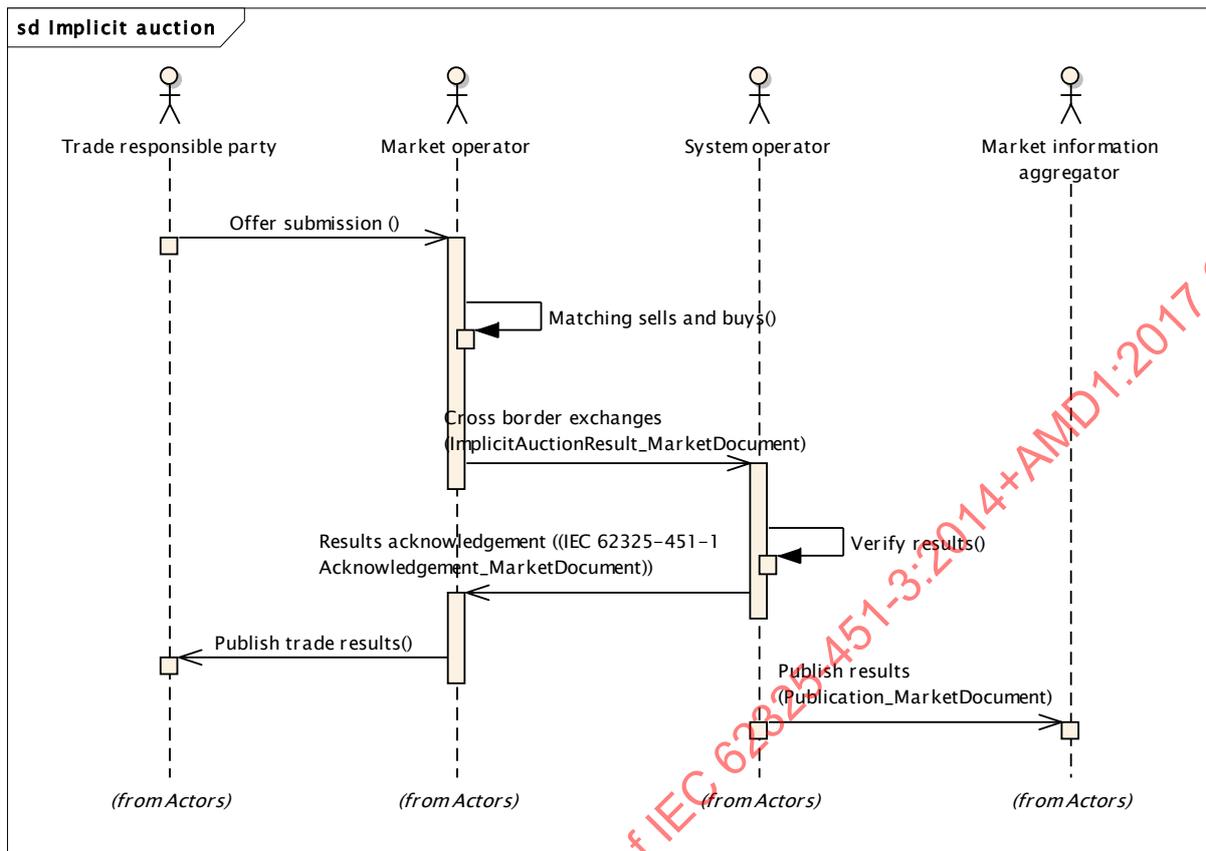
L'opérateur du marché fournit aux gestionnaires de réseau impliqués les résultats de la mise en correspondance en utilisant le document ImplicitAuctionResult\_MarketDocument.

Les gestionnaires de réseau vérifient la cohérence des résultats avec les contraintes fournies lors de la définition de la capacité offerte.

Le résultat est ensuite fourni à l'agrégateur des informations du marché en utilisant le document Publication\_MarketDocument.

#### **5.4.5 Publication des résultats des négociations**

L'opérateur du marché fournit à chaque participant au marché les résultats du marché. Le document à utiliser pour effectuer cet échange n'est pas développé plus explicitement dans le présent document.



