
**Content Delivery and Rights
Management — Functional requirements
for identifiers and descriptors for use in
the music, film, video, sound recording
and publishing industries**

*Mise à disposition de contenus et gestion de droits — Spécifications
fonctionnelles des identificateurs et descripteurs à l'usage des
industries musicales, cinématographiques, vidéographiques,
phonographiques et de l'édition*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 21449 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 9, *Identification and description*.

Introduction

This Technical Report was prepared by Tom Delsey for organizations involved in the administration of identifier systems and projects within ISO/TC 46, SC 9.

Recent advances in digital technology have prompted significant change within the music, film, video, sound recording and publishing industries. These so-called “content” industries are all actively engaged in adapting conventional modes of production and distribution to exploit new technologies for the creation, storage and communication of information. Major industry players are repositioning themselves in relation not only to their traditional competitors but to new entrants in the field as well, many of which have emerged from other industries within the broader information/communications sector. The new technologies and a new competitive environment together are driving industries right across that broader sector to develop new business models in order to maintain and strengthen their respective positions in the marketplace.

Within this new technological and economic environment, infrastructure has become a key factor for strategic positioning. It is no longer sufficient to have in place an infrastructure designed to support a specific industry; increasingly all industries within the information/communications sector rely on a technological infrastructure that is cross-sectoral and, in effect, global in design and scope. In that context, standardization becomes an issue of much greater significance. Within the content industries, increased recognition of the strategic importance of standardization is evidenced by a growing number of industry-wide and cross-sectoral initiatives aimed at developing the models, standards and protocols that are needed to support electronic commerce more efficiently and effectively. The development of a Multimedia Framework (MPEG-21) by the joint ISO/IEC Moving Picture Expert Group is the most recent, and perhaps the most far-reaching of such initiatives.

As one element of the new multimedia infrastructure, standardized mechanisms for the identification and description of digital items are becoming increasingly important as a means of supporting content-related business transactions on a cross-sectoral and global basis. Within the publishing and sound recording industries, standard identifiers have been used for decades as a means of facilitating product distribution and remuneration. With the transition to networked delivery of digital content, there is a growing need for efficient and reliable mechanisms for identifying not only the product as such, but the intellectual property embodied in the product as well. Standard identifiers play an increasingly important role in facilitating and tracking a multitude of transactions conducted throughout the lifecycle of a digital item and across the spectrum of the supply chain. As a result, issues relating to integrity, scalability and flexibility in the design of standard identifiers take on new importance, and “interoperability” becomes a key consideration.

From a business perspective, the interest of the content industries in networking infrastructure stems primarily from a recognition of the essential role that infrastructure will play in future exploitation of market potential. Digital item identification and description will serve as key elements of that infrastructure, and will form an integral part of the technology that will support efficient business transactions and protect commercial rights and interests in a networked environment.

From an operational perspective, the effective design and application of standards for digital item identification and description will be critical for the support of activities throughout the supply chain, from content creation and production through to distribution and the tracking of usage. To be fully effective in a multimedia environment, digital item identifiers and descriptions will have to function on an all-inclusive scale. They will have to encompass a broader range of content than they do currently; they will have to differentiate between product and property; and they will have to be applied at multiple levels of aggregation and decomposition. Scalability and flexibility will be essential. Above all, digital item identifiers and descriptions will have to function in a multifaceted, cross-sectoral environment where interoperability is critical.

This Technical Report was developed to provide the content industries with a shared frame of reference for describing the nature of the business and information transactions that take place between and among them in the course of production, distribution, and rights management, and a structured statement of requirements to guide the further development of identification and description schema in support of those functions.

Content Delivery and Rights Management — Functional requirements for identifiers and descriptors for use in the music, film, video, sound recording and publishing industries

1 Scope

The business and information architectures outlined in this Technical Report are designed specifically to assist organizations involved in the development and administration of identification and description schemas for intellectual content and products in understanding the relationships between their organizations and other content industry players involved in production, distribution, and rights management. This Technical Report does not preclude the possibility of other perspectives on the same environments or other business and information architectures designed to serve other purposes.

The functional requirements for identifiers and descriptors set out in this Technical Report are centred on intra- and inter-industry business transactions relating to production, distribution, and rights management in the content industries (i.e., the music, film, video, sound recording and publishing industries).

The information model presented in this Technical Report is focussed specifically on the requirements of the originators, producers, distributors, registration authorities, and rights administrators involved in the development and delivery of intellectual and artistic content. It does not reflect business functions such as marketing and archiving, nor does it directly reflect transactions between secondary service providers such as libraries, archives and museums.

2 Approach

This analysis of functional requirements for identifiers and descriptors, for use in the content industries, is set out in four segments.

The first segment defines a **conceptual business architecture** that identifies the functions performed by individuals and organizations involved in the production and distribution of intellectual or artistic content and the management of rights associated with that content, and highlights the key business relationships between those functions. The conceptual business architecture provides a perspective on the business environment designed specifically to assist the organizations responsible for the development and administration of identification and description schemas for intellectual content and products in understanding the relationships between their organizations and other content industry players involved in production, distribution, and rights management. Details of the conceptual business architecture are documented in Clause 4.

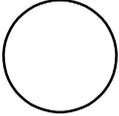
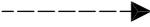
The second segment defines an **information architecture** that provides a structured representation of, and definitions for, the key entities (i.e., the objects, agents, activities, events, etc.) involved in each of the business functions and the primary relationships between those entities. Details of the information architecture are documented in Clause 5.

The third segment identifies and defines the **attributes and relationships** associated with each of the entities identified in the information architecture. Details of the attribute and relationship definitions are documented in Annex A.

The fourth segment defines a generic set of **user transactions** and maps the attributes and relationships associated with the three entities of primary focus in the information architecture (*content*, *product* and *property*) to those transactions. The mapping of attributes and relationships to transactions is intended to

serve as the basis for defining a common set of descriptors required for the registration of content, products and property. Details of the user transaction definitions and mapping are documented in Clause 7.

3 Diagramming Conventions

Conceptual Business Architecture (Figure 1)	
	A circle represents a function performed by an individual or organization operating within the overall context of production, distribution, and rights management.
 	The lines and arrows between the circles represent transactions between individuals and organizations performing the designated functions. Transactions of secondary relevance are represented by dashed arrows.

Information Model (Figures 2, 3 and 4)	
	A rectangle represents an entity (i.e., an object, agent, activity, event, etc.) about which information is needed in order to support an intra- or inter-industry business function.
	The lines and arrows connecting the rectangles represent relationships between the designated entities.
	A dashed-line rectangle surrounding a group of two or more entities indicates that a relationship represented by an arrow contiguous with the dotted line may apply to any and/or all of the entities represented within the rectangle.
	A block arrow functions as a page connector. The connector serves as a shorthand method of linking an entity to all related entities represented in the diagram referenced by the block arrow.

4 Conceptual Business Architecture

The purpose of the conceptual business architecture depicted in Figure 1 is to identify the functions performed by individuals and organizations involved in the production and distribution of intellectual or artistic content and the management of rights associated with that content, and to highlight the key business relationships between those functions. The architecture outlined here provides a perspective on the business environment designed specifically to assist the organizations responsible for the development and administration of identification and description schemas for intellectual content and products in understanding the relationships between their organizations and other content industry players involved in production, distribution, and rights management. It does not preclude the possibility of other perspectives on the same business environment or other conceptual business architectures designed to serve other purposes.

The diagram depicts nine distinct business functions (each of which is defined in Table 1). The business functions represent roles performed by individuals and organizations within the business environment. Any individual or organization may perform more than one designated function or role. Any function may be performed by a number of individuals and/or organizations. Functions may be performed simultaneously, in parallel or sequentially.

