



UNLOCKING IP
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New models for sharing and trading intellectual property

Global IT Standards, Interoperability, and IP

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Overview

- Input from You!
 - Expectations & assumptions
- Education & Training context
- Standards & Interoperability
 - Why standards?
 - What are the relevant standards?
 - DREL & DRM
 - The Wider Picture

The Terminology Trap

What are we talking about?

eg,

- Term (time)
- Term (conditions)
- Term (vocabulary entry)

The Other IP

Internet Protocol

- Part of TCP/IP
- the address space that domain names use

IPv6 – next generation IP developed by IETF

- Alleviates diminishing space under current system
- Specifies more than a billion x billion addresses per square metre on Earth!

<http://www.ietf.org/html.charters/ipv6-charter.html>

“A Standard is a published document which sets out specifications and procedures designed to ensure that a material, product, method or service is fit for its purpose and consistently performs the way it was intended to.”

Standards Australia

What is IP?

Expressed as ...

- Patents
- Copyright
- Trademarks
- Trade secrets
- Service marks
- ...

Applies to ...

- Ideas
- Designs
- Inventions
- Literary works
- Artistic works
- Processes
- Models
- Devices
- ...

Questions & Issues

- Where does IP reside in Education & Training?
 - What do you consider to be the key IP within your organisation?
 - Does it give you a business advantage?
 - How valuable is it? How do you place a value on it?
 - Do you have a policy in relation to protecting it? How does it relate to your business strategy?
 - What considerations should you take into account in developing an IP policy for an educational organisation?
 - Is IP sometimes hidden, or hoarded?
 - What is the impact of moving from the print world to the digital world?

Where is IP in Education & Training?

- Teaching and Learning resources
- Research outputs
- Scientific inventions
- Software
- Course and curriculum design
- Business processes (isolated examples)
- Student data profiles (yet to be explored)
- Professional Services
- Institutional Brand
- ...

Questions & Issues

- “Unlocking IP” implies more than just IP Rights. What other facets of IP are there?
- Is there a difference between “intellectual property” and “intellectual capital”?
- How does IP relate to Knowledge?
- Are Content and Process always distinguishable in the digital domain?
- What is the relationship between Standards & Innovation?
- What standards are necessary anyway?

Questions & Issues

- How do you encourage knowledge sharing while also protecting IP?
- What is the value in knowledge and how can it be quantified/valued?
- How does IP persist in digital environments when it is constantly re-purposed?
- IP Law and IT - which is the driver?
- Is there a way of balancing the two positions of Copyright and Copyleft?
- Will IT always be ahead of DRM?

