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Information technology — Multimedia framework (MPEG-21) —

Part 19: Media Value Chain Ontology

AMENDMENT 1: Extensions on time-segments and multi-track audio

Technologies de l'information — Cadre multimédia (MPEG-21) —

Partie 19: Ontologie de chaîne de valeur de média

AMENDEMENT 1: Titre manque

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

A list of all parts in the ISO/IEC 21000 series can be found on the ISO website.

Information technology — Multimedia framework (MPEG-21) —

Part 19: Media Value Chain Ontology

AMENDMENT 1: Extensions on time-segments and multi-track audio

Introduction

Add the following text after the last paragraph:

This document consists of eight Clauses and three Annexes. This technology is described in the following sections of this document:

Model:	The model is described in Clause 6, by way of a narrative description of the Value Chain, its main elements and relations.
Representation:	The MVCO has been formalized as a normative OWL Ontology, the description of which is given in Clause 7. The description consists of listing the classes, the object properties, the datatype properties, and the class individuals. Classes are described by giving the name, an English definition, the class hierarchy, and the restrictions imposed on the class. Annex B contains the normative OWL (XML/RDF) comprising the entire semantics of the elements in the model.
Ontology Use:	An informative section is provided with non-normative descriptions of use, extensions and an API (Annex A).
Extension:	An extension of the MVCO defining additional concepts for the description of the value chain of composite IP Entities in the audio domain is described in Clause 8. Annex C contains the corresponding normative OWL (XML/RDF).

Scope

Replace the text with the following:

This document describes MPEG-21 Media Value Chain Ontology (MVCO). The MVCO can be used to capture knowledge about media value chains and to represent it in a computer readable way, as well as concepts in the domain and the relationships between those concepts.

Clause 3

Replace 3.1.1 to 3.1.61 with:

3.1.1

action

process of performing functions

3.1.2

adaptation

IP Entity that is a Work derived from another Work or Adaptation

3.1.3

AdaptationInstance

IP Entity which is an example of an Identified Adaptation Manifestation

EXAMPLE A file.

3.1.4

AdaptationInstanceCopy

IP Entity that is a copy of an AdaptationInstance

3.1.5

AdaptationManifestation

IP Entity which is an expression of an Adaptation

Note 1 to entry: IP Entity can be an object or an event.

3.1.6

AdaptationManifestationCopy

IP Entity that is a copy of an AdaptationManifestation

3.1.7

adaptor

user who produces an Adaptation and its AdaptationManifestations

3.1.8

anonymous

user whose identity is unknown

3.1.9

broadcast

action that delivers Content to a Device in a point-to-multipoint modality

3.1.10

collective

set of two or more Users

3.1.11

content

set of one or more Content Elements

EXAMPLE A Digital Item.

3.1.12

content element

type of data

Note 1 to entry: Content elements can be Resources, metadata, nested Contents, licenses, IPMP data, IPMP tools and Use Data.

3.1.13

ContentHandler

user who is appointed to act on content on behalf of another User and within the scope and responsibility of that second User's rights

3.1.14

copy

mechanical reproduction of analogue or digital representation of a given IP Entity

Note 1 to entry: In the case of a digital Copy the result is of virtually identical quality while in the case of an analogue Copy the result can vary considerably in quality.

3.1.15

CopyrightException

permission to invoke a right under exceptional circumstance

EXAMPLE When a particular Fact is true.

3.1.16

CreateWork

action of creating a Work without any previous IP Entity

3.1.17

creator

author

user who generates a Work and makes its Manifestations

3.1.18

distribute, verb

action of selling, renting or lending

3.1.19

distributor

user who distributes a Product

3.1.20

device

combination of hardware and/or software that allows a User to execute functions over Content and/or IP Entities

3.1.21

download, verb

action of transferring a file or program from a central computer to a smaller computer or to a computer at a remote location

3.1.22

EndUser

user in a Value Chain who ultimately consumes Content

3.1.23

EndUser Action

action performed by an EndUser

3.1.24

fact

positive proposition

3.1.25

identify

function of assigning a unique signifier that establishes the identity of entities, Devices, Content and Content Elements

3.1.26

instance

IP Entity which is an example of an Identified Manifestation

Note 1 to entry: IP Entity can be an object or an event.

EXAMPLE A file.