The transactions depicted in the diagram reflect business dealings that take place between individuals and organizations in the course of performing the designated functions. The diagram reflects all intra- and inter-industry transactions of relevance within the context of content production, distribution, and rights

management. However, for the purposes of focusing further analysis of functional requirements, a distinction has been made between transactions of primary relevance from the perspective of organizations providing registration services for content and products and those that are of secondary relevance from that perspective. Transactions considered to be of secondary relevance include those that currently fall outside the normal pattern of business associated with content production, distribution, and rights management, and those that involve no direct dependency on the services or information provided by the registration authorities.

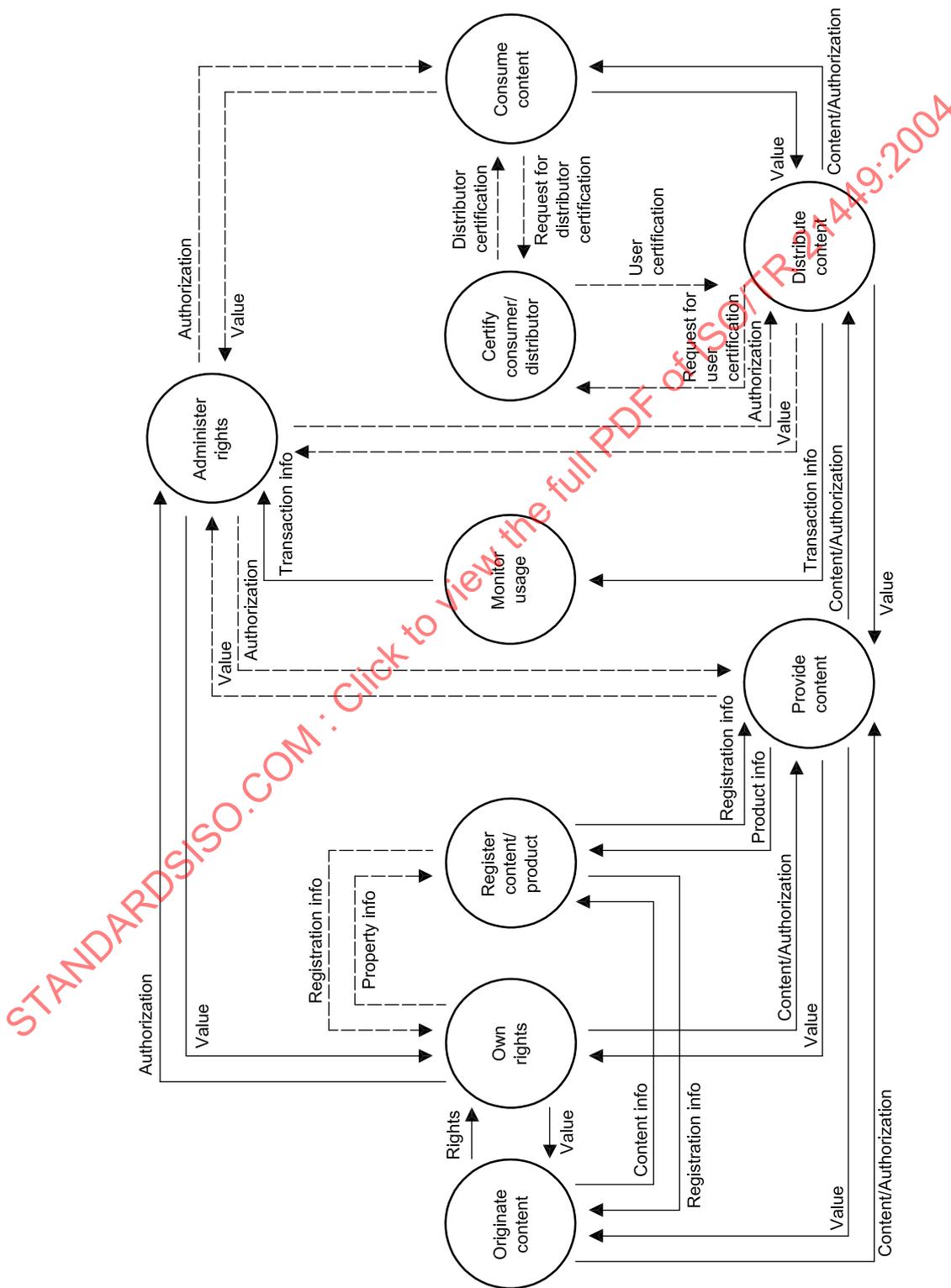


Figure 1 — Conceptual Business Architecture for Content Delivery and Rights Management

Table 1 — Conceptual Business Architecture – Role Definitions

Function	Scope
Originate Content	The creation, expression, or production of intellectual or artistic content. Includes the creation of content by writers, composers, artists, etc. (as authors of literary, musical and artistic works) and by film and video producers (as authors of audiovisual works), the expression of content by performers, and the production of content by recording companies (as producers of phonograms) and broadcasters (as producers of broadcast signals), etc.
Own Rights	The ownership of legal title to a right or rights in a property. Includes ownership by first owners (authors, producers, performers, etc.), ownership by assignees, transferees, successors in title, etc.
Register Content/Product	The registration of content, products or property. Includes registration by authorities and agencies responsible for the registration of monographic and serial publications, literary, musical, artistic and audiovisual works, sound recordings, broadcast signals, etc.
Provide Content	The production and release of a product. Includes production and release of products by publishers, record producers, film and video producers, multimedia producers, etc.
Monitor Usage	The monitoring of distribution and usage of products. Includes monitoring the distribution of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Administer Rights	The administration of intellectual property rights by, or on behalf of, an owner. Includes the direct administration of rights by the owner, the authorized administration of rights on behalf of the owner by agents, executors, publishers, film producers, collecting societies, etc., and the administration of rights by boards, trustees, etc. established by law to act on behalf of rights owners.
Certify Consumer/Distributor	The certification or authentication of consumers or distributors of products. Includes certification or authentication of consumers or distributors of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Distribute Content	The distribution of a product. Includes distribution of publications, sound recordings, films, video recordings, multimedia products, etc.
Consume Content	The consumption of intellectual or artistic content. Includes purchase, licensing, use, etc. by consumers of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.

5 Information Architecture

The information architecture for content delivery and rights management is depicted in a set of three interconnected entity-relationship diagrams (Figures 2, 3 and 4). Each of the diagrams focuses on a major business function: rights management (Figure 2); content production (Figure 3), and content distribution (Figure 4).

The entity-relationship diagrams provide a structured representation of the key entities (i.e., the objects, agents, activities, events, etc.) involved in each of the business functions and the primary relationships between those entities. Each diagram is accompanied by a table containing definitions for the entities depicted in the diagram.

The legal framework for the management of intellectual property rights depicted in Figure 2 is based on an analysis of four key documents: the *Berne Convention*, the *Rome Convention*, the *WIPO Copyright Treaty*, and the *WIPO Performances and Phonograms Treaty*. Those documents reflect international agreements on intellectual property rights and serve as the basis for copyright and neighbouring rights legislation in more than 140 countries throughout the world.

Figure 2 is centred on the *property* (i.e., the work, performance, phonogram, broadcast signal, etc.) and its relationships (both direct and indirect) with the various objects, agents, activities, events, *et cetera* that form the legal framework for the management of intellectual property rights. Table 2 defines the entities shown in Figure 2.

Figure 3 is centred on the *product* (i.e., the publication, sound recording, film, video recording, etc.) and its relationships (both direct and indirect) with the various objects, agents, activities, events, *et cetera* that come into play in the production cycle of content delivery. Table 3 defines the entities shown in Figure 3.

Figure 4 is centred on the *product* as well, and highlights the relationships (both direct and indirect) of the *product* with the various objects, agents, activities, events, *et cetera* that come into play in the distribution cycle of content delivery. Table 4 defines the entities shown in Figure 4.