**Légende**

Anglais	Français
Implicit auction	Vente aux enchères implicite
Trade responsible party	Responsable d'échange
Market operator	Opérateur du marché
System operator	Gestionnaire de réseau
Market information aggregator	Agrégateur des informations du marché
Offer submission	Soumission d'offre
Matching sells and buys	Mise en correspondance des ventes et des achats
Cross border exchanges	Échanges transfrontaliers
Results acknowledgement	Accusé de réception des résultats
Verify results	Vérification des résultats
publish trade results	Publication des résultats d'échange
Publish results	Publication des résultats
From actors	À partir des acteurs

**Figure 8 – Présentation de vente aux enchères implicite**

**5.5 Règles métier applicables au processus d'attribution de la capacité de transport**

**5.5.1 Règles générales**

Les règles génériques définies dans l'IEC 62325-351 s'appliquent à tous les documents décrits dans la présente partie. L'IEC 62325-351 décrit plus particulièrement le concept de type de courbe à utiliser pour définir le modèle d'une vente aux enchères.

Pour chaque échange de données électroniques défini dans ce document, un accusé de réception d'application est exigé comme défini dans l'IEC 62325-451-1, sauf pour le document transmis au négociant de capacité ou au responsable d'échange d'interconnexion en tant que receiver\_MarketParticipant.marketRole.type.

Lorsqu'un document est reçu, il doit être vérifié au niveau de l'application pour s'assurer qu'il ne contient aucune erreur susceptible d'empêcher son traitement normal. A l'issue de cette vérification, un document d'accusé de réception, tel que défini dans l'IEC 62325-451-1, doit être généré qui accepte le document considéré dans sa totalité ou le rejette.

Dans le cas d'une vente aux enchères explicite, la nomination des droits de capacité doit être réalisée en utilisant le document de programme, comme décrit dans l'IEC 62325-451-2.

### 5.5.2 Règles régissant le Bid\_MarketDocument

Les règles suivantes s'appliquent au Bid\_MarketDocument:

- Un document d'offre comprend un ensemble d'offres (une offre est représentée par une série chronologique).
- L'expéditeur peut soumettre plusieurs offres pendant la même période de soumission et pour la même partie concernée (négociant de capacité).
- Pour annuler un ensemble complet d'offres, le document d'offre est soumis de nouveau avec un nouveau numéro de version mais sans série chronologique.
- Il ne peut y avoir qu'un seul expéditeur pour une partie concernée donnée.
- Un document d'offre ne peut concerner qu'une seule partie concernée.
- Un document d'offre reçu avec la même identification et même version de document qu'un document d'offre existant doit être refusé.
- La dernière version d'un document d'offre avec la même identification de document doit constituer la dernière offre valide pour le document considéré.
- Chaque Bid\_TimeSeries dans un document est considérée comme une offre dans le cadre de cette spécification. Le mRID d'offre que le soumissionnaire attribue est l'identification unique de l'offre pour une identification de vente aux enchères donnée (auction.mRID).
- Le Tableau 1 indique la dépendance relative aux indicateurs d'offre:

**Tableau 1 – Dépendance des indicateurs d'offre**

	Cas par défaut	Autres cas			
		NON	NON	OUI	OUI
Divisible (valeurs possibles)	OUI	NON	NON	OUI	OUI
LinkedBidIdentification (attribut utilisé ou non)	Non utilisé	Utilisé	Non utilisé	Non utilisé	Non applicable
BlockedBid (valeurs possibles)	NON	OUI	OUI	NON	Non applicable

NOTE "Non utilisé" signifie que l'attribut ne peut pas être utilisé. "Non applicable" signifie que les attributs considérés ne s'appliquent pas au cas de dépendance.

Par exemple: un LinkedBidIdentification peut ne comporter qu'une identification où Divisible est "NON" et un BlockedBid est "OUI". Dans tous les autres cas, il peut ne comporter aucune identification.

### 5.5.3 Règles régissant le Capacity\_MarketDocument

Les dépendances sont énumérées ci-après:

- Le type de document "Agreed capacity» (Capacité convenue) est à utiliser avec le type de processus "Capacity determination" (Détermination de capacité) et les types de métier

“Offered capacity” (Capacité offerte), “NTC” ou “ATC”, la “Reason” (Raison) peut être “Curtaiment”(restriction);

- Le type de document “Proposed capacity” (Capacité proposée) est à utiliser avec le type de processus “Capacity determination” (Détermination de capacité) et les types de métier “Offered capacity” (Capacité offerte), “NTC” ou “ATC”, la “Reason” (Raison) peut être “Curtaiment” (restriction);
- Le type de document “Interconnection capacity” (Capacité d’interconnexion) est à utiliser avec le type de processus “Capacity determination” (Détermination de capacité) et les types de métier “AAC” ou “Released AAC” (AAC cédée);
- Le type de document “Interconnection capacity” (Capacité d’interconnexion) est à utiliser avec le type de processus “Capacity allocation” (Attribution de capacité) et le type de métier “General capacity information” (Information de capacité générale).