3.1.27

instantiator

user who produces an Instance

3.1.28

Intellectual Property

IP

any identifiable product of the mind attributable to any person(s) or legal entitie(s) that can be represented or communicated physically and protectable by copyright or similar laws

3.1.29

interval

temporal entity defined by a start and end point

3.1.30

IP entity

type of IP represented by Content: Work, Adaptation, Manifestation, Instance, Product

3.1.31

MakeAdaptation

action of making an Adaptation

3.1.32

MakeAdaptationManifestationCopy

action of making an AdaptationManifestationCopy

3.1.33

MakeAdaptationInstanceCopy

action of making an AdaptationInstanceCopy

3.1.34

MakeAdaptationInstance

action of making an Instance from an AdaptationManifestation

3.1.35

MakeAdaptationManifestation

action of making an AdaptationManifestation

3.1.36

MakeCopy

action of making a copy

3.1.37

MakeInstance

action of making an Instance from a Manifestation

3.1.38

MakeManifestation

action of making a Manifestation

3.1.39

MakeWorkInstanceCopy

action of making a WorkInstanceCopy

3.1.40

MakeWorkManifestationCopy

action of making a WorkManifestationCopy

3.1.41

MakeWorkInstance

action of making an Instance from a WorkManifestation

3.1.42

MakeWorkManifestation

action of making a Manifestation of a Work

3.1.43

manifestation

IP Entity which is an expression of a Work

Note 1 to entry: IP Entity can be an object or an event.

3.1.44

permission

authorisation from one Rights owner to one or more Users to perform one or more Actions on a given IP Entity

3.1.45

private copy

action of storing Content and hold it private for non commercial purposes

3.1.46

produce, verb

action of making Products

3.1.47

producer

user that makes Products

3.1.48

product

IP Entity that adds value to IP Entities by including them with an appropriate licence for publishing

3.1.49

public communication

action of publicly displaying/performing

EXAMPLE Live performance, radio, television, internet streaming, multicast of Instances and Manifestations, and download.

3.1.50

render

action of converting a Resource to a human-perceivable form

3.1.51

represent

express information in a form that can be processed by a digital or analogue Device

3.1.52

resource

Data that can be processed by a Device

Note 1 to entry: This is only applicable to data whose Representation is not specified by ISO/IEC 21000.

EXAMPLE An MP3 file or an executable code.

3.1.53

reuse, verb

action of using an IP Entity for the creation of another IP Entity

3.1.54

right

ability of performing one or more functions over IP Entities as a consequence of ownership or Permissions

3.1.55

role

defined set of Actions and corresponding conditions attributed to and required of a User

3.1.56

segment

<audio> specified slice of an IP Entity

3.1.57

synchronize, verb

action of concurrently performing/displaying two or more distinct IP Entities each for a different human sense

EXAMPLE Text and audio or video and song.

3.1.58

TimeLine

linear and coherent piece of time in relation to time-based IP Entities

Note 1 to entry: TimeLine can be either abstract (such as the one behind a score) or concrete (such as a signal timeline).

3.1.59

track

single track of a multi-track audio IP Entity which can contain an existing audio IP Entity

3.1.60

use data

data documenting the functions performed by a Device on a Content item and the associated context

3.1.61

Value-Chain

group of interacting Users, connecting (and including) Creators to End-Users

3.1.62

work

IP Entity which is an original or derived creation that retains intellectual or artistic attributes independently of its Manifestations

3.1.63

WorkInstance

IP Entity which is an example of an Identified Manifestation of a Work

Note 1 to entry: IP Entity can be an object or an event.

EXAMPLE A file.

3.1.64

WorkInstanceCopy

IP Entity copy of a WorkInstance

3.1.65

WorkManifestation

IP Entity which is an expression of a Work

Note 1 to entry: IP Entity can be an object or an event.

3.1.66

WorkManifestationCopy

IP Entity copy of a WorkManifestation

4.2, Table 1

Add the following line between “None (default namespace)” and “xsd” lines:

amvco	http://purl.oclc.org/NET/aumvco.owl#

4.2

Add the following sentence immediately following Table 1:

MVCO and AUMVCO ontologies shall be used in accordance with Annexes B and C, respectively.

Clause 7

Add the following clause at the end of Clause 7:

