Technology of Registries

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A FRAMEWORK FOR METADATA
The Indecs Project

• Dates from 2000
• Interoperability of Data in E-Commerce Systems
• Funded by European Commission
• Partners and affiliates from Europe, Asia and US
Indecs Model of Commerce

People make stuff
People use stuff
People make deals about stuff
Machine Mediated Commerce

• Need to identify and describe in standard ways:
  – The stuff
  – The people
  – The deals
INDECS PRINCIPLES
Principle of Unique Identification

Every entity should be uniquely identified within an identified namespace.
Unique Identification

- Disambiguation

John Williams
Guitarist
Public Domain

John Williams
Composer
Courtesy: TashTish
Disambiguation

John Williams (disambiguation)

From Wikipedia, the free encyclopedia

John Williams (born 1932) is an American music composer who specializes in motion picture scores.

John Williams, Johnnie Williams, or Johnny Williams may also refer to:

Artists and entertainers

- John Williams (actor) (1903–1983), British stage, film, and television actor
- John Williams (guitarist) (born 1941), Australian-born classical guitarist
- John Williams (composer)
- John Williams (radio personality) (born 1959), Chicago radio personality
- John A. Williams (born 1925), American novelist
- John B. (John B. Williams, born 1977), English DJ
Principle of Functional Granularity

It should be possible to identify an entity whenever it needs to be distinguished.
Functional Granularity

Mini Coopers

One identifier or three?
Depends on the function

- Buying an engine part?
- Matching the paint for a respray?
- Defending a speeding ticket?
Principle of Designated Authority

The author of an item of metadata should be securely identified.
Architects

St Paul’s Cathedral

Was designed by

Asserted by Paul Jessop on March 22nd, 2013

J S Bach
Principle of Appropriate Access

Everyone requires access to the metadata on which they depend, and privacy and confidentiality for their own metadata from those who are not dependent on it.
Crediting Creators

I want to credit the composer in my webcast. Who wrote this?

Jurassic Park Main Theme

Wrote

John Williams
Not Necessarily Free or Available

John Williams

Wrote

Jurassic Park Main Theme

What deal did the composer have with the film producers?
TYPES OF METADATA
Types of Metadata

- Administrative
- Indexing
- Rights Management
- Identity Management
Identity Management

- Unique identifying codes
- Enough descriptive metadata to disambiguate
  - Minimum Metadata
  - Reference Metadata
Example – Sound Recording

- International Standard Recording Code
  - AU-XYZ-13-12345
- Track title
- Version title
- Featured Artist
- Recording Date
- Duration
Requirements – Identity Management

• Fundamental: Shared between bilateral users
• In practice: Shared within mesh of users
• Optimally: Public registry
Rights Management

• The information you need to make sure the right people get paid or recognized
• e.g.
  – Ownership of particular right in territory
  – Copyright expiration date
  – Backing musician identity
Indexing Metadata

• Everything else
• For resource discovery
  – “Find me”
  – “Try this”
• For rendering enhancement
  – “Did you know?”
  – “FYI”
REGISTRY REQUIREMENTS
Identity Registry

- Trusted - ISO?
- International
- Open/RAND
- Accountability
- Resolution service
- Query capability
Simple Rights Registry

- Single right
- Territorial
- Identify:
  - Rightsholders
  - Typically for distribution
Complex Rights Registry

- Multiple rights
- Multiple uses
- Multiple territory
- Licence creation
- Licence request processing
- Usage reporting
Codification of Uses

• Overlap with Rights Expression Languages
• See:
  – Copyright Clearance Center/Getty/others
  – Linked Content Coalition - Rights Reference Model
  – Use Description Taxonomy (UDT)
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