NOTE Le Business Type “General Capacity Information” est un type générique pour l’identification d’une série chronologique qui fournit la capacité totale disponible pour une frontière TSO.

#### 5.5.4 Règles régissant le AllocationResult\_MarketDocument

Les règles suivantes s’appliquent au AllocationResult\_MarketDocument:

- Il n’existe qu’une seule identification de contrat attribuée par l’allocateur de capacité de transport par identification de vente aux enchères, période de soumission et partie concernée.
- Il n’existe qu’un seul document de résultat de l’attribution par expéditeur et partie concernée pour une identification de vente aux enchères donnée et un intervalle de temps de soumission donné.
- Une seule des trois possibilités suivantes est autorisée dans un document de résultat de l’attribution donné:
  - a) Lorsque le document de résultat de l’attribution comporte toutes les offres et reventes validées pour traitement dans le cadre d’une vente aux enchères dans la dernière version des documents d’offres et de reventes reçus, ceci doit comprendre les offres et les reventes qui n’ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n’ont pas été réalisées doivent être égales à zéro.
  - b) Il est également possible que le document de résultat de l’attribution ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.
  - c) Une troisième possibilité consiste à ne fournir que l’agrégation des offres ayant des droits de transport de capacité et l’agrégation des droits de transport vendus. Dans ce cas, l’identification d’offre ne doit pas être spécifiée.
- Le résultat de l’offre peut refléter l’offre initiale proprement dite auquel cas le curveType ne doit pas être utilisé, ou un profil peut être fourni comme résultat pour lequel le curveType doit être utilisé.
- Le choix de refléter ou non les offres initiales doit être cohérent dans l’ensemble du document de résultat.

#### 5.5.5 Règles régissant le TotalAllocationResult\_MarketDocument

Les règles suivantes s’appliquent au TotalAllocationResult\_MarketDocument:

- Il n’existe qu’une seule identification de contrat attribuée par l’allocateur de capacité de transport par identification de vente aux enchères, période de soumission et soumissionnaire.
- Une seule des trois possibilités suivantes est autorisée dans un document de résultat de l’attribution totale donné:
  - a) Lorsque le document de résultat de l’attribution totale comporte toutes les offres et reventes validées pour traitement dans le cadre d’une vente aux enchères dans la dernière version des documents d’offres et de reventes reçus, ceci doit comprendre les

offres et les reventes qui n'ont pas été réalisées. Dans ce cas, les valeurs de quantité et de prix pour les offres et les reventes qui n'ont pas été réalisées doivent être égales à zéro.

- b) Il est également possible que le document de résultat de l'attribution totale ne comporte que les offres auxquelles ont été attribués des droits de transport de capacité et les reventes ayant concerné des droits de transport de capacité.
  - c) Une troisième possibilité consiste à ne fournir que l'agrégation des offres ayant des droits de transport de capacité et l'agrégation des droits de transport vendus. Dans ce cas, l'identification d'offre ne doit pas être spécifiée.
- Le résultat de l'offre peut refléter l'offre initiale proprement dite auquel cas le curveType ne doit pas être utilisé, ou un profil peut être fourni comme résultat pour lequel le curveType doit être utilisé.
  - Le choix de refléter ou non les offres initiales doit être cohérent dans l'ensemble du document de résultat.

### 5.5.6 Règles régissant le Rights\_MarketDocument

Les règles suivantes s'appliquent au Rights\_MarketDocument:

- Un Rights\_MarketDocument est utilisé dans divers contextes métier. En général, il identifie les droits de transport de capacité dont un négociant de capacité ou un responsable d'échange d'interconnexion dispose dans son portefeuille pour une frontière donnée.
- À chaque modification des droits de transport de capacité d'une partie pendant une période donnée, le négociant de capacité peut informer la partie concernée de son nouveau portefeuille en lui transmettant une nouvelle version du document de droits.
- Un document de droits peut également être utilisé pour fournir le portefeuille complet pour une frontière donnée.
- De plus, un document de droits peut être utilisé pour fournir des informations sur la compensation des droits telles que la tarification UIOSI ou la compensation de restriction des droits.
- Il ne peut y avoir qu'un seul expéditeur pour une partie concernée donnée.
- Un Rights\_MarketDocument ne peut concerner qu'une seule partie concernée.
- Un Rights\_MarketDocument reçu avec la même identification et la même version de document qu'un Rights\_MarketDocument existant doit être refusé.
- Le Tableau 2 indique la dépendance relative aux indicateurs de Rights\_MarketDocument:

