

# An Overview of e-Learning Standards: Strengths and Weaknesses

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## Overview of Presentation

- Introducing e-Learning standards
- Why have standards for e-Learning?
- What e-Learning standards can and can't achieve
- Current e-Learning standards work in Australia and internationally
- The future of e-Learning standards (inc DRM)
- The role of standards in successful e-learning development and implementation
- Case study: The "COLIS" project



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## *Introducing e-Learning Standards*

- Welcome to acronym soup!
  - AICC (training focussed, since early 90s, arose from US aviation training, originally pre-Web)
  - IMS (education & training, late 90s, arose from US higher education, many standards, Web)
  - SCORM (training focussed, late 90s, arose from US military, uses AICC & IMS, Web)
  - IEEE (official standards body, recently approved "LOM" - Learning Object Metadata, from IMS)
  - EdNA (Australian education body, late 90s, uses own subset of IMS, Dublin Core & other elements)
- Other more general standards (XML, etc)



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What's the great thing about standards?

*There are so many to choose from!*



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## *Why have e-Learning standards?*

- Depends on your sector
  - AICC/SCORM relevant for corporate/government training
  - IMS relevant for education (HE, VET, K-12)
- 3 key reasons to consider standards
  - Re-usability of courseware (applies to both 3rd party and custom developed courses)
  - Avoid being locked to a single Learning Management System
  - Take advantage of good practice instatiated in standards requirements
- However, standards are still evolving!

## *What standards can and can't do*

- Standards can help:
  - Allow for re-usability of courseware
  - Provide a standard method for data interchange
  - Inform good practice
- Standards can't solve the following:
  - Which LMS should I choose?
  - Which courseware should I choose?
  - How do I ensure that the way my LMS functions will be the same if I switch LMSs (admin)
  - Guarantee standards compliance means plug & play without any issues

## *Australian and O/S standards work*

- Australia:
  - IMS Australia (at Macquarie University)
  - EdNA
  - Standards Australia IT-019-01 committee
  - Digital Rights Management (DRM) - ODRL
- Overseas:
  - ISO/IEEE - "LOM"
  - IMS (various standards - esp Content Package)
  - AICC - from aviation industry
  - SCORM - from US military
  - CEN/ISSS - European standards
  - EML - Open University of the Netherlands

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## *The Future of e-Learning Standards*

- Growing impact of SCORM
  - New SCORM 1.3 including Simple Sequencing
- IMS "next generation architecture"
  - Move towards "run-time" behaviour description
- ISO/IEEE - bringing it together or fragmentation?
- Educational Markup Language (EML)
  - The "Learning Activities" collaborative dimension
- Digital Rights Management (DRM)
  - ODRL and XrML
  - Impact on all aspects of systems, especially SSO

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## *The role of standards in success*

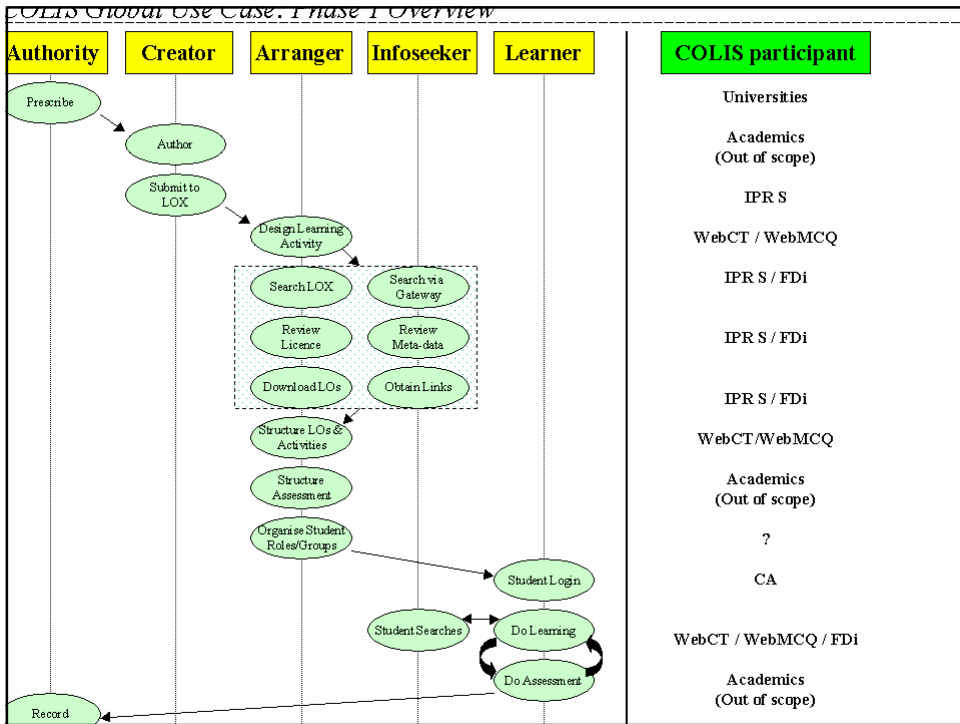
- (1) Become aware of them and their importance to e-learning implementation
- (2) Ensure your Learning Management System (LMS) is standards compliant
- (3) Question anyone who says their LMS is standards compliant
  - Find out exactly what they mean - which standards, to what extent, are they certified?
  - Eg, you cannot be IMS certified (no agency)
- (4) Ensure courseware is standards-based
  - Both 3rd party and custom developed courses



## *Case Study: The COLIS Project*

- DEST funded interoperability project based on e-learning standards
  - 5 Universities
  - 5 Vendors
- University IT Architecture reviews
  - Similarities and differences
- "Demonstrator" environment
  - Including SSO, Learning Object Trading Exchange, Learning Object Management System (WebMCQ), LMS, and federated search gateway
  - Incorporating of Digital Rights Management
  - Standards based - no one dominant vendor





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## Questions?

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