8 MVCO Audio Extension

8.1 General

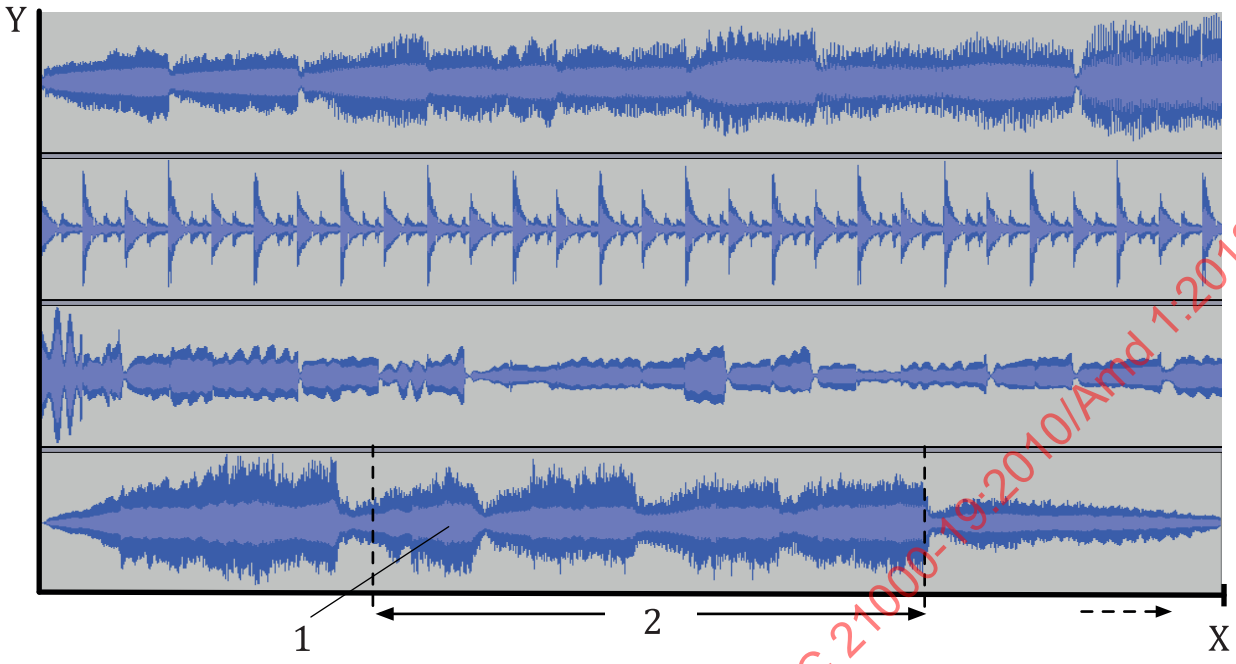
MVCO is intended to handle IP entities of different domains, such as music, still image, video and text. Although it provides the means for the description of composite IP entities, this functionality is currently limited to simply stating which IP entities are part of another IP entity, without specifying them further (i.e., in time). However, there are many cases where a more detailed description of IP components becomes necessary for the accurate tracking of contributions and rights of a composite IP entity, including in the audio domain, with DJ mixes, podcasts, music samples in compositions, and multi-track audio becoming increasingly popular.

This document constitutes an extension of MVCO, in particular of its functionality related to the description of composite IP entities in the audio domain, whereby the components of a given IP entity can be located in time and, for the case of multi-track audio, associated with specific tracks. The motivation is to facilitate rights management of audio IP entities, in particular when reuse of audio IP entities is involved.

In the audio domain, there are several examples where a work is created by reusing existing IP entities. For instance, DJ mixes consist of a sequence of recordings where songs can be mixed together during transitions. In modern music production, especially in electronic dance music (EDM), it is commonplace that parts of other recordings are reused (sampling). Ideally, a rights management system shall be capable of locating these components within such a composite IP entity.

Multi-track audio resources can have audio material on different tracks that are derived from individual IP entities with different rights holders. In order to identify the media value chain in these cases, it is necessary to be able to represent individual tracks in the metadata accordingly.

The concept of time segments and tracks for the location of IP entities is illustrated in Figure 6.



X time on TimeLine

Y tracks

1 segment

2 interval

NOTE 1 Segments are within an interval on a TimeLine.

NOTE 2 Segments can exist on specified tracks.

Figure 6 — Visualized multi-track audio

Widespread adoption of multi-track formats such as the MPEG-A: Interactive Music Application Format (ISO/IEC 23000-12) raises the issue of rights monitoring for fair and transparent royalties payment with respect to reusable tracks or even segments of them in derivative new works. This document for IP entities in the audio domain addresses this issue by facilitating complex matrix-based rights monitoring on time vs tracks throughout the media value chain. It defines concepts for the representation of time segments and tracks of multi-track audio IP entities. Segments and tracks may contain IP entities that can be treated as conventional IP entities as defined in MVCO. The introduction of an additional action "ReuseIPEntity" in MVCO enables granting permissions for the reuse of existing IP entities in order to create new derivative composite IP entities.