**Tableau 2 – Tableau de dépendance de Rights\_MarketDocument**

Type de document	Type de métier	Détenteur des droits	Destinataire du transfert	Identification de contrat précédente	Identification de vente aux enchères
Capacité pour revente	AAC libérée	Obligatoire			Obligatoire
	Droits de capacité non nominés	Obligatoire			
Transfert approuvé	Notification de transfert de capacité	Obligatoire			
Transfert d'AAC	Notification de transfert de capacité Désignation du responsable d'échange d'interconnexion	Obligatoire	Obligatoire	Obligatoire	
Portefeuille de droits de transport	Droits de capacité	Obligatoire			
Attributions	AAC autorisée	Obligatoire			
	AAC autorisée minimum	Obligatoire			
	AAC autorisée maximum	Obligatoire			
Droits de compensation	Tarifification «Use it or sell it» (UIOSI) Compensation de revente suite à une annulation Restriction de droits Compensation «Use it or sell it» (UIOSI) Annulation de vente aux enchères	Obligatoire			

Lorsqu'on utilise le type de document "Allocations" (Attributions), le type de métier "Authorised AAC" (AAC autorisée) est généralement suffisant pour fournir la quantité maximum d'AAC disponible pour la nomination. Cependant, si le type de métier "Minimum authorized AAC" (AAC autorisée minimum) est utilisé, le type de métier "Maximum authorised AAC" (AAC autorisée maximum) doit alors être utilisé en lieu et place du type de métier "Authorised AAC" (AAC autorisée).

## 6 Modèles contextuels et modèles d'assemblage

### 6.1 Modèle contextuel d'offre

#### 6.1.1 Présentation du modèle

La Figure 9 présente le modèle.