Although each business function (rights management, production and distribution) has been represented in a separate entity-relationship diagram, all three diagrams are linked through the *property*, *product*, *authorization* and *use* entities. Each diagram can therefore be viewed as a segment of a larger diagram representing the information architecture for content delivery and rights management as a whole.

The diagrams depicting the information architecture also have a direct relationship with the conceptual business architecture (Figure 1). The entities representing agents in Figures 2, 3 and 4 (*originator*, *owner*, *agent*, *competent authority*, *user*, *producer*, *creator*, *registration authority*, *distributor*, *monitoring service*, *certification authority*, and *consumer*) parallel the business functions depicted in Figure 1.

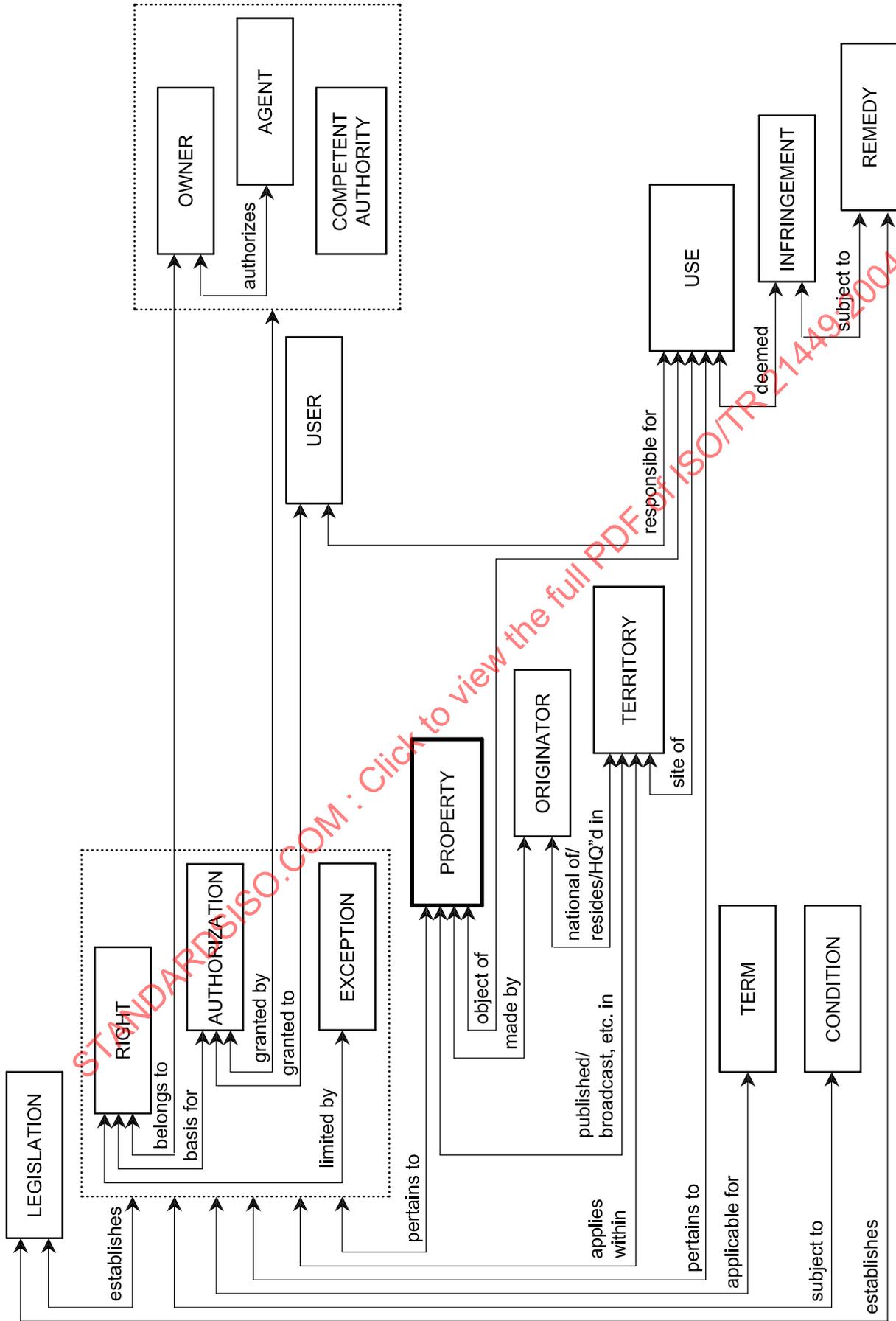


Figure 2 — Legal Framework for Intellectual Property Management and Protection

Table 2 — Entity Definitions

Entity	Definition
Legislation	An enactment of a legislative body. Includes laws, statutes, orders, directives, regulations, etc. established pursuant to a law relating to intellectual property.
Right	An entitlement established by legislation. Includes both economic and moral rights pertaining to all forms of intellectual property (literary, musical, artistic and audiovisual works, performances, phonograms, broadcast signals, etc.).
Authorization	Permission granted by a rights owner, the owner's agent, or a competent authority. Includes written permissions, licences, contractual agreements, compulsory licences, etc.
Exception	An exclusion or limitation established by legislation. Includes exclusions of designated classes of intellectual property, limitations of designated rights, exceptions for designated non-infringing uses, etc.
Owner	An individual or organization holding legal title to a right or rights in a property. Includes first owners (authors, producers, performers, etc.), assignees, transferees, successors in title, etc.
Agent	An individual or organization authorized by an owner to act on his/her behalf. Includes literary agents, publishers representing anonymous authors, executors, collective societies, etc.
Competent Authority	A body authorized by legislation to act on behalf of an owner. Includes boards, trustees, etc. established by law, order, regulation, etc.
User	An individual or organization utilizing a property. Includes users authorized by licence, contract, permission, etc., users operating within the parameters of an exception, users engaged in infringing use.
Property	An entity to which property rights apply. Includes literary, musical, artistic and audiovisual works, performances, phonograms, broadcast signals, etc.
Originator	An individual or organization responsible for the creation or production of a property. Includes authors (as creators of literary, musical and artistic works), performers (as creators of performances), film and video producers (as authors of audiovisual works), recording companies (as producers of phonograms), broadcasters (as producers of broadcast signals), etc.
Territory	A geographical area belonging to, or under the jurisdiction of, a governmental authority.
Term	A period of time during which a right is enforceable. Includes fixed periods linked to a designated event (e.g., the production, first publication, first broadcast, etc. of a property), periods extending from a designated event (e.g., the creation of a property) through a fixed length of time following a subsequent event (e.g., the death of an author), etc.
Condition	A stipulation, proviso, or limitation. Includes conditions attached to the enjoyment of a right or the exercise of an authorization or exception, payment of a royalty or tariff, etc.
Use	An act entailing utilization of a property. Includes reproduction, adaptation, translation, public performance, communication to the public, broadcasting, distribution, rental, etc.
Infringement	An encroachment or trespass on a right. Includes unauthorized use, use that exceeds the limitations stipulated in a licence, use that exceeds the parameters established for an exception, etc.
Remedy	A legal means to recover a right or to prevent or obtain redress for an infringement. Includes penalties established in law, judgments issued by the courts, settlements agreed to by the contestants in a dispute, etc.