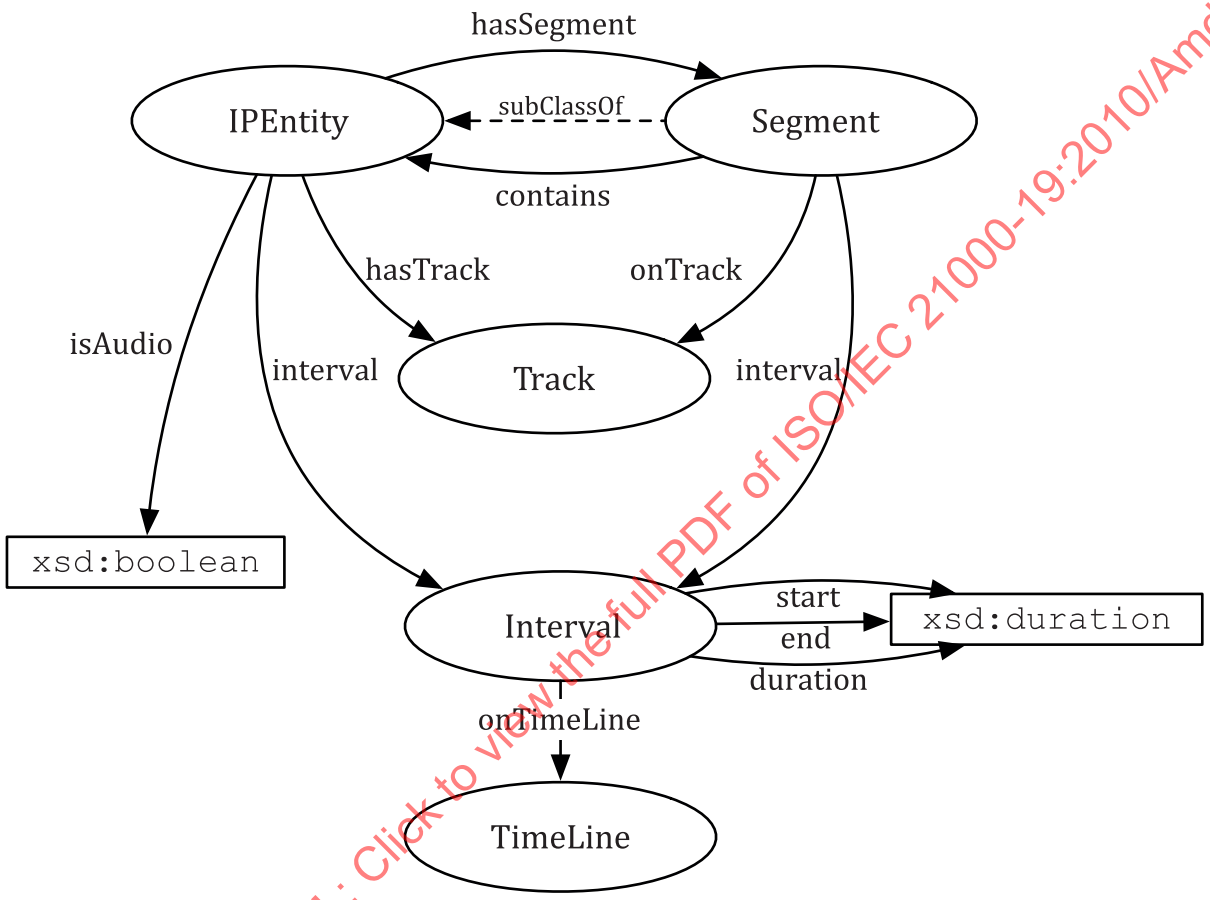
8.2 Description of relations for IP Entity Segments and Tracks

Figure 7 illustrates the relations for the representation of composite IP Entities in the audio domain that reuse other existing IP Entities. The reused IP Entities may exist on specified Segments and, in the case of multi-track IP Entities, on specified Tracks. An IP Entity (object) has a certain Segment. A Segment is in a part-of relationship with the IP Entity linked with the hasSegment property, and its class is subsumed by IPEntity. The Segment, in turn, "contains" another IP Entity, which represents one of the components the composite IP Entity is made up of. Since we are dealing with IP Entities in the audio domain, we can associate a timeline with it. The property interval links an IP Entity to an Interval. An Interval is defined, similarly to Intervals in the Time Ontology in OWL[1)], as a temporal entity with extent. The duration of the audio resource is specified with the duration property linking to an explicit datatype. The property onTimeLine relates the Interval with a timeline. In order to express

1) https://www.w3.org/TR/owl-time/

that the Segment exists within a certain Interval on the same timeline, in a similar fashion an Interval is related to the Segment using the interval property. The beginning and end of an Interval are specified through an explicit datatype using the properties start and end, respectively. The interval is related to the timeline with the onTimeLine property. Since Segment is a subclass of IPEntity, it is also possible to associate the Segment with its own timeline. The timeline class is based on the timeline model of the Timeline Ontology[2)].

For the case of multi-track resources, an IP Entity is related to Tracks with the hasTrack property. To express that a Segment exists on a certain Track, it is linked to the respective Track using the onTrack property.



NOTE Segments can also be associated with individual Tracks of a multi-track audio IP Entity.

Figure 7 — Classes and relationships for the representation of IP Entities that contain other existing IP Entities

8.3 Description of MVCO Audio Extension Classes

8.3.1 General

The ontology URI shall be `http://purl.oclc.org/NET/aumvco.owl`.

2) http://motools.sourceforge.net/timeline/timeline.179.html

8.3.2 Actions and Rights

class	**Reuse**	
rdfs:comment	The Action of using an IP Entity for the creation of a composite IP Entity	
rdfs:subClassOf	owl:Action	
Restrictions	**Expression**	**Meaning**
	⊆ (∃ actedOver IPEntity)	An Adaptation is made over some Work.
	⊆ (∃ rightGivenBy Creator)	Only Creators give the right to use an IP Entity.