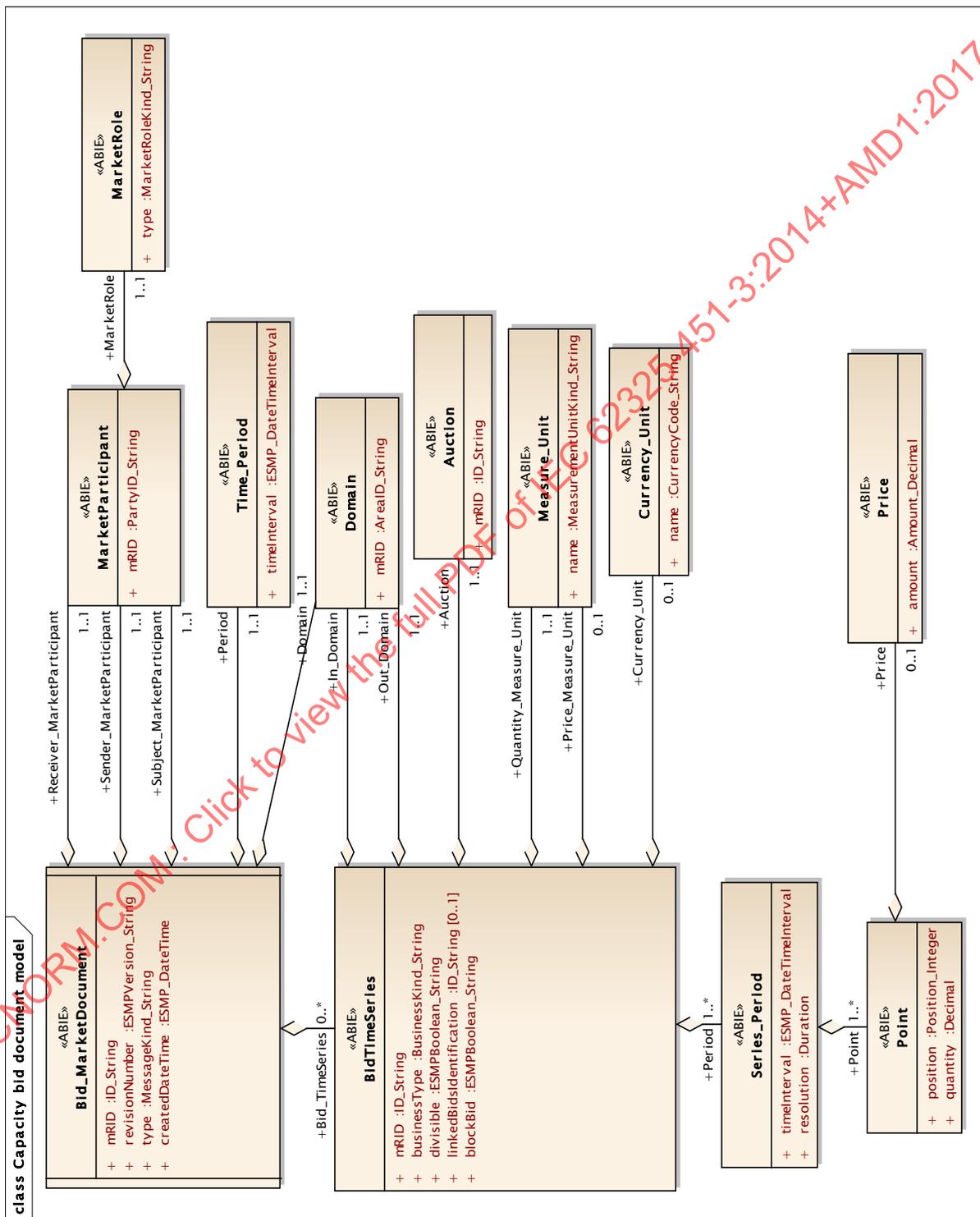


Figure 9 – Modèle contextuel d'offre

### 6.1.2 Relations IsBasedOn à partir du profil de marché de style européen

Le Tableau 3 montre la dépendance de traçabilité des classes utilisées dans ce paquetage vers le niveau supérieur.

**Tableau 3 – Dépendance IsBasedOn**

Nom	Classe IsBasedOn	Chemin complet IsBasedOn Path
Auction	ESMPClasses::Auction	IEC62325-351\ESMPClasses
Bid_MarketDocument	ESMPClasses::MarketDocument	IEC62325-351\ESMPClasses
BidTimeSeries	ESMPClasses::BidTimeSeries	IEC62325-351\ESMPClasses
Currency_Unit	ESMPClasses::Currency_Unit	IEC62325-351\ESMPClasses
Domain	ESMPClasses::Domain	IEC62325-351\ESMPClasses
MarketParticipant	ESMPClasses::MarketParticipant	IEC62325-351\ESMPClasses
MarketRole	ESMPClasses::MarketRole	IEC62325-351\ESMPClasses
Measure_Unit	ESMPClasses::Measure_Unit	IEC62325-351\ESMPClasses
Point	ESMPClasses::Point	IEC62325-351\ESMPClasses
Price	ESMPClasses::Price	IEC62325-351\ESMPClasses
Series_Period	ESMPClasses::Series_Period	IEC62325-351\ESMPClasses
Time_Period	ESMPClasses::Time_Period	IEC62325-351\ESMPClasses

### 6.1.3 Description détaillée du modèle contextuel d'offre

#### 6.1.3.1 Classe racine Bid\_MarketDocument

Un document d'offre comprend un ensemble d'offres (une offre est représentée par une série chronologique). L'expéditeur peut soumettre plusieurs offres pendant la même période de soumission et pour la même partie concernée.

Document électronique comprenant les informations nécessaires pour satisfaire aux exigences d'un processus métier donné.

IsBasedOn: ESMPClasses::MarketDocument

Le Tableau 4 montre tous les attributs du Bid\_MarketDocument.

**Tableau 4 – Attributs du Modèle contextuel d'offre::Bid\_MarketDocument**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	createdDateTime	ESMP_DateTime	Date et heure de création du document.
[1..1]	mRID	ID_String	Identification unique du document échangé dans le cadre d'un flux de processus métier.
[1..1]	revisionNumber	ESMPVersion_String	Identification de la version qui distingue un changement dans un document par rapport à un autre.
[1..1]	type	MessageKind_String	Type d'un document sous forme codée. Le type d'un document décrit la caractéristique principale du document.

Le Tableau 5 montre toutes les extrémités d'association de Bid\_MarketDocument avec d'autres classes.