Table 3 — Content Production — Entity Definitions

Entity	Definition
Producer	An individual or organization responsible for the making of a product. Includes publishers, record producers, film and video producers, etc.
Production	The act of making a product. Includes production of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Release	The act of making a product available to the public. Includes publication, release of a sound recording, film, or video, broadcasting, communication to the public via electronic networks, etc.
Authorization	Permission granted by a rights owner, the owner's agent, or a competent authority. Includes written permissions, licences, contractual agreements, compulsory licences, etc.
Product	An object resulting from an act of production. Includes monographic and serial publications, sound recordings, film, video recordings, multimedia products, etc. Includes intermediate as well as final products. Includes product components and aggregate products as well as single-entity products.
Creator	An individual or organization responsible for the intellectual or artistic creation of content. Includes writers, composers, artists, performers, producers of sound recordings and films, etc.
Creation	The act of originating intellectual or artistic content. Includes the creation of literary, musical, artistic and audiovisual works, the performance of such works, the original fixation of sound in a recording medium, etc.
Content	The intellectual or artistic substance of a product. Includes literary, musical, artistic and audiovisual works, the performance of such works, the fixation of sound in a recording medium, etc. Includes content components and aggregate content as well as single-entity content.
Registrant	An individual or organization responsible for registering a product, content, or property. Includes producers, creators, rights owners, rights administrators, and other individuals and organizations with an interest in having a product, content, or property registered (e.g., national bibliographic agencies, information service providers).
Registration	The act of registering a product, content, or property. Includes registration of monographic and serial publications, literary, musical, artistic and audiovisual works, sound recordings, broadcast signals, etc.
Registration Authority	An organization responsible for the registration of products, content, or property. Includes authorities responsible for the registration of monographic and serial publications, literary, musical, artistic and audiovisual works, sound recordings, broadcast signals, etc.
Property	An entity to which property rights apply. Includes literary, musical, artistic and audiovisual works, performances, phonograms, broadcast signals, etc.

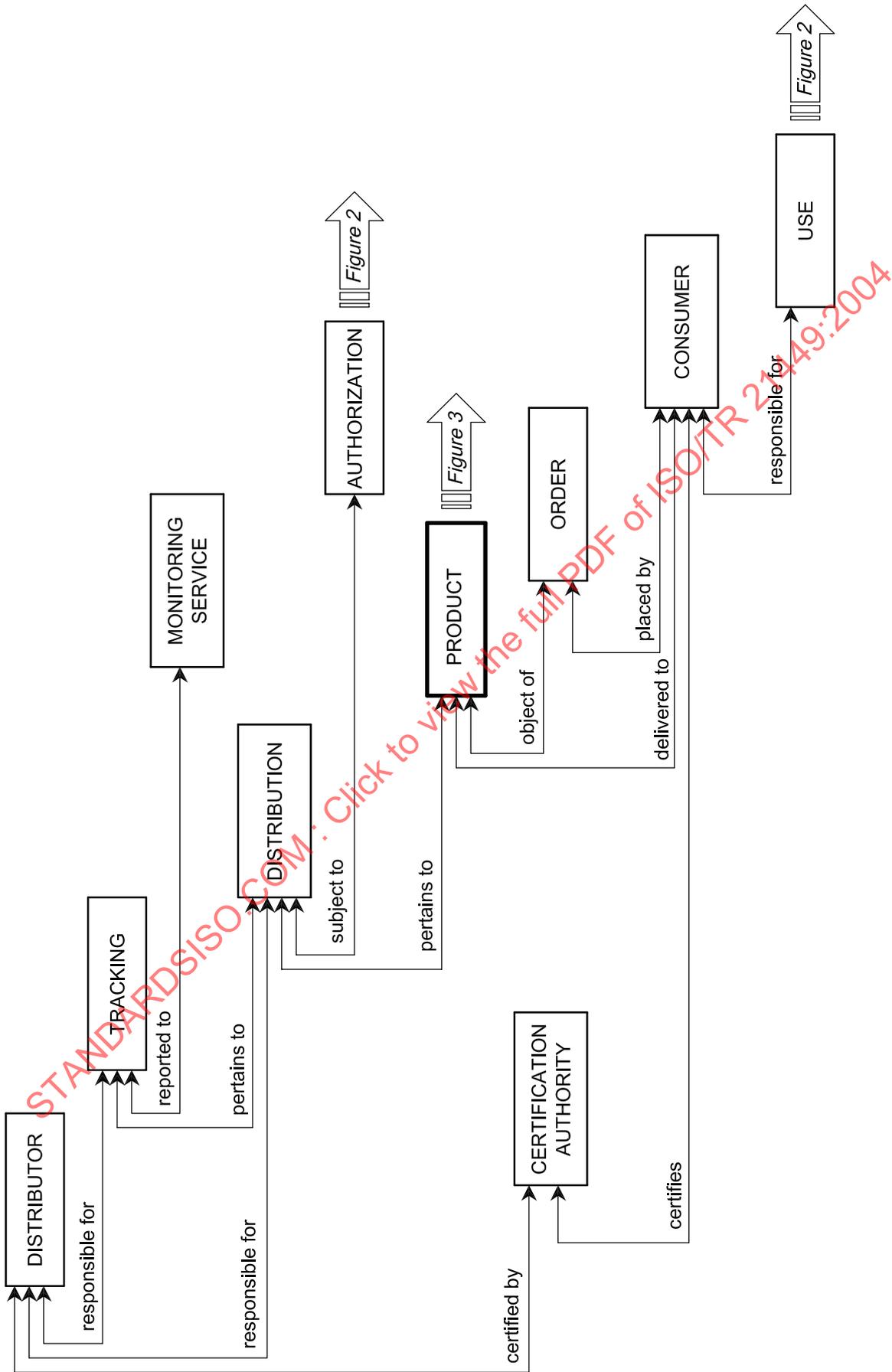


Figure 4 — Distribution Cycle for Content Delivery

Table 4 — Content Distribution — Entity Definitions

<i>Entity</i>	<i>Definition</i>
Distributor	An individual or organization responsible for the distribution of a product. Includes distributors of publications, sound recordings, films, video recordings, multimedia products, etc.
Tracking	The act of monitoring and compiling data on transactions. Includes tracking of transactions relating to the distribution of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Monitoring Service	An individual or organization monitoring the distribution of products. Includes services monitoring the distribution of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Distribution	The act of disseminating a product to consumers. Includes distribution of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Authorization	Permission granted by a rights owner, the owner's agent, or a competent authority. Includes written permissions, licences, contractual agreements, compulsory licences, etc.
Product	An object resulting from an act of production. Includes monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Order	An authorization issued to a distributor to deliver itemized products on agreed conditions. Includes orders for monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Certification Authority	An individual or organization authenticating distributors or consumers of products. Includes services authenticating distributors or consumers of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Consumer	A purchaser or end-user of a product. Includes consumers of monographic and serial publications, sound recordings, films, video recordings, multimedia products, etc.
Use	An act entailing utilization of a property. Includes reproduction, adaptation, translation, public performance, communication to the public, broadcasting, distribution, rental, etc.

6 Attributes and Relationships

Annex A contains a set of tables that list and define attributes of each of the entities identified in the information model (Figures 2, 3 and 4) and the relationships that operate between each of the entities.

For the purposes of this model, attributes are defined at a "logical" level (i.e., as characteristics of the entities to which they pertain, not as specifically defined data elements).

The attributes listed in the tables have been derived in part from an analysis of data elements defined for the ISO identifier schemas for books, serials, audiovisual works, musical works, textual works, and sound recordings, and in part from other relevant models (e.g., the model developed for the IFLA study on functional requirements for bibliographic records, and the model developed for the <indec> project).

The relationships listed in the tables represent a consolidation of the relationships depicted in the information model (Figures 2, 3 and 4). The relationships depicted in the information model have been supplemented with additional relationships that operate between instances of the same entity type (e.g. the relationship between one product and another product—other edition, other format, reproduction, etc.).

7 User Transactions

The information architecture set out above and the set of logical attributes and relationships defined in Annex A provide a framework for analyzing the uses that are made of identifiers and descriptors in supporting the business transactions associated with content delivery and rights management.

