ISO’s contribution for managing metadata

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Brussels, 2009-06-17
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ISO’s standards for managing metadata

- Managing publishing metadata: ISO’s identifiers (ISO/TC 46/SC 9)
- Standards for managing metadata (ISO/TC 46/SC 11)
- Metadata for International Standards
Managing e-publishing metadata: ISO’s identifiers

ISO/TC 46/SC 9, *Information and documentation — Identification and description*

ISO 3297  *International Standard serial number (ISSN)*
ISO 3901  *International Standard recording code (ISRC)*
ISO 10957  *International Standard music number (ISMN)*
ISO 15706  *International Standard audiovisual number (ISAN)*
ISO 15707  *International Standard musical work code (ISWC)*
ISO 21047  *International Standard text code (ISTC)*
Future ISO identifiers

ISO/TC 46/SC 9 identifiers under development

ISO/CD 26324  *Digital object identifier system*

ISO/CD 27729  *International Standard name identifier (ISNI)*

ISO/CD 27730  *International Standard collection identifier (ISCI)*
Identifier system interoperability

Digital object identifier system

- ISSN
- ISTC
- ISBN
- ISNI
- ISMN
- ISWC
- ISRC
- ISAN
- ISAN
Standards for managing metadata

ISO/TC 46/SC 11, Information and documentation — Archives/records management

ISO 15489  Records management
ISO 23081  Managing metadata for records
ISO 13008  Digital records conversion and migration process
ISO/TR 13028 Implementation guidelines for digitization of records
ISO/TR 13069 Risk assessment for records systems
ISO 13390  Management system for records — Fundamentals and vocabulary
ISO 13391  Management system for records
How ISO manages its own standards metadata

- Current metadata definition: ISONET, created in 1985
- Uses numbers rather than semantically meaningful names
- Some elements contain lists and other more complex structures expressed using comma separation and other notations
- Format uses specific elements to express data types
- Not all lifecycle-related data elements covered, e.g. historical and future information
Metadata for International Standards

ISO/IEC CD 24706

*Information technology — Metadata for technical standards and specifications documents*

covers data elements and relationships for standards content
ISONET currently under revision:

- Additional metadata needs
- Take into consideration ISO/IEC CD 24706
- Based on the FRBR model (International Federation of Library Associations and Institutions)
  - defines a document on 4 levels
New XML authoring template, supporting
- standards authoring
- collection/exchange of metadata with ISO databases

Cooperation with other Standards Development Organizations (SDOs: CEN, ITU-T, and ISO Member Bodies)

Extensible to SDO needs
Metadata for International Standards

WORK

is realized through

EXPRESSION

is embodied in

MANIFESTATION

is exemplified by

ITEM
Metadata for International Standards

**Work**: A distinct intellectual or artistic creation

**Expression**: Specific intellectual or artistic form that a work takes each time it is realized

**Manifestation**: Physical embodiment of an expression of a work

**Item**: Single exemplar of a manifestation – zipped version

- Project
- Draft, final draft, published edition, various languages
- Documents, databases, etc.
- Variants, e.g. zipped version, watermarked …
Metadata for International Standards

- **PROJECT** is realized through **STANDARD**
- **STANDARD** is embodied in **DOCUMENT**
- **DOCUMENT** is exemplified by **VARIANT**
Related work on metadata management

ISO/TR 21449  *Content delivery and rights management: Functional requirements for identifiers and descriptors for use in the music, film, video, sound recording and publishing industries*

ISO/IEC 21000 *Information technology — Multimedia framework (MPEG-21)*
**Example: MPEG-21 multimedia framework**

- **Vision:** to define a multimedia framework to enable transparent and increased use of multimedia resources across a wide range of networks and devices used by different communities.

- MPEG-21 identifies and defines the normative technologies needed to support the multimedia delivery chain as well as the relationships between and the operations supported by them. Within the parts of MPEG-21, these elements are elaborated by defining the syntax and semantics of their characteristics, such as interfaces to the elements.
**MPEG-21: Basic concepts**

- **Digital Item (DI):** A structured digital object with a standard representation, identification and metadata within the MPEG-21 framework. This entity is also the fundamental unit of distribution and transaction within this framework.

  A Digital Item is a combination of resources, metadata, and structure. The resources are the individual assets or (distributed) content. The metadata describes (distributed) data about or pertaining to the Digital Item as a whole or also to the individual resources in the Digital Item. Finally, the structure relates to the relationships among the parts of the Digital Item, both resources and metadata.

- **User** is any entity that interacts in the MPEG-21 environment or makes use of Digital Items.

  At its most basic level, MPEG-21 can be seen as providing a framework in which one User interacts with another User and the object of that interaction is a Digital Item.
MPEG-21 International Standard

Comprises 18 parts that can be grouped into 6 main categories

- **DI Declaration and Identification** (DIDL – Digital Item Declaration Language)


- **DI Adaptation** (DIA – specification used to build device and coding format independent adaptation engines)

- **DI Processing** (DIP – standardization of Digital Item Processing allows interoperability at the processing level)

- **MPEG-21 Systems** (File format, Binary format, Digital Item Streaming)

- **Other** (Reference software, test bed, Conformance)
MPEG-21 IPMP

MPEG-21 defines an interoperable framework for Intellectual Property Management and Protection (IPMP)

- It includes standardized ways of retrieving IPMP tools from remote locations, exchanging messages between IPMP tools and between these tools and the terminal.

- It addresses authentication of IPMP tools, and has provisions for integrating Rights Expressions according to the Rights Data Dictionary and the Rights Expression Language.
MPEG standards have helped the creation of an industry worth several tens of billions USD
Thank you

Any questions?

Please contact me

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Thank you

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