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SCORM Specifications through AUF Training Workshops - the linguistic diversity at work

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SCORM specifications through AUF Training Workshops: the linguistic diversity at work

AUF Liaison with RG1
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ADL requests a Category A Liaison with SC36 for the following reasons:

1. the SCORM technical scope overlaps the scope of multiple SC36 working groups.
2. SCORM draws extensively on diverse specifications and standards produced by three organizations already with SC36 Category A Liaison status:
   a. AICC,
   b. IMS Global Learning Consortium,
   c. IEEE Learning Technology Standards Committee.
3. ADL sponsors research on advanced learning technologies beyond the scope of SCORM which are not in all cases addressed by current SC36 working groups.
ADL / SC36 : key dates & documents

- **2006-01-27**: ADL Request for Category A Liaison with JTC 1/SC 36 (N1194)


- **2006-04-10**: ADL submit SCORM 2004 3rd Edition for review by ISO/IEC JTC1 SC36 NBLOs (N1264)

- **2006-07-28**: Comments submitted (N1296)

- **2007-09-19**: London SC36 Open Forum in association with ADL to achieve appropriate global stewardship of SCORM, SC36 will have the opportunity to reach out to a greater catchment of stakeholders (N1332)
SCORM, ADL key issue

- SCORM incorporates four learning-related IEEE standards that were developed with active ADL participation:
  - IEEE 1484.11.1-2004: Data Model for Content to Learning Management System Communication
  - IEEE 1484.11.2-2003: ECMAScript Application Program Interface for Content to Runtime Services Communication
Document N1332 states that there is the opportunity for elements within this conference to follow on from the findings and recommendations coming out the WSIS event in terms of:

- "how developing countries can be better engaged in this process and;

- how, in the process of sharing technologies and best practice globally, local linguistic and cultural differences can be not just respected but also reinforced and supported».

How did AUF reacted to achieve these goals?
AUF Scorm initiatives

- Two major initiatives addressing developing countries (French speaking communities):
  1. **2004**: Migration to Scorm specifications for training courses development (Cognifer LCMS),
  2. **2005**: Defining a new Transfer workshop about “Standardized conception of learning objects” based on Scorm specifications
Cognifer LCMS

- Cognifer LCMS URL: http://www.cognifer.refer.org/
- A Scorm upgrading of the entire AUF educational repository

Scorm based sequencing
**Cognifer LCMS**

- A Scorm derived application profile for learning objects description

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Cognifer LCMS

- IMS compliant content aggregations

Exporting sequences metadata to create IMS Manifest XML files for Scorm content aggregations
Cognifer LCMS

- IMS compliant aggregation packaging

Generating the metadata files ("imsmanifest.xml" & the content aggregation metadata) for the IMS Content aggregation package.
Cognifer LCMS

- SCORM compliant Run Time Environment

A Scorm based RTE API
Cognifer LCMS

- Training resources and documentation for French speaking communities:

  - Indexation d’objets pédagogiques sous Cognifer selon le modèle de référence SCORM : *Manuel du concepeuteur* [indexing learning objects under Cognifer platform using Scorm specifications : users manual]
Transfer Workshop 2.3

Atelier 1.1 :: Installation d'un système d'exploitation sous Linux

Atelier 1.2 :: Administration d'un réseau sous Linux

Atelier 1.3 :: Gestion et sécurité d'un réseau d'entreprise

Atelier 2.1 :: Gestion de la rédaction et de la publication scientifique en ligne

Atelier 2.2 :: Création et gestion de site dynamique (PHP/MySQL)

Atelier 2.3 :: Conception standardisée d'objets pédagogiques interopérables

Atelier 2.0 :: Maîtrise des outils de recherche et d'accès à la documentation scientifique

Atelier 3.2 :: Conception, développement et utilisation d'un cours en ligne

Atelier 3.3 :: Création et gestion d'un enseignement ouvert et distant

Atelier 3.4 :: Tutorat dans une formation ouverte et à distance

Workshop 2.3 : « Conception standardisée d’objets pédagogiques interopérables » [Standardized interoperable learning objects]

10 workshops

03 E-Learning oriented

01 explicitly standards oriented

Conception, development and use of an on-line learning content

Implementation and management of an On-line educational system

Tutoring an on-line training
Transfer workshop 2.3 objectives

● **General objectives:**

- Draw attention onto the advantages of learning resources standardization,
- Support integration of educational metadata in on-line educational resources,
- Enhance the implementation of standards ensuring interoperability between applications and reusability of resources in on-line education systems