8.3.3 Segments and Multi-Track Audio

class	**Segment**	
rdfs:comment	A segment of an IP Entity that may contain another IP Entity	
rdfs:subClassOf	mvco:IPEntity	
in-domain-of	interval (Interval) contains (IPEntity)	
Restrictions	**Expression**	**Meaning**
	⊆ ∀ segmentTime Interval ⊆ segmentTime exactly 1	A Segment has one and only one interval on the parent IPEntity's timeline associated with it.

class	**Track**
rdfs:comment	A track of a multi-track audio IP Entity that can contain another IP Entity
rdfs:subClassOf	owl:Thing

class	**TimeLine**
rdfs:comment	Represents a linear and coherent piece of time; it can be either abstract (such as the one behind a score) or concrete (such as a signal timeline).
rdfs:subClassOf	owl:Thing

class	**Interval**
rdfs:comment	A temporal entity with extent defined by a start end end point.
rdfs:subClassOf	owl:Thing
In-domain-of	timeline (TimeLine)

8.4 Reference of properties

Table 5 lists the object properties in the MVCO Audio Extension, including their features (F stands for functional). In the columns for domain and range *IPEntity* is assumed to represent an IP Entity in the audio domain.

Table 5 — Object properties in the MVCO Audio Extension

Relation	Definition	Domain	Range	P	Inverse
`contains`	Specifies an IP Entity contained in a Segment	Segment	IPEntity		
`hasSegment`	Specifies a Segment of an audio IP Entity	IPEntity	Segment		
`hasTimeLine`	Relates an audio IP Entity to its timeline	IPEntity	Interval	F	
`interval`	Relates an IP Entity to an Interval	Segment	Interval	F	

Table 5 *(continued)*

Relation	Definition	Domain	Range	P	Inverse
onTimeLine	Relates an Interval to a TimeLine	Interval	TimeLine	F	
onTrack	Relates a Segment to a Track	Segment	Track		
segmentOf	Relates a Segment to a composite IP Entity	IPEntity	Segment	F	*hasSegment*

Some additional datatype properties also have been defined in the MVCO Audio Extension. These are listed in Table 6, along with their definition, domain, and type (the kind of value it can assume, which is one of the XML Schema types).

Table 6 — Datatype properties in the MVCO Audio Extension

Property	Domain	Type	Definition
duration	Interval	xsd:duration	Specifies the duration (length in time) of an interval
end	Interval	xsd:duration	Specifies the end of a time interval
isAudio	IP Entity	xsd:boolean	Specifies an IP Entity in the audio domain
start	Interval	xsd:duration	Specifies the beginning of a time interval
trackNumber	Track	xsd:integer	Specifies an identifier for a track of a multi-track IP Entity

A.1.3.13

Add the following subclauses after A.1.3.13:

A.1.3.14 Operation to link a composite IP Entity to one of its components

Interface	MVCOInterface
Method Syntax	
+ LinkCompositeIP(String sCompositeIP, String sComponentIP): Boolean	
Java sample code	
`public boolean LinkCompositeIP(String sCompositeIP, String sComponentIP);`	
Method description	
This method is employed to link a composite IP Entity created by an authorized user to one of its component IP Entities via the "isMadeUpOf" property.	
Parameters	
sCompositeIP	Composite IP Entity
sComponentIP	Component IP Entity of the composite IP Entity
Return value	
True on success	

A.1.3.15 Operation to specifying an IP Entity within a segment of another IP Entity in the audio domain

Interface	MVCOInterface
Method Syntax	
+ CreateSegment(String sParentIP, String sSegmentIP, String sStart, String sEnd): Boolean	
Java sample code	
`public boolean CreateSegment(String sParentIP, String sSegmentIP, String sStart, String sEnd, String sTrack);`	

Method description	
This method is employed to specify an IP Entity within a segment of another IP Entity in the audio domain.	
Parameters	
sParentIP	Composite IP Entity
sSegmentIP	Component IP Entity of the composite IP Entity
sStart	Start of segment on the timeline in seconds
sEnd	End of segment on the timeline in seconds
sTrack	Track number of a multi-track audio IP Entity associated with the segment
Return value	
True on success	

A.1.3.16 Operation to set the media domain of an IP Entity to "audio"

Interface	MVCOInterface
Method Syntax	
+ SetDomainAudio(String sIP, String sTimeLine): Boolean	
Java sample code	
`public boolean SetDomainAudio(String sIP, String sSwitch);`	
Method description	
This method is employed to set the media domain of an IP Entity to "audio" and create an associated TimeLine by setting the value for "isAudio" to True.	
Parameters	
sIP	IP Entity
sSwitch	Switch to set audio domain to True
Return value	
True on success	

A.1.3.17 Operation to define a track of a multi-track audio IP Entity

Interface	MVCOInterface
Method Syntax	
+ CreateTrack(String sParentIP, Integer iTrackNumber): Boolean	
Java sample code	
`public boolean CreateTrack(String sParentIP, Integer iTrackNumber);`	
Method description	
This method is employed to define a track of a multi-track audio IP Entity, and specify the track number.	
Parameters	
sParentIP	IP Entity
iTrackNumber	The track number
Return value	
True on success	

A.1.3.18 Operation to return a list of components of a composite IP Entity

Interface	MVCOInterface
Method Syntax	
+ GetComponents(String sParentIP): Vector<String>	

Java sample code	
`public Vector<String> GetComponents(String sCompositeIP);`	
Method description	
This method returns IP Entities that are components of a composite IP Entity.	
Parameters	
sCompositeIP	Composite IP Entity
Return value	
A list of IP Entities.	