Rights

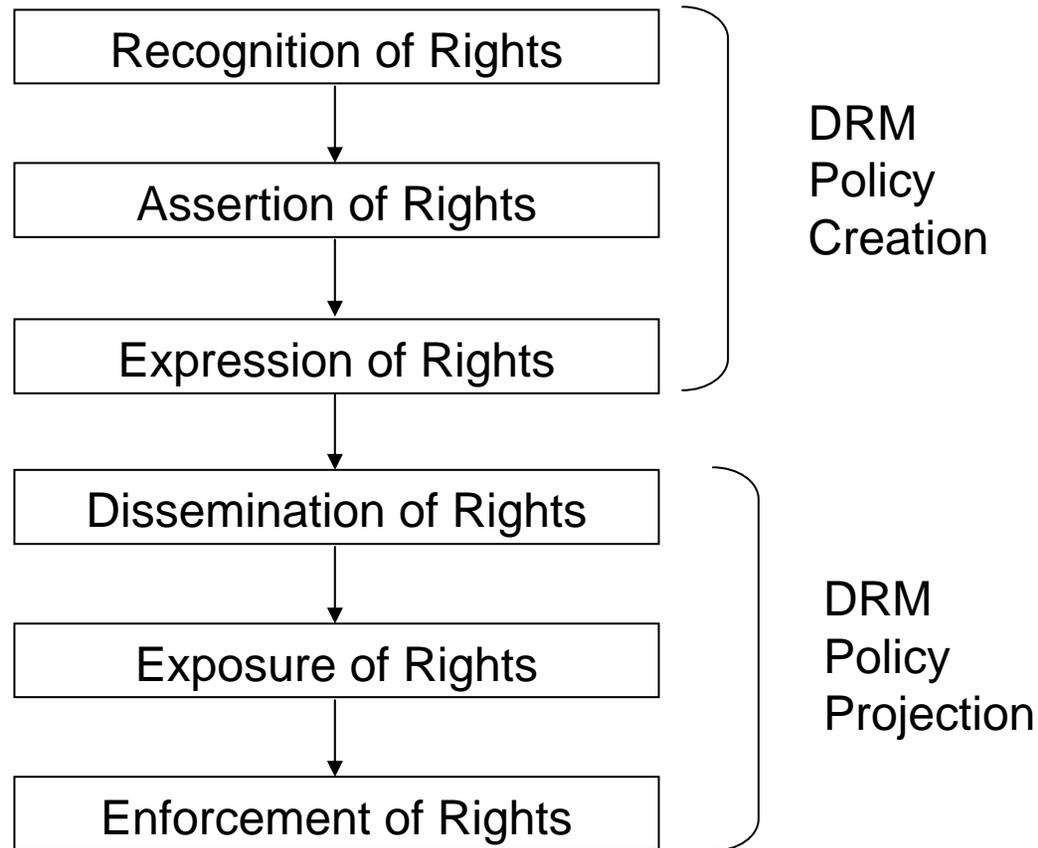
From Print to Digital

- Digital technology has unlocked IP but its management has become very complicated:
 - New laws have been & are being developed
 - New models of IP are emerging
 - Standards re IP management in their infancy
 - Digital 'stuff' is inherently malleable
 - Content
 - Structure
 - Process
 - Presentation
 - ...Rights are unbundled compared with Print world
 - 'born digital' syndicated content has no analogue in the print world
 - Replication & Distribution at close to zero cost.

Ed & Training IPR Requirements

- Attribution (moral rights)
- Seamless & easy 'workflow'
- Systems that share content
- Need to handle 'compound content'
 - Need to unbundle
 - Need to recombine

JISC Rights Management Model



* **Source:** Digital Rights Management Study Interim Report, 10 June 2004 . Prepared by Intrallect Ltd on behalf of JISC. By Charles Duncan, Ed Barker, Peter Douglas.

<http://www.intrallect.com/drm-study/>

Standards

Why Standards?

- A natural artifact of any human society
- Communities of practice develop standards (& conventions, protocols, fashions, etc)
- Signal marketplace maturity of an industry
- All successful industries depend on standards
- Help create 'trust' infrastructure

But!

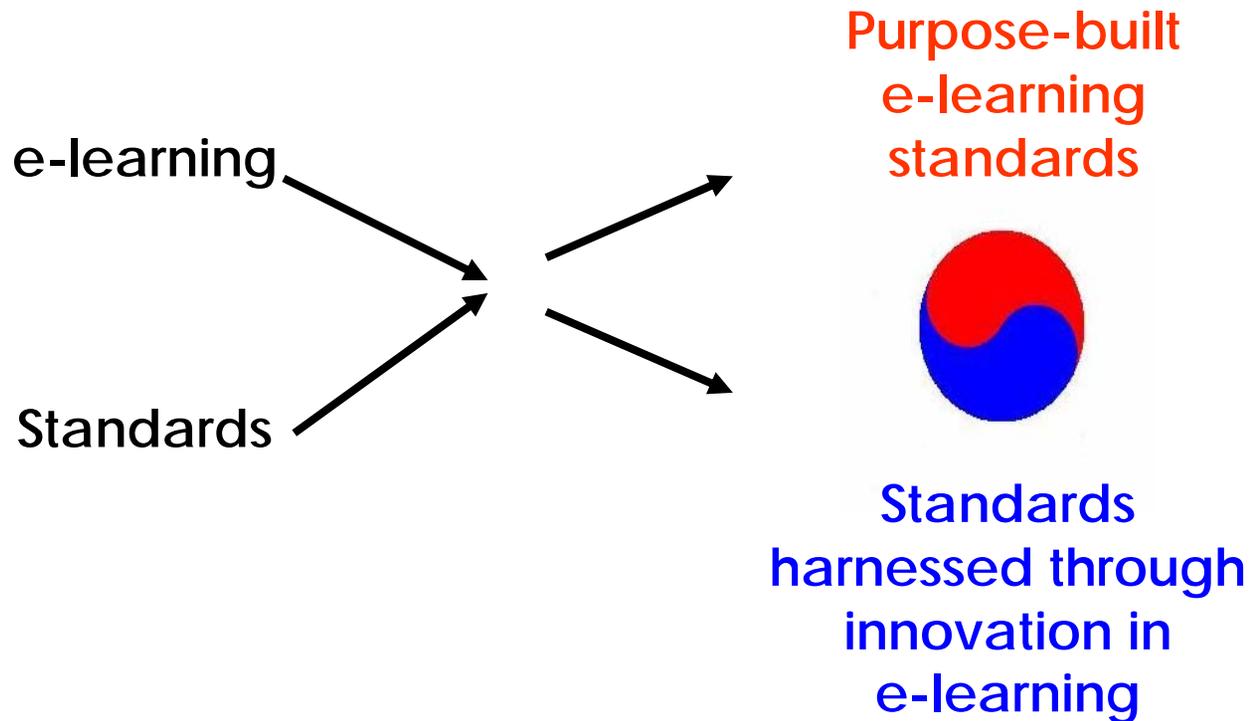
Standards are Misunderstood

As:

- A means for corporate dominance in a market
- A means for government regulatory control
- Limiting personal freedom of expression
- Limiting frontier thinking & innovation

And, there's wide usage of the term!