Tables 5 to 7 map the attributes and relationships associated with the three entities of primary focus in the information architecture (*content*, *product* and *property*) against a set of eight generic user transactions. The user transactions are defined as follows:

Search	Search for an entity corresponding to stated criteria (i.e., to search either a single entity or a set of entities using an attribute or relationship of the entity as the search criteria).
Identify	Identify an entity (i.e., to confirm that the entity described or located corresponds to the entity sought, or to distinguish between two or more entities with similar characteristics).
Select	Select an entity that is appropriate to the user's needs (i.e., to choose an entity that meets the user's requirements with respect to content, physical format, etc., or to reject an entity as being inappropriate to the user's needs).
Access	Access an entity either physically or electronically through an online connection to a remote computer.
Acquire	Acquire an entity through purchase, licence, loan, etc.
Open	Open an electronic entity by means of one or more software applications.
Use	Use an entity (i.e., to reproduce, record, communicate, broadcast, perform, adapt, translate, etc. an entity).
Control	Control the use of an entity (i.e., to restrict access to and use of an entity on the basis of proprietary rights).

In the left-hand column of Tables 5 to 7 are listed the attributes and relationships defined for the three entities that form the centre of focus in the information model—*content*, *product* and *property*. Under each relationship, at the next indentation, are listed the key attributes and relationships associated with the entity that functions as the object of that relationship. At the next indentation are listed the key attributes of the entity that forms the object of the secondary relationship.

For each attribute and relationship listed, the columns on the right-hand side of Tables 5 to 7 indicate the relevance of that attribute or relationship to each of the eight generic transactions. A solid square (■) indicates that data reflecting that attribute or relationship are considered necessary to provide a basic level of support for the designated transaction. An open square (□) indicates that data reflecting that attribute or relationship are considered useful to provide an enhanced level of support for the designated transaction.

Table 5 — Attributes and Relationships of Content Mapped to User Transactions

Entity	CONTROL	USE	OPEN	ACQUIRE	ACCESS	SELECT	IDENTIFY	SEARCH
Attribute								
Relationship								
Attribute of related entity								
Relationship from related entity								
Attribute of related entity								
Content								
Attribute								
Content identifier	■	■		■	■	■	■	■
Title of content	■	■		■	■	■	■	■
Version designation				■	■	■	■	■
Type of content				■	■	■	■	■
Form of expression				■	■	■	■	■
Extent of content				■	■	□	□	■
Content specifications						■	■	■
Language of content						■	□	■
Subject of content						■	■	■
Relationship								
Results from ⇨ creation						■	■	■
Attribute								
Date of creation						■	■	■
Place of creation						■	□	■
Relationship								
Responsibility of ⇨ creator						■	■	■
Attribute								
Creator identifier						■	■	■
Name of creator						■	■	■

Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity
CONTROL					
USE					
OPEN					
ACQUIRE					
ACCESS					
SELECT					
IDENTIFY					
SEARCH					
Content (continued)					
	Incorporated in ⇨ product				■
	<i>Attribute</i>				
	Product identifier				■
	Title of product				■
	Type of product				■
	Name of issuing body				■
	Edition/issue designation				■
	Product status				■
	Frequency of issue				■
	Numbering				■
	Terms of availability				■
	Mode of access				■
	Access address				■
	<i>Relationship</i>				
	Results from ⇨ production				■
	<i>Attribute</i>				
	Date of production				■
	Place of production				■
	Subject of ⇨ release				■
	<i>Attribute</i>				
	Date of release				■
	Place of release				■
	Responsibility of ⇨ producer				■
	<i>Attribute</i>				
	Producer identifier				■
	Name of producer				■

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Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity	CONTROL	USE	OPEN	ACQUIRE	ACCESS	SELECT	IDENTIFY	SEARCH
Content (continued)													
	Supplement ⇨ content										<input type="checkbox"/>	<input type="checkbox"/>	
	<i>Attribute</i>												
	Content identifier										<input type="checkbox"/>	<input type="checkbox"/>	
	Title of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Type of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Form of expression										<input type="checkbox"/>	<input type="checkbox"/>	
	Translation ⇨ content										<input type="checkbox"/>	<input type="checkbox"/>	
	<i>Attribute</i>												
	Content identifier										<input type="checkbox"/>	<input type="checkbox"/>	
	Title of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Type of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Form of expression										<input type="checkbox"/>	<input type="checkbox"/>	
	Language of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Revision ⇨ content										<input type="checkbox"/>	<input type="checkbox"/>	
	<i>Attribute</i>												
	Content identifier										<input type="checkbox"/>	<input type="checkbox"/>	
	Title of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Type of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Form of expression										<input type="checkbox"/>	<input type="checkbox"/>	
	Adaptation ⇨ content										<input type="checkbox"/>	<input type="checkbox"/>	
	<i>Attribute</i>												
	Content identifier										<input type="checkbox"/>	<input type="checkbox"/>	
	Title of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Type of content										<input type="checkbox"/>	<input type="checkbox"/>	
	Form of expression										<input type="checkbox"/>	<input type="checkbox"/>	

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Table 6 — Attributes and Relationships of Product Mapped to User Transactions

Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity	SEARCH	IDENTIFY	SELECT	ACCESS	ACQUIRE	OPEN	USE	CONTROL
Product	<i>Attribute</i>												
	Product identifier					■	■	■	■	■	■	■	■
	Title of product					■	■	■	■	■	■	■	■
	Type of product						■	■	■	■	■	■	■
	Name of issuing body					□	■	■	■	■	■	■	■
	Edition/issue designation						■	■	■	■	■	■	■
	Product status						■	■	■	■	■	■	■
	Frequency of issue						■	■	■	■	■	■	■
	Numbering						■	■	■	■	■	■	■
	Terms of availability						□	■	■	■	■	■	■
	Medium						□	□	■	■	■	■	■
	Extent of product						□	□	■	■	■	■	■
	Product specifications						□	□	■	■	■	■	■
	Mode of access								■	■	■	■	■
	Access address					□			■	■	■	■	■
<i>Relationship</i>													
	Results from ⇨ production						■	■	■	■	■	■	■
<i>Attribute</i>													
	Date of production						■	■	■	■	■	■	■
	Place of production						■	■	■	■	■	■	■
<i>Relationship</i>													
	Responsibility of ⇨ producer						■	■	■	■	■	■	■
<i>Attribute</i>													
	Producer identifier						■	■	■	■	■	■	■
	Name of producer						■	■	■	■	■	■	■

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Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity	SEARCH	IDENTIFY	SELECT	ACCESS	ACQUIRE	OPEN	USE	CONTROL
Product (continued)													
	Subject of ⇨ release						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	<i>Attribute</i>												
	Date of release						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	Place of release						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	<i>Relationship</i>												
	Responsibility of ⇨ producer						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	<i>Attribute</i>												
	Producer identifier						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	Name of producer						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	Contains ⇨ product						<input type="checkbox"/>						
	<i>Attribute</i>												
	Product identifier						<input type="checkbox"/>						
	Title of product						<input type="checkbox"/>						
	Type of product						<input type="checkbox"/>						
	Name of issuing body						<input type="checkbox"/>						
	Edition/issue designation						<input type="checkbox"/>						
	Incorporates ⇨ content						<input type="checkbox"/>						
	<i>Attribute</i>												
	Content identifier						<input type="checkbox"/>						<input checked="" type="checkbox"/>
	Title of content						<input type="checkbox"/>						<input checked="" type="checkbox"/>
	Type of content						<input type="checkbox"/>						<input checked="" type="checkbox"/>
	Form of expression						<input type="checkbox"/>						<input checked="" type="checkbox"/>
	Language of content						<input type="checkbox"/>						<input checked="" type="checkbox"/>
	Subject of content						<input type="checkbox"/>						<input checked="" type="checkbox"/>

Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity
Product (continued)					
	Other edition ⇨ product				<input type="checkbox"/>
	<i>Attribute</i>				
	Product identifier				<input type="checkbox"/>
	Title of product				<input type="checkbox"/>
	Type of product				<input type="checkbox"/>
	Name of issuing body				<input type="checkbox"/>
	Edition/issue designation				<input type="checkbox"/>
	Other format ⇨ product				<input type="checkbox"/>
	<i>Attribute</i>				
	Product identifier				<input type="checkbox"/>
	Title of product				<input type="checkbox"/>
	Type of product				<input type="checkbox"/>
	Name of issuing body				<input type="checkbox"/>
	Edition/issue designation				<input type="checkbox"/>
	Reproduction ⇨ product				<input type="checkbox"/>
	<i>Attribute</i>				
	Product identifier				<input type="checkbox"/>
	Title of product				<input type="checkbox"/>
	Type of product				<input type="checkbox"/>
	Name of issuing body				<input type="checkbox"/>
	Edition/issue designation				<input type="checkbox"/>
	Successor ⇨ product				<input type="checkbox"/>
	<i>Attribute</i>				
	Product identifier				<input type="checkbox"/>
	Title of product				<input type="checkbox"/>
	Type of product				<input type="checkbox"/>
	Name of issuing body				<input type="checkbox"/>
	Edition/issue designation				<input type="checkbox"/>

Entity	Attribute	Relationship	Attribute of related entity	Relationship from related entity	Attribute of related entity	SEARCH	IDENTIFY	SELECT	ACCESS	ACQUIRE	OPEN	USE	CONTROL
Product (continued)													
	Supplement ⇨ product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<i>Attribute</i>												
	Product identifier					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Title of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Type of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Name of issuing body					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Edition/issue designation					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Abstract/index ⇨ product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<i>Attribute</i>												
	Product identifier					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Title of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Type of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Name of issuing body					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Edition/issue designation					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Subseries ⇨ product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<i>Attribute</i>												
	Product identifier					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Title of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Type of product					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Name of issuing body					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	Edition/issue designation					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

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Table 7 — Attributes and Relationships of Property Mapped to User Transactions

Entity	Attribute	Relationship	SEARCH	IDENTIFY	SELECT	ACCESS	ACQUIRE	OPEN	USE	CONTROL
	Attribute of related entity	Relationship from related entity								
	Attribute of related entity	Attribute of related entity								
Property										
	<i>Attribute</i>									
	Property identifier		■	■					■	■
	Title of property		■	■	■				■	■
	Type of property			■	■				■	■
	Date of creation			■					■	■
	<i>Relationship</i>									
	Subject to ⇨ right								■	■
	<i>Attribute</i>									
	Right identifier								■	■
	Title of right								■	■
	Type of right								■	■
	Scope of right								■	■
	Effective date of right								■	■
	Right revision date								■	■
	<i>Relationship</i>									
	Established by ⇨ legislation								■	■
	<i>Attribute</i>									
	Legislation identifier								■	■
	Title of legislation								■	■
	Limited by ⇨ exception								■	■
	<i>Attribute</i>									
	Exception identifier								■	■
	Title of exception								■	■
	Type of exception								■	■
	Scope of exception								■	■
	Effective date of exception								■	■
	Exception revision date								■	■

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Entity	Attribute	Relationship	CONTROL	USE	OPEN	ACQUIRE	ACCESS	SELECT	IDENTIFY	SEARCH
	Attribute of related entity	Relationship from related entity								
	Attribute of related entity	Attribute of related entity								
Property (continued)										
	Subject of ⇨ authorization			■						
	<i>Attribute</i>									
	Authorization identifier			■						
	Title of authorization			■						
	Type of authorization			■						
	Scope of authorization			■						
	Effective date of authorization			■						
	Authorization revision date			■						
	<i>Relationship</i>									
	Granted to ⇨ user			■						
	<i>Attribute</i>									
	User identifier			■						
	Name of user			■						
	Applies within ⇨ territory			■						
	<i>Attribute</i>									
	Territory identifier			■						
	Name of territory			■						
	Applicable for ⇨ term			■						
	<i>Attribute</i>									
	Beginning date of term			■						
	Ending date of term			■						
	Contingent event			■						
	Duration of term			■						
	Subject to ⇨ condition			■						
	<i>Attribute</i>									
	Type of condition			■						
	Condition requirement			■						
	Effective date of condition			■						
	Expiry date of condition			■						
	Condition revision date			■						

Entity	Attribute	Relationship	CONTROL
	Attribute of related entity	Relationship from related entity	
		Attribute of related entity	■
Property (continued)			
	Object of ⇨ use		
	<i>Attribute</i>		
	Use identifier		■
	Type of use		■
	Scope of use		■
	Extent of use		■
	Date of use		■
	<i>Relationship</i>		
	Responsibility of ⇨ user		■
	<i>Attribute</i>		
	User identifier		■
	Name of user		■
	Made by ⇨ originator		■
	<i>Attribute</i>		
	Originator identifier		■
	Name of originator		■
	Address		□
	Date of death		■
	<i>Relationship</i>		
	National of ⇨ territory		■
	<i>Attribute</i>		
	Territory identifier		■
	Name of territory		■

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Entity	Attribute	Relationship	CONTROL
	Attribute of related entity	Relationship from related entity	
	Attribute of related entity	Attribute of related entity	■
Property (continued)	Resides ⇨ territory	<i>Attribute</i>	
		Territory identifier	■
		Name of territory	■
	Headquartered in ⇨ territory	<i>Attribute</i>	■
		Territory identifier	■
		Name of territory	■
	Published in ⇨ territory	<i>Attribute</i>	■
		Territory identifier	■
		Name of territory	■
	Broadcast in ⇨ territory	<i>Attribute</i>	■
		Territory identifier	■
		Name of territory	■
	Embodied in ⇨ content	<i>Attribute</i>	■
		Content identifier	■
		Title of content	■
	Version designation	<i>Relationship</i>	■
	Incorporated in ⇨ product	<i>Attribute</i>	■
		Product identifier	■
		Title of product	■
		Edition/issue designation	■

Annex A

Tables of entity attributes and relationships

Tables A.1 to A.33 list and define attributes of each of the entities identified in the information model (Figures 2, 3 and 4) and the relationships that operate between each of the entities. To facilitate reference, the tables are organized alphabetically according to the name of the entity.

For the purposes of this model, attributes are defined at a “logical” level (i.e., as characteristics of the entities to which they pertain, not as specifically defined data elements).

The attributes listed in Tables A.1 to A.33 have been derived in part from an analysis of data elements defined for the ISO identifier schemas for books, serials, audiovisual works, musical works, textual works and sound recordings, and in part from other relevant models (e.g., the model developed for the IFLA study on functional requirements for bibliographic records, and the model developed for the <index> project).

The relationships listed in Tables A.1 to A.33 represent a consolidation of the relationships depicted in the information model (Figures 2, 3 and 4). The relationships depicted in the information model have been supplemented with additional relationships that operate between instances of the same entity type (e.g. the relationship between one product and another product—other edition, other format, reproduction, etc.).