A.1.3.19 Operation to registers a new user collective in the model

Interface	MVCOInterface
Method Syntax	
+ CreateCollective(String sName): Boolean	
Java sample code	
`public boolean CreateCollective(String sName);`	
Method description	
This method registers a new user collective in the model.	
Parameters	
sName	Name of the user collective
Return value	
True on success.	

A.1.3.20 Operation to add a user to a user collective

Interface	MVCOInterface
Method Syntax	
+ CreateTrack(String sParentIP, Integer iTrackNumber): Boolean	
Java sample code	
`public boolean AddUserToCollective(String sUser, String sCollective);`	
Method description	
This method is employed to add a user to a user collective.	
Parameters	
sUser	Name of the user
sCollective	Name of the user collective
Return value	
True on success	

A.1.3.21 Operation to list users of a user collective

Interface	MVCOInterface
Method Syntax	
+ ListCollectiveUsers(String sCollective): Vector<String>	
Java sample code	
`public Vector<String> ListCollectiveUsers(String sCollective);`	
Method description	
This method is employed to list users of a user collective.	
Parameters	
sCollective	Name of the user collective
Return value	
List of users	

A.4

Add the following subclauses after A.4:

A.5 Usage example for Audio Segments

Consider a podcast, for instance a program made available in digital format that consists of several music pieces. A podcast may be defined as a single IP Entity. However, the podcast consists of a number of media items such as songs with individual property rights, which are played successively.

In this example, the podcast is represented by the Manifestation *Bobmanifestation*. Bob is the creator of the respective Work (not shown), hence it is stated that the rights owner of the podcast is the user *Bob*. It is stated that, within the time interval of 122.1 s to 324.3 s, a Manifestation of Alice's Work is part of the program. For Bob to acquire the appropriate permission for this action, Alice issues the permission (*License1*) for Bob to reuse her IP Entity (*ActionTemplate1*). In order to represent the time information, an Interval (*Interval1)* spanning the duration of the podcast is associated with *Bobmanifestation* using the duration property. *Interval1* is related to a timeline (*BobTimeLine)* with the onTimeLine property. The individual *BobSegment* represents the segment of *BobManifestation* in which *AliceManifestation* is present: *BobSegment* "has" the segment *BobSegment*, while *BobSegment* "contains" *AliceManifestation*. The segment is associated with an Interval (*Interval2*) which is characterized by a start and end point specified with the data properties start and end. To express that this segment exists on the same timeline as the podcast (*BobManifestation*), the property hasTimeLine links *Interval2* with *BobTimeLine*.

