Digital Rights Management
and Digital Repositories

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Overview

- Introduction to DRM
- DRM Modeling
- Open Digital Rights Language (ODRL)
- Education and DRM
- DRM and IMS and OKI
- Learning Object Xchange
- Conclusion
DRM Definition

- Digital Rights Management (DRM) has always had a “security/protection” emphasis
  - Digital Rights Enforcement
- DRM” is broader and includes
  - description, identification, trading, protection, monitoring and tracking of all forms of rights usages over both tangible and intangible assets including management of rights holders relationships
- DRM must address end-to-end management of digital assets
  - Technical, Business, Legal, Social needs
- DRM is an asset management approach, not a magic “bolt-on” utility

New Opportunities

- From “Creation Waterfall” to “Creation Lifecycle”
  - Blurring creation/use towards re-creation/re-use
    - Pay for usage, not possession
- Share the rights - Share the revenue
  - Layers of Rights
Open Digital Rights Language (ODRL)

- Developed by IPR Systems
- Incoporated MRV (Nokia)
- Merged XMCL (Real Networks)
- Defines both Expression Language and Data Dictionary
- No License Requirements
- http://odrl.net
- Also Supported By:

![Trademark Logos]

ODRL Model

- Signature
- Revoke
- Agreement
- Offer
- Parties
- Rights
- Permission
- Constraint
- Requirement
- Condition
- Encryption
- Rights Holder
- Assets
DRM Education Studies

- SOCCI/TLF
  - DRM Business and System Requirements
  - Education Architecture Functional Requirements
  - http://www.thelearningfederation.edu.au
- Department of Education Science and Training (DEST)
  - DRM Requirements from Scenarios
  - Recommendations for Standards activities
    - IMS DRM work item
    - Liaison with OpenEBook Forum
    - Propose ODRL as base model

DRM and Education

- Education Sector has unique characteristics
  - Creation of Learning Objects
    - Longer time period
    - "Re-Use"
    - Multi-part
    - Multi-Format
    - Sequencing
  - Trusted User base
    - Upstream and Downstream
  - DRM needs to interoperate with Learning Object Management Systems (LOMS)
From Chunks to...

Content Management
Learning Content Management
Learning Management
Library E-Services
Integration Services
Digital Rights Management
Directory Services

DRM LOMS Framework

Content Use
Rights Tracking
Learning Mgt System
Permissions Management
Secure Delivery
Re-Use
Learning Content Mgt
Rights Attribution
Content Mgt
Rights Validation
Content Source
LO Exchange
Parties Directory

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DRM and IMS

- DRM Work Item proposal
- Develop Rights Language supporting a number of IMS specifications:
  - Metadata and Packaging
  - Description and Delivery
  - Digital Repositories
  - Discovery and Retrieval
  - Enterprise
  - Parties and Access
- Develop Rights Terms (data dictionary) of specific e-learning permissions
- Define Rights Behaviour across e-learning architecture

DRM and IMS and OKI

- Other API
- DRM API
- Other API

OKI Rules

IMS System

Rights Language

IMS System
Conclusion

- DRM is emerging as a new mechanism to
  - Manage rights on existing content
  - Enable innovative new online education models
- DRM standardisation important
  - Input needed from all groups and sectors
- IMS DRM activity critical to meet needs of online learning community
  - IMS DRM Briefing Paper