List of tables

- A.1: Agent – Attributes and Relationships
- A.2: Authorization – Attributes and Relationships
- A.3: Certification Authority – Attributes and Relationships
- A.4: Competent Authority – Attributes and Relationships
- A.5: Condition – Attributes and Relationships
- A.6: Consumer – Attributes and Relationships
- A.7: Content – Attributes and Relationships
- A.8: Creation – Attributes and Relationships
- A.9: Creator – Attributes and Relationships
- A.10: Distribution – Attributes and Relationships
- A.11: Distributor – Attributes and Relationships
- A.12: Exception – Attributes and Relationships
- A.13: Infringement – Attributes and Relationships
- A.14: Legislation – Attributes and Relationships
- A.15: Monitoring Service – Attributes and Relationships
- A.16: Order – Attributes and Relationships
- A.17: Originator – Attributes and Relationships
- A.18: Owner – Attributes and Relationships
- A.19: Producer – Attributes and Relationships
- A.20: Product – Attributes and Relationships
- A.21: Production – Attributes and Relationships
- A.22: Property – Attributes and Relationships
- A.23: Registrant – Attributes and Relationships
- A.24: Registration – Attributes and Relationships
- A.25: Registration Authority – Attributes and Relationships
- A.26: Release – Attributes and Relationships
- A.27: Remedy – Attributes and Relationships
- A.28: Right – Attributes and Relationships
- A.29: Term – Attributes and Relationships
- A.30: Territory – Attributes and Relationships
- A.31: Tracking – Attributes and Relationships
- A.32: Use – Attributes and Relationships
- A.33: User – Attributes and Relationships

Table A.1 — Agent — Attributes and Relationships

Attribute	Definition
Agent identifier	A number or code that is uniquely associated with the agent, and serves to differentiate that agent from other agents.
Name of agent	A word, character, or group of words and/or characters by which the agent is known. Includes names of individuals and of organizations.
Date of birth	The date an individual was born.
Date of death	The date an individual died.
Date of establishment	The date an organization was established (e.g., date of incorporation).
Date of dissolution	The date an organization was dissolved.
Address	The address of the agent's residence or place of business.
Relationship	Definition
Authorized by ⇒ owner	The relationship between the agent and an owner by whom the agent is authorized.
Grants ⇒ authorization	The relationship between the agent and an authorization granted by the agent.

Table A.2 — Authorization — Attributes and Relationships

Attribute	Definition
Authorization identifier	A number or code that is uniquely associated with the authorization, and serves to differentiate that authorization from other authorizations.
Title of authorization	A word, phrase, or group of characters naming the authorization.
Type of authorization	A categorization or generic descriptor for the authorization (e.g., authorization for public performance).
Scope of authorization	The specific scope of application of an authorization.
Effective date of authorization	The date the authorization comes into force.
Authorization revision date	The date the authorization was last revised.
Relationship	
Relationship	Definition
Established by ⇨ legislation	The relationship between the authorization and the legislation under which the authorization is established.
Based on ⇨ right	The relationship between the authorization and a right on which the authorization is based.
Granted by ⇨ owner	The relationship between the authorization and a rights owner who grants the authorization.
Granted by ⇨ agent	The relationship between the authorization and an agent who grants the authorization.
Granted by ⇨ competent authority	The relationship between the authorization and a competent authority who grants the authorization.
Granted to ⇨ user	The relationship between the authorization and a user to whom the authorization is granted.
Pertains to ⇨ property	The relationship between the authorization and a property to which the authorization pertains.
Applies within ⇨ territory	The relationship between the authorization and a territory within which the authorization applies.
Pertains to ⇨ use	The relationship between the authorization and a use to which the authorization pertains.
Applicable for ⇨ term	The relationship between the authorization and a term during which the authorization is applicable.
Subject to ⇨ condition	The relationship between the authorization and a condition that is attached to the authorization.
Pertains to ⇨ production	The relationship between the authorization and a production that is subject to the authorization.
Pertains to ⇨ release	The relationship between the authorization and a release that is subject to the authorization.
Pertains to ⇨ distribution	The relationship between the authorization and a distribution that is subject to the authorization.

Table A.3 — Certification Authority — Attributes and Relationships

Attribute	Definition
Certification authority identifier	A number or code that is uniquely associated with the certification authority, and serves to differentiate that certification authority from other certification authorities.
Name of certification authority	A word, character, or group of words and/or characters by which the certification authority is known.
Date of establishment	The date a certification authority was established (i.e., date of initiation as a certification authority).
Date of dissolution	The date a certification authority was dissolved (i.e., date the organization ceased to function as a certification authority).
Address	The address of the certification authority's place of business.
Relationship	Definition
Certifies ⇒ distributor	The relationship between the certification authority and a distributor certified by the certification authority.
Certifies ⇒ consumer	The relationship between the certification authority and a consumer certified by the certification authority.

Table A.4 — Competent Authority — Attributes and Relationships

Attribute	Definition
Competent authority identifier	A number or code that is uniquely associated with the competent authority, and serves to differentiate that competent authority from other competent authorities.
Name of competent authority	A word, character, or group of words and/or characters by which the competent authority is known. Includes names of individuals and of organizations.
Date of establishment	The date the competent authority was established (e.g., date of incorporation).
Date of dissolution	The date the competent authority was dissolved.
Address	The address of the competent authority's place of business.
Relationship	Definition
Grants ⇒ authorization	The relationship between the competent authority and an authorization granted by the competent authority.

Table A.5 — Condition — Attributes and Relationships

Attribute	Definition
Title of condition	A word, phrase, or group of characters naming the condition.
Type of condition	A categorization or generic descriptor for the condition (e.g., educational use, private use).
Condition requirement	A specific requirement that must be met in order to satisfy the condition.
Effective date of condition	The date the condition comes into force.
Expiry date of condition	The date the condition ceases to have force.
Condition revision date	The date the condition was last revised.
Relationship	Definition
Applies to ⇒ right	The relationship between the condition and a right to which the condition applies.
Applies to ⇒ authorization	The relationship between the condition and an authorization to which the condition applies.
Applies to ⇒ exception	The relationship between the condition and an exception to which the condition applies.

Table A.6 — Consumer — Attributes and Relationships

Attribute	Definition
Consumer identifier	A number or code that is uniquely associated with the consumer, and serves to differentiate that consumer from other consumers.
Name of consumer	A word, character, or group of words and/or characters by which the consumer is known. Includes names of individuals and of organizations.
Address	The address of the consumer's residence or place of business.
Relationship	Definition
Places ⇒ order	The relationship between the consumer and order placed by the consumer.
Receives ⇒ product	The relationship between the consumer and a product delivered to the consumer.
Certified by ⇒ certification authority	The relationship between the consumer and a certification authority responsible for certifying the consumer.
Responsible for ⇒ use	The relationship between the consumer and a use for which the consumer is responsible.

Table A.7 — Content — Attributes and Relationships

Attribute	Definition
Content identifier	A number or code that is uniquely associated with the content, and serves to differentiate that content from another content.
Title of content	A word, phrase, or group of characters naming the content. Includes titles of works, parts of works, compilations of works, etc.
Version designation	A number, date, term, phrase, etc. that serves to differentiate a particular version of the content from related versions with the same title, etc. (e.g., "revised 2001-04-29").
Type of content	A categorization or generic descriptor for the content (e.g., novel, biography, symphony).
Form of expression	The form in which the content is expressed (e.g., alpha-numeric notation, musical notation, spoken word, musical sound, cartographic image, sculpture, dance).
Extent of content	A quantification of the extent of the content (e.g., number of words in a text, statements in a computer program, images in a comic strip).
Content specifications	Specification of the intellectual and/or artistic particulars of the content (e.g., the medium of performance for a musical composition, the technique used to create a motion picture, the coordinates, scale, projection, etc. of a cartographic image).
Language of content	The language or languages in which the content is expressed.
Subject of content	The subject matter of the content. Includes subject descriptors, subject classification codes, content summaries, etc.
Relationship	
Relationship	Definition
Incorporated in ⇒ product	The relationship between the content and a product in which the content is incorporated.
Results from ⇒ creation	The relationship between the content and the creation from which it results.
Contains ⇒ content	The relationship between the content and sub-content contained within the content.
Embodies ⇒ property	The relationship between the content and a property embodied in the content.
Abridgement ⇒ content	The relationship between the content and an abridgement, condensation or expurgated version of the content.
Augmentation ⇒ content	The relationship between the content and a version of the content augmented with textual annotations, critical commentary, biographical matter, illustrations, data files, etc.
Supplement ⇒ content	The relationship between the content and supplementary content.
Translation ⇒ content	The relationship between the content and a translated version of the content.
Revision ⇒ content	The relationship between the content and a revised or updated version of the content.
Adaptation ⇒ content	The relationship between the content and an adapted version of the content.
Compilation ⇒ content	The relationship between the content and a compilation containing the content.
Extraction ⇒ content	The relationship between the content and an extract of the content.