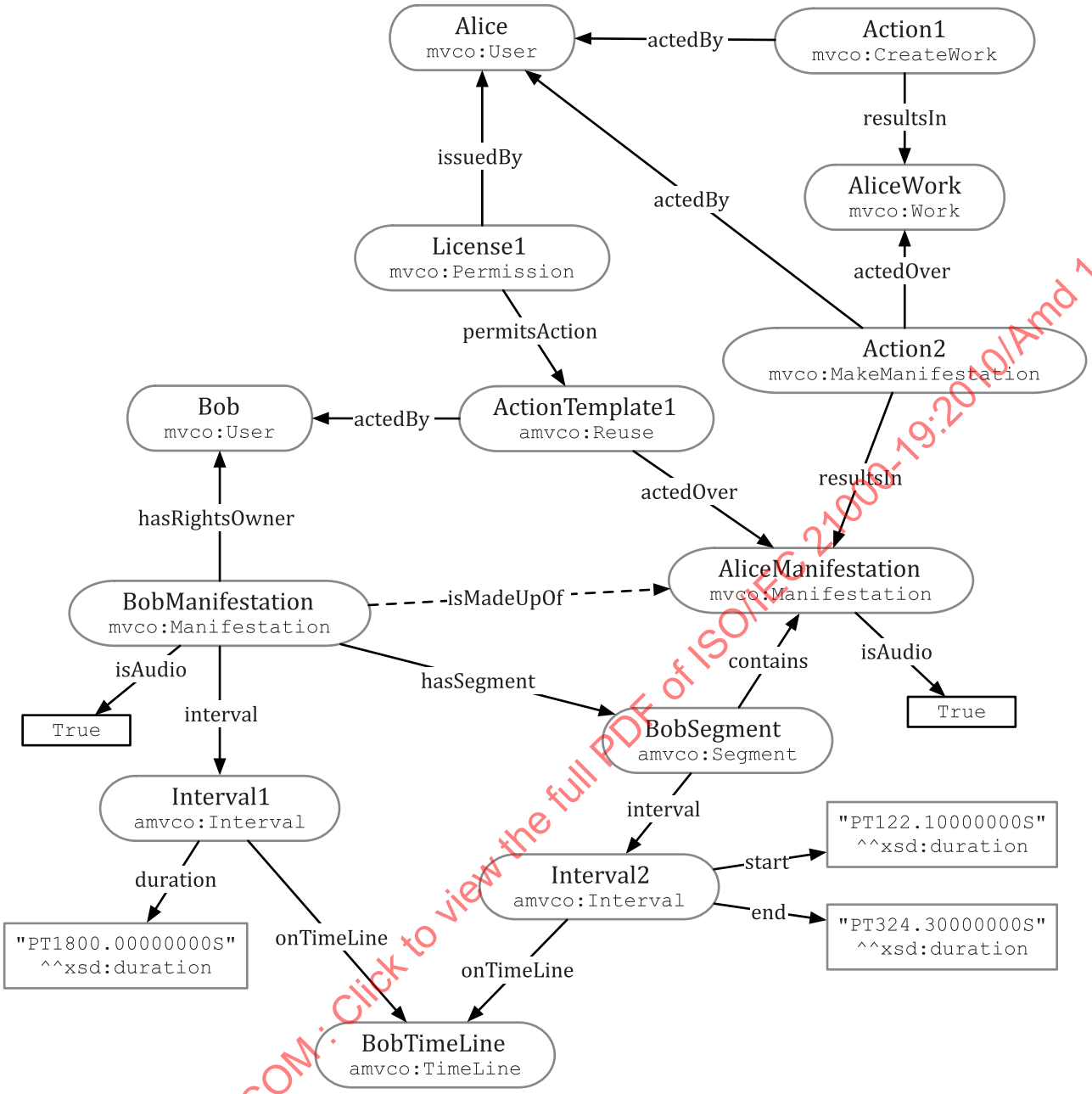


Figure A.5 — Description of a Segment of an audio IP Entity containing an existing IP Entity

A.6 Usage example for Multi-Track Audio

Consider a music resource that is distributed in a multi-track format. The individual tracks (or segments on those tracks) have different media value chains. For instance, the user *Bob* may create a 4 minutes long music piece (*BobManifestation2)*, which uses a vocal recording by *Alice* (*AliceManifestation2*) on a separate Track within a 210 s interval starting at 10 s. Expressing this with the MVCO Audio extension is done in a similar fashion as in the podcast example described in A.5. However, the additional information with regards to tracks is expressed by first stating that *BobManifestation2* "has" the Track *BobTrack1*. The Track individual is also specified by an integer identifier "1" using the property trackNumber. Then, the segment containing *AliceManifestation2* is associated with *BobTrack1* using the property onTrack.