**Tableau 5 – Extrémités d’association du Modèle contextuel d’offre::Bid\_MarketDocument avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..*]	Bid_TimeSeries	BidTimeSeries	La timeseries (série chronologique) comprend les offres soumises dans la vente aux enchères Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::TimeSeries.TimeSeries[0..*]
[1..1]	Domain	Domain	Domaine couvert dans le cadre du document d’offre, c’est-à-dire la frontière pour laquelle la vente aux enchères est réalisée. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Domain.Domain[0..1]
[1..1]	Period	Time_Period	Date et heure de début et de fin de la période couverte par le document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::Time_Period.Period[0..*]
[1..1]	Receiver_MarketParticipant	MarketParticipant	Destinataire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Sender_MarketParticipant	MarketParticipant	Propriétaire du document. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]
[1..1]	Subject_MarketParticipant	MarketParticipant	Partie pour laquelle l’offre est soumise. Association Based On: ESMPClasses::MarketDocument.[] ----- ESMPClasses::MarketParticipant.MarketParticipant[0..*]

### 6.1.3.2 Auction

Identification d’une spécification formelle d’un produit d’énergie mis en vente.

IsBasedOn: ESMPClasses::Auction

Le Tableau 6 montre tous les attributs de Auction.

**Tableau 6 – Attributs du Modèle contextuel d’offre::Auction**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	mRID	ID_String	Identification unique de la vente aux enchères.

### 6.1.3.3 Bid\_TimeSeries

Spécification formelle de caractéristiques spécifiques relatives à une offre.

IsBasedOn: ESMPClasses::BidTimeSeries

Le Tableau 7 montre tous les attributs de BidTimeSeries.

**Tableau 7 – Attributs du Modèle contextuel d'offre::BidTimeSeries**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	blockBid	ESMPBoolean_String	Indique que les valeurs de la période sont considérées comme un ensemble. Elles ne peuvent être ni changées, ni subdivisées.
[1..1]	businessType	BusinessKind_String	Identification de la nature de la série chronologique.
[1..1]	divisible	ESMPBoolean_String	Indique si chaque élément de l'offre peut être accepté en partie ou non.
[0..1]	linkedBidsIdentification	ID_String	Identification unique d'offres liées entre elles.
[1..1]	mRID	ID_String	Identification unique de la série chronologique.

Le Tableau 8 montre toutes les extrémités d'association de BidTimeSeries avec d'autres classes.

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**Tableau 8 – Extrémités d’association du Modèle contextuel d’offre::  
 BidTimeSeries avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	Auction	Auction	Identification associant l’offre à un ensemble de spécifications créé par l’opérateur de vente aux enchères. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Auction.Auction[0..*]
[0..1]	Currency_Unit	Currency_Unit	Devise dans laquelle le montant en numéraire est exprimé. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Currency_Unit.Currency_Unit[0..1]
[1..1]	In_Domain	Domain	Zone dans laquelle l’énergie est à fournir. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..1]	Out_Domain	Domain	Zone de laquelle l’énergie provient. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Domain.Domain[0..*]
[1..*]	Period	Series_Period	Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Series_Period.Period[0..*]
[0..1]	Price_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle le prix de la série chronologique est exprimé (MW, MWh, etc.). Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]
[1..1]	Quantity_Measure_Unit	Measure_Unit	Unité de mesure dans laquelle les grandeurs dans la série chronologique sont exprimées, par exemple MAW. Association Based On: ESMPClasses::TimeSeries.[] ----- ESMPClasses::Measure_Unit.Measurement_Unit[0..*]

#### 6.1.3.4 Currency\_Unit

Code spécifiant une unité monétaire.

IsBasedOn: ESMPClasses::Currency\_Unit

Le Tableau 9 montre tous les attributs de Currency\_Unit.

**Tableau 9 – Attributs du Modèle contextuel d’offre::Currency\_Unit**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	name	CurrencyCode_String	Identification du code formel d’une devise (ISO 4217).

### 6.1.3.5 Domain

Domaine couvrant un certain nombre d'objets liés, tels que la zone d'équilibre du marché, la zone du réseau, les frontières, etc.

IsBasedOn: ESMPClasses::Domain

Le Tableau 10 montre tous les attributs de Domain.

**Tableau 10 – Attributs du Modèle contextuel d'offre::Domain**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	AreaID_String	Identification unique du domaine.

### 6.1.3.6 MarketParticipant

Identification de l'acteur prenant part aux processus métier du marché de l'énergie.

