INTERNATIONAL STANDARD

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Information technology — Multimedia framework (MPEG-21) —

Part 6:
Rights Data Dictionary

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

Partie 6: Dictionnaire de données des droits

Contents

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

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

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

ISO/IEC 21000-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

ISO/IEC 21000 consists of the following parts, under the general title *Information technology — Multimedia framework (MPEG-21)*:

— *Part 1: Vision, technologies and strategy*

— *Part 2: Digital item declaration*

— *Part 3: Digital item identification*

— *Part 5: Rights expression language*

— *Part 6: Rights data dictionary*

— *Part 7: Digital item adaptation*

The following parts are under preparation:

— *Part 8: Reference software*

— *Part 9: File format*

— *Part 10: Digital item processing*

— *Part 11: Evaluation methods for persistent association technologies*

Introduction

Today, many elements exist to build an infrastructure for the delivery and consumption of multimedia content. There is, however, no 'big picture' to describe how these elements, either in existence or under development, relate to each other. The aim for MPEG-21 is to describe how these various elements fit together. Where gaps exist, MPEG-21 will recommend which new standards are required. ISO/IEC JTC 1/SC 29/WG 11 (MPEG) will then develop new standards as appropriate while other relevant standards may be developed by other bodies. These specifications will be integrated into the multimedia framework through collaboration between MPEG and these bodies.

The result is an open framework for multimedia delivery and consumption, with both the content creator and content consumer as focal points. This open framework provides content creators and service providers with equal opportunities in the MPEG-21 enabled open market. This will also be to the benefit of the content consumer providing them access to a large variety of content in an interoperable manner.

The vision for MPEG-21 is to define a multimedia framework to enable transparent and augmented use of multimedia resources across a wide range of networks and devices used by different communities.

This sixth part of MPEG-21 (ISO/IEC 21000-6) specifies a Rights Data Dictionary for use within the MPEG-21 Framework. This Rights Data Dictionary forms the basis of all expressions of rights and permissions as defined by the MPEG-21 Rights Expression Language (specified in ISO/IEC 21000-5).

Information technology — Multimedia framework (MPEG-21) —

Part 6:
Rights Data Dictionary

1   Scope

This part of ISO/IEC 21000 describes a Rights Data Dictionary which comprises a set of clear, consistent, structured, integrated and uniquely identified Terms (as defined in Clause 5.4) to support the MPEG-21 Rights Expression Language (REL), ISO/IEC 21000-5. Annex A specifies the methodology for and structure of the RDD Dictionary, and specifies how further Terms may be defined under the governance of a Registration Authority, requirements for which are described in Annex C.

Taken together, these specifications and the RDD Dictionary and Database together make up the RDD System. Use of the RDD System will facilitate the accurate exchange and processing of information between interested parties involved in the administration of rights in, and use of, Digital Items, and in particular it is intended to support ISO/IEC 21000-5 (REL). Clause 6 describes how this part of ISO/IEC 21000 relates to ISO/IEC 21000-5.

As well as providing definitions of Terms for use in ISO/IEC 21000-5, the RDD System is designed to support the mapping of Terms from different namespaces. Such mapping will enable the transformation of metadata from the terminology of one namespace (or Authority) into that of another namespace (or Authority). Mapping, to ensure minimum ambiguity or loss of semantic integrity, will be the responsibility of the Registration Authority, requirements for which are specified in Annex C. Provision of automated Term look-up is also a requirement.

The RDD Dictionary is a *prescriptive* Dictionary, in the sense that it defines a single meaning for a Term represented by a particular RddAuthorized TermName, but it is also *inclusive* in that it can recognize the prescription of other Headwords and definitions by other Authorities and incorporates them through mappings. The RDD Dictionary also supports the circumstance that the same name may have different meanings under different Authorities. ISO/IEC 21000-6 describes audit provisions so that additions, amendments and deletions to Terms and their attributes can be tracked.

ISO/IEC 21000-6 recognises legal definitions as and only as Terms from other Authorities that can be mapped into the RDD Dictionary. Therefore Terms that are directly authorized by the RDD Registration Authority neither define nor prescribe intellectual property rights or other legal entities.

1.1   Organization of the Document

This document contains six Clauses and four Annexes.