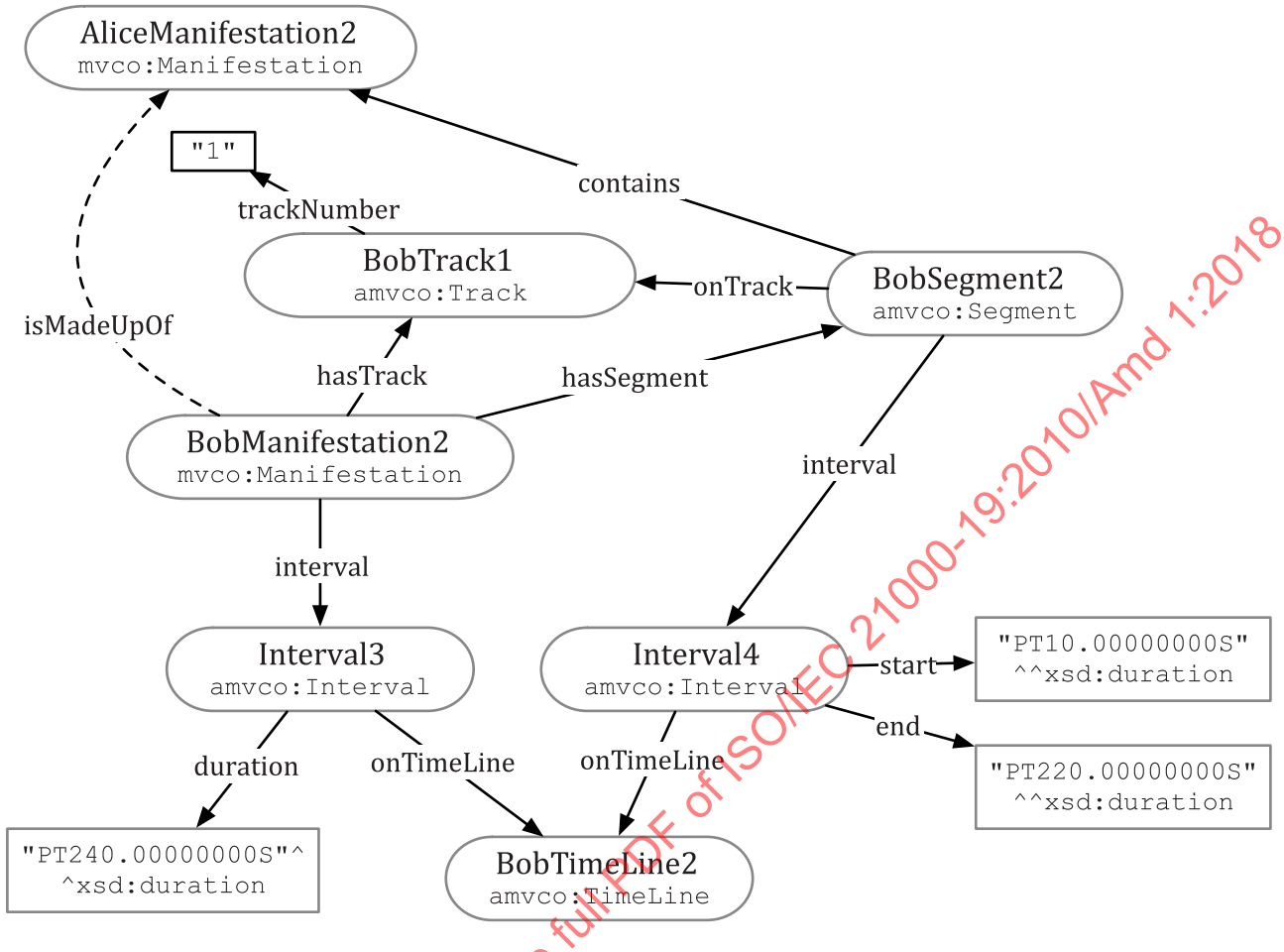


Figure A.6 — Description of a Segment of a multi-track audio IP Entity containing an existing IP Entity

Specifying tracks and segments that contain IP Entities enables the user to:

— answer queries about the components of composite IP Entities;

— answer queries about which kind of Role a User plays with respect to a certain IP Entity of a particular track or time segment;

— answer queries about provenance, rights and permissions concerning individual parts of a composite IP Entity covering the complete media value chain.

Annex B

Add the following annex after Annex B:

Annex C
(normative)

MVCO Audio Extension OWL

```
<?xml version="1.0"?>


<!--
 This software was originally developed by Thomas Wilmering and Panos Kudumakis
 (QMUL) in the course of development of the ISO/IEC 21000-19 (Media Value
 Chain Ontology) Amd 1 Extensions on Time-Segments and Multi-Track Audio standard
 for reference purposes and its performance may not have been optimized.
 This software module is an implementation of one or more tools as specified by
 the ISO/IEC 21000-19 Amd 1 Extensions on Time-Segments and Multi-Track Audio.
 ISO/IEC gives users free license to this software module or modifications thereof
 for use in products claiming conformance to audiovisual and image-coding related
 ITU Recommendations and/or ISO/IEC International Standards. ISO/IEC gives users
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 QMUL retains full right to modify and use the code for its own purpose,
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 using the code for products that do not conform to audiovisual and image-coding
 related ITU Recommendations and/or ISO/IEC International Standards. This
 copyright notice must be included in all copies or derivative works. Copyright
 (c) ISO/IEC 2016.
 -->



<!DOCTYPE rdf:RDF [
    <!ENTITY owl "http://www.w3.org/2002/07/owl#" >
    <!ENTITY xsd "http://www.w3.org/2001/XMLSchema#" >
    <!ENTITY mvco "http://purl.oclc.org/NET/mvco.owl#" >
    <!ENTITY avco "http://purl.oclc.org/NET/aumvco.owl#" >
    <!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#" >
    <!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#" >
]>



<rdf:RDF xmlns="http://www.semanticweb.org/owl/owlapi/turtle#"
     xml:base="http://www.semanticweb.org/owl/owlapi/turtle"
     xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
     xmlns:owl="http://www.w3.org/2002/07/owl#"
     xmlns:mvco="http://purl.oclc.org/NET/mvco.owl#"
     xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
     xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
     xmlns:avco="http://purl.oclc.org/NET/aumvco.owl#">
    <owl:Ontology rdf:about="http://purl.oclc.org/NET/aumvco.owl">
        <rdfs:comment xml:lang="en">AuMVCO. Media Value Chain Ontology Audio
Extension</rdfs:comment>
        <owl:imports rdf:resource="http://purl.oclc.org/NET/mvco.owl"/>
    </owl:Ontology>

    <!--

///////////////////////////////////////////////////////////////////////////////
/////
    //
```