What Standards?



What Standards?

- DREL & DRM
- DOI
- Metadata
- Content Management
- Access Management
- Identity Management
- ...

What Standards?

DREL & DRM

Definitions

- **DREL** - Digital Rights Expression Languages
The expression of IPR via consistent grammar & vocabulary
 - ODRL
 - MPEG REL
 - METSRights
 - CreativeCommons
 - Adobe Content Manager
 - & others ...
- **DRM** - Digital Rights Management
The management of IPR via digital means - defining, tracking & enforcing permissions & conditions. Depends on DRELS

ODRL

Open **D**igital **R**ights **L**anguage

- Initiated by IPR Systems (Australia)
- Rights expression & data dictionary
- Intended to be machine actionable
- Adopted by Open Mobile Alliance

<http://www.odrl.net/>

MPEG-REL

- Part 5 of MPEG-21
- MPEG serves large & powerful community (publishing & entertainment)
- Largely based on XrML (Content Guard)
- Standardised as ISO/IEC 21000-5:2004
- Intended to be 'unambiguously' machine actionable

<http://www.iso.ch/>

CreativeCommons



- Initiated in 2002
- Based on open licensing scheme of FSF/GNU
- Machine readable but not machine actionable
- Relies on copyright law for 'protection'
- CC metadata record has two parts
 - Work (DC metadata)
 - License (a range to choose from)
- Not a DRM enforcement mechanism

<http://creativecommons.org/>

METSRights

METS (Metadata Encoding Transmission Standard)

- Developed by & serves academic & library community (digital libraries)
- Most projects deal with archival works
- Machine readable but not actionable beyond display of data element content
- No automated control – but not intended

<http://www.loc.gov/standards/right/METSRights.xsd>

Systems Boundaries

Digital rights management brings new complexity & can imply management of:

- Identity (people & resources)
- Access
- Content (end-to-end, creator-to-consumer)
- Distribution & tracking
- Enabling & constraining technologies
- ‘Trusted Computing’

Copyright

- Protects the expression of ideas
 - not the ideas themselves
- Protects creative effort through exclusive rights
- But also protects against monopoly

Copyleft

GNU General Public License:

- Provides the public with legal permission to redistribute & modify a work (usually software)
- Viral clause – provides mechanism & condition for delivering free software: all modifications &/or extensions are subject to same license

<http://www.gnu.org/copyleft/copyleft.html>

Issues (1)

- IPR challenging enough outside digital domain
- Neither the law nor the available methods of DRM is keeping pace with technology
- DRM not just a machine-machine issue (rights & terms subject to human interpretation)
- Copyright Law – applies only to ‘works’ that are demonstrably original
- International context – laws & rights all vary

Issues (2)

- Standards are in their infancy
- Involving key practitioners in standards development

DRM Implementations

- Microsoft Office 2003 *Permissions*
 - Unrestricted Access
 - Do Not Distribute
 - Restrict Permission as ...
- Adobe Acrobat
 - View
 - Copy
 - Print
- OeBF (Open eBook Forum)
 - Profile of MPEG-REL

What Standards?

The Wider Picture

Unlocking IP?

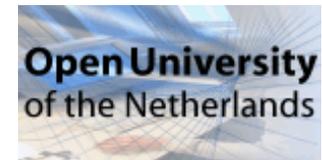
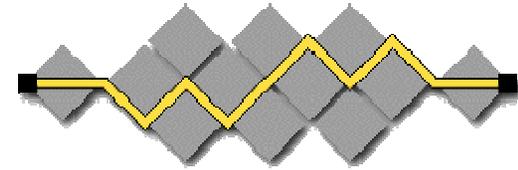
Standardisation is a key activity
that is closely linked with
stimulating & capitalising on
innovation ...

it is a key foundation in
achieving interoperability ...

but is a bigger challenge than
developing IPR standards



Who





Who Else?

Workforce Management Coalition



United Nations Educational, Scientific and Cultural Organization



Education for All

EFA Home



eEurope

Standards that make eEurope tick !

ALIC

Advanced Learning Infrastructure Consortium / 先進學習基礎協議會

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