Table A.8 — Creation — Attributes and Relationships

Attribute	Definition
Creation identifier	A number or code that is uniquely associated with the creation, and serves to differentiate that creation from other creations.
Type of creation	A categorization or generic descriptor for the creation (e.g., composing).
Date of creation	The date(s) the creation occurs.
Place of creation	The city, town, or other locality associated with the creation of the content.
Relationship	Definition
Responsibility of ⇨ creator	The relationship between the creation and a creator who is responsible for the creation.
Pertains to ⇨ content	The relationship between the creation and content to which the creation pertains.

Table A.9 — Creator — Attributes and Relationships

Attribute	Definition
Creator identifier	A number or code that is uniquely associated with the creator, and serves to differentiate that creator from other creators.
Name of creator	A word, character, or group of words and/or characters by which the creator is known. Includes names of individuals and of organizations.
Date of birth	The date an individual was born.
Date of death	The date an individual died.
Date of establishment	The date an organization was established (e.g., date of incorporation).
Date of dissolution	The date an organization was dissolved.
Address	The address of the creator's residence or place of business.
Relationship	Definition
Responsible for ⇨ creation	The relationship between the creator and the creation of content for which the creator is responsible.
Acts as ⇨ registrant	The relationship between the creator and the role the creator plays as registrant of content or property.

Table A.10 — Distribution — Attributes and Relationships

Attribute	Definition
Distribution identifier	A number or code that is uniquely associated with the distribution transaction, and serves to differentiate that distribution transaction from other distribution transactions.
Type of distribution	A categorization or generic descriptor for the distribution transaction (e.g., licence).
Extent of distribution	A quantification of the amount of distribution (e.g., a site licence covering 200 users).
Date of distribution	The date(s) the distribution transaction occurs.
Relationship	
Relationship	Definition
Subject to ⇨ tracking	The relationship between the distribution and a tracking transaction to which the distribution is subject.
Responsibility of ⇨ distributor	The relationship between the distribution and a distributor who is responsible for the distribution.
Subject to ⇨ authorization	The relationship between the distribution and an authorization to which the distribution is subject.
Pertains to ⇨ product	The relationship between the distribution and a product to which the distribution pertains.

Table A.11 — Distributor — Attributes and Relationships

Attribute	Definition
Distributor identifier	A number or code that is uniquely associated with the distributor, and serves to differentiate that distributor from other distributors.
Name of distributor	A word, character, or group of words and/or characters by which the distributor is known. Includes names of individuals and of organizations.
Date of birth	The date an individual was born.
Date of death	The date an individual died.
Date of establishment	The date an organization was established (e.g., date of incorporation).
Date of dissolution	The date an organization was dissolved.
Address	The address of the distributor's residence or place of business.
Relationship	
Relationship	Definition
Responsible for ⇨ distribution	The relationship between the distributor and the distribution of a product for which the distributor is responsible.
Responsible for ⇨ tracking	The relationship between the distributor and the tracking of the distribution of a product for which the distributor is responsible.
Certified by ⇨ certification authority	The relationship between the distributor and a certification authority responsible for certifying the distributor.

Table A.12 — Exception — Attributes and Relationships

Attribute	Definition
Exception identifier	A number or code that is uniquely associated with the exception, and serves to differentiate that exception from other exceptions.
Title of exception	A word, phrase, or group of characters naming the exception.
Type of exception	A categorization or generic descriptor for the exception (e.g., fair use exception).
Scope of exception	The specific scope of application of an exception (e.g., communication to the public).
Effective date of exception	The date the exception comes into force.
Exception revision date	The date the exception was last revised.
Relationship	Definition
Established by ⇒ legislation	The relationship between the exception and the legislation under which the exception is established.
Limits ⇒ right	The relationship between the exception and a right the exception limits.
Pertains to ⇒ property	The relationship between the exception and a property to which the exception pertains.
Applies within ⇒ territory	The relationship between the exception and a territory within which the exception applies.
Pertains to ⇒ use	The relationship between the exception and a use to which the exception pertains.
Applicable for ⇒ term	The relationship between the exception and a term during which the exception is applicable.
Subject to ⇒ condition	The relationship between the exception and a condition that is attached to the exception.

Table A.13 — Infringement — Attributes and Relationships

Attribute	Definition
Infringement identifier	A number or code that is uniquely associated with the infringement, and serves to differentiate that infringement from other infringements.
Type of infringement	A categorization or generic descriptor for the infringement (e.g., moral rights infringement).
Scope of infringement	The specific scope of the infringement.
Extent of infringement	A quantification of the amount of infringement (e.g., illegal importation of 3,000 copies of a work).
Date of infringement	The date(s) the infringement occurs.
Relationship	Definition
Results from ⇒ use	The relationship between the infringement and a use from which the infringement results.
Subject to ⇒ remedy	The relationship between the infringement and a remedy pertaining to the infringement.

Table A.14 — Legislation — Attributes and Relationships

Attribute	Definition
Legislation identifier	A number or code that is uniquely associated with the legislation, and serves to differentiate that legislation from other legislation.
Title of legislation	A word, phrase, or group of characters naming the legislation. Includes official titles, short titles, citation titles, etc.
Type of legislation	A categorization or generic descriptor for the legislation (e.g., copyright legislation).
Effective date of legislation	The date the legislation comes into force.
Legislation revision date	The date the legislation was last revised.
Relationship	Definition
Establishes ⇨ right	The relationship between the legislation and a right established under the legislation.
Establishes ⇨ authorization	The relationship between the legislation and an authorization established under the legislation.
Establishes ⇨ exception	The relationship between the legislation and an exception established under the legislation.
Establishes ⇨ remedy	The relationship between the legislation and a remedy established under the legislation.

Table A.15 — Monitoring Service — Attributes and Relationships

Attribute	Definition
Monitoring service identifier	A number or code that is uniquely associated with the monitoring service, and serves to differentiate that monitoring service from other monitoring services.
Name of monitoring service	A word, character, or group of words and/or characters by which the monitoring service is known.
Date of establishment	The date a monitoring service was established (i.e., date of initiation as a monitoring service).
Date of dissolution	The date a monitoring service was dissolved (i.e., date the organization ceased to function as a monitoring service).
Address	The address of the monitoring service's place of business.
Relationship	Definition
Receives reports of ⇨ tracking	The relationship between the monitoring service and a tracking transaction that is reported to the monitoring service.

Table A.16 — Order — Attributes and Relationships

Attribute	Definition
Order identifier	A number or code that is uniquely associated with the order, and serves to differentiate that order from other orders.
Type of order	A categorization or generic descriptor for the order (e.g., purchase order).
Date of issue	The date the order was issued.
Date of recall/ cancellation	The date the order was recalled or cancelled.
Extent of order	The number of units in the order (e.g., item count).
Relationship	Definition
Pertains to ⇒ product	The relationship between the order and a product to which the order pertains.
Placed by ⇒ consumer	The relationship between the order and the consumer who placed the order.

Table A.17 — Originator — Attributes and Relationships

Attribute	Definition
Originator identifier	A number or code that is uniquely associated with the originator, and serves to differentiate that originator from other originators.
Name of originator	A word, character, or group of words and/or characters by which the originator is known. Includes names of individuals and of organizations.
Date of birth	The date an individual was born.
Date of death	The date an individual died.
Date of establishment	The date an organization was established (e.g., date of incorporation).
Date of dissolution	The date an organization was dissolved.
Address	The address of the originator's residence or place of business.
Relationship	Definition
Made ⇒ property	The relationship between the originator and a property made by the originator.
National of ⇒ territory	The relationship between the originator and a territory in which the originator holds citizenship.
Resides in ⇒ territory	The relationship between the originator and a territory in which the originator resides.
Headquartered in ⇒ territory	The relationship between the originator and a territory in which the originator maintains its headquarters.