● **Specific objectives:**

- Control and manage tools capable to implement on-line education standards,
- Conceive and compose XML structured learning resources,
- Handle standardized metadata to reference educational resources,
- Identify the process steps of designing interoperable learning objects,
- Exchange and share learning resources within varied learning environments and platforms.
Transfer workshop 2.3 programme

- **M1 : General Introduction to metadata**
  - Introduction to educational metadata
  - Digital documents and XML reference model
  - Practice: editing standardized educational metadata using metadata editors:
    - LOM Editor
    - LOMPAD Editor

- **M2 : Introducing on-line educational standards**
  - Presentation of standards categories and Scorm conformant application profiles
  - Presentation of Scorm components and Cordra
  - Practice: Using Reload and ADL Test Suite for aggregation and validation

- **M3 : Learning design using Scorm environment**
  - Scenarios
  - Scorm SN (sequencing and Navigation)
  - Mapping between Scorm and IMS/LD
  - Practice: Collaborative projects for learning design using Reload
Transfer workshop 2.3 contents

● **M4 : Interoperable learning resources**
  ✤ Learning repositories
  ✤ LMS interoperability using Scorm and IMS content aggregations (Reload/Moodle/Ganesha)
  ✤ Practice : Content interoperability between Moodle and Scorm RTE (Run Time Environment)

● **M5 : Individual projects**
  ✤ Restructuring real individual courses contents in SCO and Assets entities
  ✤ Using educational metadata to index learning objects
  ✤ Creating Scorm compliant content aggregations
  ✤ Demonstrate interoperability using two platforms RTE
1st Transfer 2.3 workshop:

- Date: 2006-05-08/12
- Category: Regional
- Place: Faculty of Science and Technology, Monastir (Tunisia)
- Public: University lecturers
- Number: 18
- Language: French
- Nationalities: Tunisians, Algerians, Moroccans

Potential impact:
- Building bridges with Moroccan CVM technicians (Moroccan Virtual Campus) who attended the workshop,
- Initiating Algerian future trainers on learning standards,
- Endorsement of Tunisian UVT (Tunisian Virtual University) for using standards for learning contents development
Transfer workshop 2.3 statistics

- **2nd Transfer 2.3 workshop:**
  - **Date:** 2006-07-17/21
  - **Category:** Regional
  - **Place:** AUF Office, Indian Ocean, Antananarivo (Madagascar)
  - **Public:** University lecturers
  - **Number:** 09
  - **Language:** French
  - **Nationalities:** Malgachians, Burundians,

**Potential impact:**
- Train the local future trainers for national needs
Transfer workshop 2.3 statistics

- **3rd Transfer 2.3 workshop**
  - **Date**: 2006-05-08/12
  - **Category**: International
  - **Place**: AUF Offices for Europe and North Africa, Tunis (Tunisia)
  - **Public**: University lecturers
  - **Number**: 09
  - **Language**: French
  - **Nationalities**: Tunisians, Algerians, Nigerians, Congolese
  - **Potential impact**: Train the local future trainers for national needs
Transfer workshop 2.3 perspectives

- UVT (Tunisia) plans to organize 100 national workshops about E-Learning during 2007. Two AUF Transfer 2.3 workshops are already planned for the universities of Sousse and Sfax,

- CVM (Morocco) intends to introduce standards in its E-learning projects. Attendees to first AUF workshop 2.3 are mounting national workshops in Morocco,

- AUF plans to introduce the experience in Algeria with Algerian trainers having attended 1st workshop in Tunisia,

- Further Transfer 2.3 workshops are projected for other French speaking countries (potentially Senegal, Lebanon, Romania)
Other linguistic versions of Cognifer LCMS and Transfer 2.3 workshop are on their way to merge within local contexts (TELJE+ : A6Multilingual LCMS)
Transfer workshop 2.3 linguistic perspectives

- Unicode characters coding and Bidi algorithms are default implemented.
Templates, metadata and localization variables are culturally and linguistically adapted to implement Scorm specifications in any language.
Producing IMS Contents aggregations are also possible in different languages (even complex ones)
Transfer workshop 2.3 linguistic perspectives

- SCORM/RTE are systematically shifted Right to Left in multilingual environments
Conclusion

- With technical solutions for characters coding like Unicode and ISO 10646,
- And with concepts like I18n and L10n,
  - Linguistic and cultural diversity is no more an obstacle for E-learning standards interoperability and worldwide spreading,
  - All is a matter of awareness, willingness and motivation,
  - AUF is helping its partner languages to integrate the universe of E-Learning standards and SC36 standardization issues