Clause 1 contains a Scope statement and three sub-Clauses.

Clause 2 comprises a list of Normative References.

Clause 3 comprises a list of Terms and Definitions. The Terms and Definitions in this Clause are only those required to navigate the text of the Standard. The Terms of the RDD Dictionary are contained in Clause 5.

Clause 4 describes the documentation conventions used in this document.

Clause 5 contains the Standardized Terms of the RDD Dictionary, set out in the following sub-clauses:

Clause 5.1 – Introduction to the Terms in the RDD Dictionary and the ontology which it embodies. An ontology, in this context, is a structured catalog of entities in which meaning, once defined, can be passed on from one term to

another by logical rules of association such as inheritance and opposition. The process by which the RDD Dictionary is structured and can be extended is contained in Annex A.

Clause 5.2 – A table of the fourteen RELStandardardizedActTypes which provide the semantic content of the corresponding REL Multimedia Extension Rights. Each of these RELStandardizedActTypes is included in the full RDD Dictionary in Clause 5.4 but they are separated out here for ease of reference, as they are normatively referenced in the REL Standard (ISO/IEC 21000-5).

Clause 5.3 – A Figure (Figure 1) in the form of a hierarchical table including the principal ActTypes in the RDD Dictionary ("The RDD Family Tree") showing how meaning is inherited from one to another within the RDD ontology.

Clause 5.4 – A table (Table 2) containing the RDD Dictionary of StandardizedTerms with their Attributes. The RDD Dictionary includes all the Terms that are required to support the REL Multimedia Extension Rights, and also all the Terms that are required to support the process for adding new Terms, as specified in Annex A.

Clause 6 describes how this part of ISO/IEC 21000 relates to ISO/IEC 21000-5.

Annex A (normative) specifies the methodology for and structure of the RDD Dictionary, providing information about the supporting model, how the model is used to introduce Terms to the RDD Dictionary and how those Terms are related. It also shows how further Terms may be defined under the governance of a Registration Authority, requirements for which are described in Annex C.

Annex B (normative) provides Rules and Style Guides for Textual Elements, in support of the methodology of Annex A.

Annex C (normative) describes the requirements for a Registration Authority for the RDD Dictionary.

Annex D (informative) provides examples of how this part of ISO/IEC 21000 can be applied, with illustrative examples of an Action Family, and an exemplary specialization of an ActType mapped from an external dictionary.

Annex E (informative) provides patent statements relating to ISO/IEC 21000-5.

For information about the Terms in the RDD Dictionary and their relationship to ISO/IEC 21000-5, it is necessary to read the six Clauses.

For information about the methodology of the RDD Dictionary and the ontology upon which it is based, it is necessary to read Annexes A and B.

For information about the requirements for the Registration Authority, which will govern the process of extending the dictionary, it is necessary to read Annex C.

For examples of how the RDD Dictionary can be implemented for the development of new Terms and their use in the REL, it is necessary to read Annex D.

1.2 Relationship between this part of ISO/IEC 21000 and other parts of the MPEG-21 Framework (Informative)

At present the only specific relationship with other parts of ISO/IEC 21000 is with Part 5, the Rights Expression Language. A description of this relationship is set out in Clause 6.

1.3 RDD Term Identifier Prefix

The RDD Term Identifier Prefix will be `urn:mpeg:mpeg21:2002:01-RDD-NS`. The "01" represents a serial number that may be expected to change consequent upon the maintenance activities of the Registration Authority.

2   Normative References

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

ISO/IEC TR 21000-1, *Information technology — Multimedia framework (MPEG-21) — Part 1: Vision, technologies and strategy*

ISO/IEC 21000-2, *Information technology — Multimedia framework (MPEG-21) — Part 2: Digital item declaration*

ISO/IEC 21000-3, *Information technology — Multimedia framework (MPEG-21) — Part 3: Digital item identification*

ISO 639 (all parts), *Codes for the representation of names of languages*

ISO 3166 (all parts), *Codes for the representation of names of countries and their subdivisions*

ISO 4217:2001, *Codes for the representation of currencies and funds*

ISO 8601:2000, *Data elements and interchange formats — Information interchange — Representation of dates and times*