IsBasedOn: ESMPClasses::MarketParticipant

Le Tableau 11 montre tous les attributs de MarketParticipant.

**Tableau 11 – Attributs du Modèle contextuel d'offre::MarketParticipant**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	mRID	PartyID_String	Identification d'un acteur du marché de l'énergie.

Le Tableau 12 montre toutes les extrémités d'association de MarketParticipant avec d'autres classes.

**Tableau 12 – Extrémités d'association du Modèle contextuel d'offre::  
MarketParticipant avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..1]	MarketRole	MarketRole	Association Based On: ESMPClasses::MarketParticipant.[] ----- ESMPClasses::MarketRole.MarketRole[0..1]

### 6.1.3.7 MarketRole

Identification du comportement prévu d'un acteur du marché dans un processus métier donné.

IsBasedOn: ESMPClasses::MarketRole

Le Tableau 13 montre tous les attributs de MarketRole.

**Tableau 13 – Attributs du Modèle contextuel d’offre::MarketRole**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	type	MarketRoleKind_String	Identification du rôle joué par un acteur du marché.

### 6.1.3.8 Measure\_Unit

Grandeur spécifique définie et adoptée par convention, à laquelle sont comparées d’autres grandeurs similaires afin d’exprimer leur magnitude par rapport à elle.

IsBasedOn: ESMPClasses::Measure\_Unit

Le Tableau 14 montre tous les attributs de Measure\_Unit.

**Tableau 14 – Attributs du Modèle contextuel d’offre::Measure\_Unit**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	name	MeasurementUnitKind_String	Identification du code formel d’une unité de mesure (Recommandation 20 de la CEE-ONU).

### 6.1.3.9 Point

Grandeur objet de l’offre pendant l’intervalle considéré.

Identification des valeurs traitées dans un intervalle de temps donné.

IsBasedOn: ESMPClasses::Point

Le Tableau 15 montre tous les attributs de Point.

**Tableau 15 – Attributs du Modèle contextuel d’offre::Point**

mult.	Nom d’attribut	Type d’attribut	Description
[1..1]	position	Position_Integer	Valeur séquentielle représentant la position relative dans un intervalle de temps donné.
[1..1]	quantity	Decimal	Grandeur principale identifiée à un point.

Le Tableau 16 montre toutes les extrémités d’association de Point avec d’autres classes.

**Tableau 16 – Extrémités d’association du Modèle contextuel d’offre:: Point avec d’autres classes**

mult.	Rôle	Nom de type de classe	Description
[0..1]	Price	Price	Prix exprimé pour chaque unité de grandeur. Le montant est obligatoire dans le cas de ventes aux enchères de capacité et ne doit pas être fourni dans le cas d’attributions basées sur les règles selon les règles locales du marché (par exemple "premier arrivé, premier servi"). Association Based On: ESMPClasses::Point.[] ----- ESMPClasses::Price.Price[0..*]

### 6.1.3.10 Price

Coût correspondant à une entité spécifique et exprimé dans une devise.

IsBasedOn: ESMPClasses::Price

Le Tableau 17 montre tous les attributs de Price.

**Tableau 17 – Attributs du Modèle contextuel d'offre::Price**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	amount	Amount_Decimal	Nombre d'unités monétaires spécifié dans une unité de devise.

### 6.1.3.11 Series\_Period

Identification de la période de temps correspondant à un intervalle de temps et à une résolution donnés.

IsBasedOn: ESMPClasses::Series\_Period

Le Tableau 18 montre tous les attributs de Series\_Period.

**Tableau 18 – Attributs du Modèle contextuel d'offre::Series\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	resolution	Duration	Définition du nombre d'unités de temps qui composent une étape individuelle dans une période.
[1..1]	timeInterval	ESMP_DateTimeInterval	Heure de début et de fin de la période.

Le Tableau 19 montre toutes les extrémités d'association de Series\_Period avec d'autres classes.

**Tableau 19 – Extrémités d'association du Modèle contextuel d'offre:: Series\_Period avec d'autres classes**

mult.	Rôle	Nom de type de classe	Description
[1..*]	Point	Point	Association Based On: ESMPClasses::Series_Period.[] ----- ESMPClasses::Point.Point[1..*]

### 6.1.3.12 Time\_Period

Identification d'un intervalle de temps.

