

CEN/ISSS Work Item Proposal:
Interoperability of Repositories for Learning
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Rationale

The finalization of the IEEE LTSC Learning Object Metadata standard in 2002, and the complementary work in the CEN/ISSS Learning Technologies Workshop on translations, vocabularies, etc. has further accelerated the development and roll-out of learning object repositories. It is noteworthy that Europe is playing an important role here, with initiatives like ARIADNE (<http://www.ariadne-eu.org>) and UNIVERSAL (<http://www.ist-universal.org>).

In parallel, we evidence that learning objects are increasingly stored in repositories, which do not provide effective means for making them available over the net. While educators and learning technologists increasingly rely on metadata standards such as learning design and learning object metadata (LOM), a suitable infrastructure for exchanging this kind of descriptions is still missing.

The initiative presented here shall investigate existing infrastructures and determine their suitability for solving the interoperability problem between learning repositories. Repositories for learning are defined as databases with descriptions of educational material, courses, and other learning objects that can provide access to those resources via electronic means. Examples of repositories for learning are educational brokers, knowledge pools, learning management systems, collaboration tools, streaming video servers, etc.

Scope

A top down approach will be applied, starting with the investigation on appropriate architectures (e.g. P2P, broker-centered, distributed databases, etc.). In the context of these architectures, services required for learning resource exchange shall be identified and broken down to concrete functional requirements. Finally, these requirements shall be mapped into service bindings and trialed in concrete implementations.

The purpose of a repository is not simply safe storage and delivery, but also administration and configuration management for learning objects, in terms of updating, identifying, utilizing, sharing, re-using and annotating them. It is the objective of this project to identify means for performing these tasks not only on a user-level, but also on a system-level.

Starting points and related work

The work will be strongly based on the experiences of the highly successful EC-funded projects ARIADNE and UNIVERSAL. In addition, two documents have been identified as extremely relevant sources:

- IMS Digital Repositories Interoperability Specification (<http://www.imsglobal.org/digitalrepositories/index.cfm>)
- UNIVERSAL System Interface Framework for Educational Brokerage Networks / ELENA Learning Management Network Specification (<http://nm.wu-wien.ac.at/e-learning/interoperability/>)
- ARIADNE KPS Client 4.0 RC1 Release Notes (<http://rubens.cs.kuleuven.ac.be:8989/ariadne/KPSClient/>)

This initiative wants to build on the work documented in these papers and aims to come one step closer to a widely adoptable interoperability framework. DRM for content shall not be

covered by this project, but repository functionalities for granting and withdrawing rights need to be identified.

Case Study: Building a network of interoperable learning repositories

The work shall be strongly based on a case study, which aims to connect as many as learning repositories as possible. A starting point will be the repositories of Ariadne (<http://rubens.cs.kuleuven.ac.be:8989/lkptm5/intro.jsp>) and EducaNext (EducaNext is a portal based on the UNIVERSAL Brokerage Platform, <http://www.educanext.org/>), which we aim to interconnect. However, other repositories for learning are very welcome to join.

Contact

Please send your comments, questions, input and feedback to interoperability@alice.wu-wien.ac.at, which will reach Erik, Simos and Bernd directly, or use the CEN workshop mailing list for public comments.