IsBasedOn: ESMPClasses::Time\_Period

Le Tableau 20 montre tous les attributs de Time\_Period.

**Tableau 20 – Attributs du Modèle contextuel d'offre::Time\_Period**

mult.	Nom d'attribut	Type d'attribut	Description
[1..1]	timeInterval	ESMP_DateTimeInterval	Date et heure de début et de fin d'un intervalle donné.

## 6.2 Modèle d'assemblage d'offre

### 6.2.1 Présentation du modèle

La Figure 10 présente le modèle.

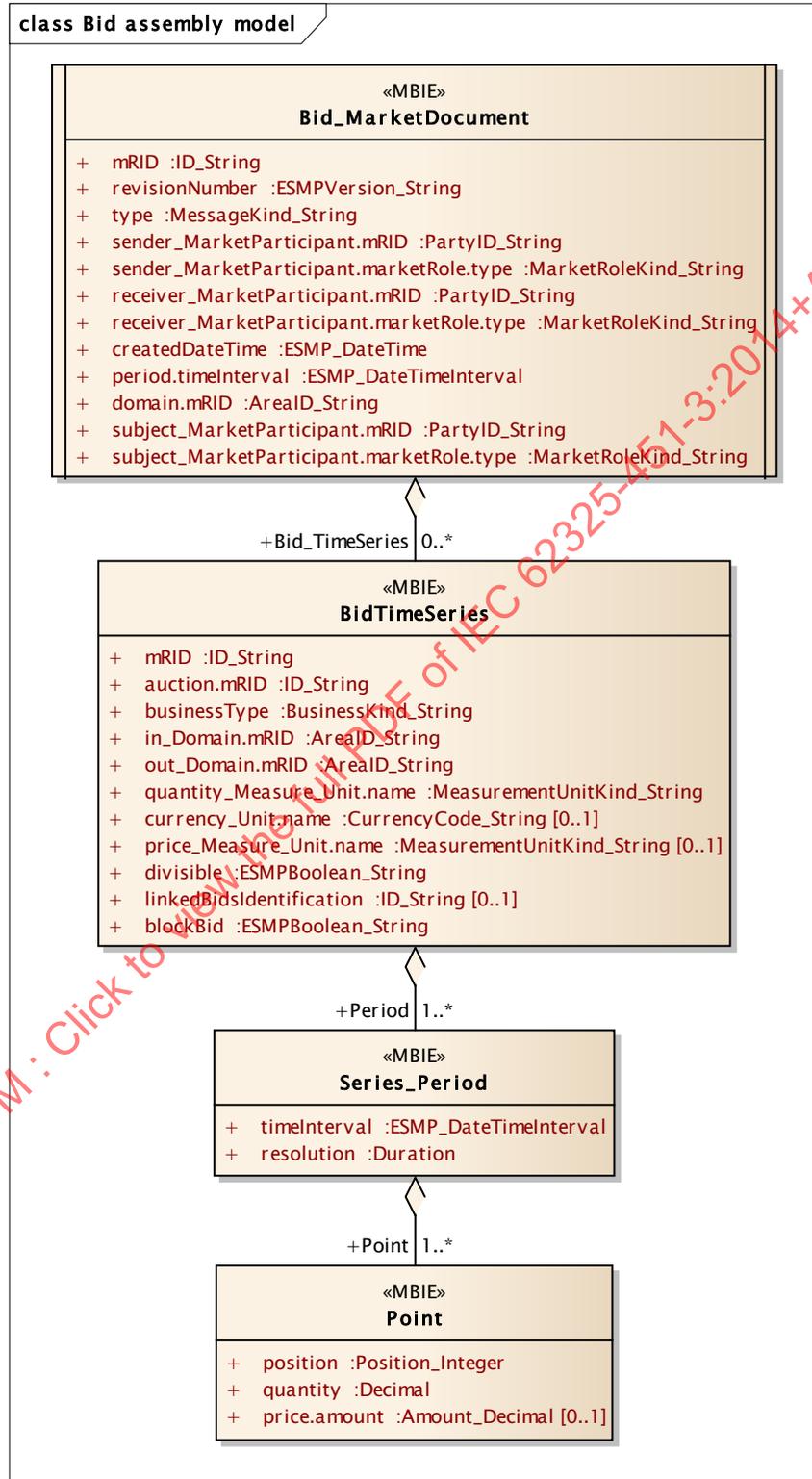


Figure 10 – Modèle d'assemblage d'offre