

# IMS Learning Design Update

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# Background

- IMS Learning Design version 1.0 released in 2003
- Based on Educational Modelling Language (EML 2000)
- Update on current activities in Europe

# What Vision Drives the LD Activities

How can we improve the pedagogical quality of e-learning courses in an interoperable way with user-friendly tools?

# What is LD?

- eLearning 'Standard' published by the IMS consortium in February 2003
- Based on Educational Modelling Language (EML) developed at the OUNL
- MS LD replaces EML

**Information  
Model**

**Best Practice  
Guide**

**XML  
schema**

# Why LD?

- get rid of proprietary non-interoperable solutions
- get rid of the oversimplified technological driven views of learning/teaching, eg. learning is consuming sequenced learning objects
- extend the possibilities of e-learning: new more effective, efficient & attractive learning models (active learning, problem based, ...)
- integrate the large number of isolated existing standards (LOM, CP, QTI, RCD, LIP, ..) to create executable units of learning ('courses')
- Support automation of the workflow in the teaching/learning process to decrease workload

# What it does...

- model different kinds *pedagogical models*
- describes **all** processes, content and services within a course in an interoperable way
- supports **personalisation** of learning activities
- supports **reuse** of (components of courses)
- supports **multi-role workflow** within teaching/learning

# Roadmap for LD implementation

- a. Specification (febr. 2003)
- b. Awareness raising (febr. 2004)
- c. First generation tools (febr.2005)
- d. Demonstrators (during 2005),  
usability improvement of tools, and  
application profiles and conformance testing
- e. Development of community of users  
(from 2006)

# Valkenburg Group

- Ad hoc community of persons interested in developing tools for IMS LD incl. R&D issues
- European partners in Valkenburg are now funded by EU (UNFOLD project)
- Tool development projects (Reload, etc.)
- Test suite/application profiles for LD (Telcert)
- February 2004: group wrote chapters of Springer Book Learning Design
- During the Unfold period, we invite non-europeans to participate in co-organized Valkenburg meetings.



# Status of Tool Development

- Reload editor (Level A editor Nov. Preview in CopperCore)
- Alfabet level C editor and player (June 2005)
- Lams (Level A editor + player (mid 2005)
- CopperCore Engine (Level C LD Engine dec)
- eLive Visual LD Editor (level B, nov).
- Chronotech level A LD/EML editor (nov)
- Service Based Learning Design System  
OUNL/BOU JISC (Nov)
- MOT+ input/output filters (?)
- Edubox (EML 1.1)



# understanding new frameworks of learning design

A Sixth Framework IST European Project

<http://www.unfold-project.net>

- **Main Partners**  
UPF, JISC/CETIS, EUCEN and OUNL
- **Focus of UNFOLD?**  
Adoption of IMS Learning Design
- **Target Group**
  - Systems Developers
  - Learning Designers
  - Teachers and Learning Providers
  - PhD students working on LD or EML



# understanding new frameworks of learning design

A Sixth Framework IST European Project

## Major Activities

- Setup of CoPs for every level of target group
  - support for tool developers (installation CD)
  - support for learning designers (demo materials)
  - support for providers (through EUCEN)
  - support for PhD students in LD
- Setting up (a pilot) Learning Network for Learning Designers ([In4ld.learningnetworks.org](http://In4ld.learningnetworks.org))
- Organization of Conferences, workshops, etc. incl. Valkenburg Group Meetings
- Publication and dissemination activities

# Book of Valkenburg Group (2005)

**Rob Koper** is professor of Educational Technology and director of learning technologies R&D at the Educational Technology Expertise Centre (OTEC) of the Open University of the Netherlands. He was one of the driving forces for the development of the IMS Learning Design Specification.

**Colin Tattersall** works as an educational technologist at The Open University of the Netherlands, where his responsibilities cover innovation in e-learning, learning technology standardization and the coordination of the "Valkenburg Group".

#### Features and Benefits

- ★ Description of the IMS Learning Design Specification
- ★ Roadmap for approaching the specification for different audiences
- ★ How-to guides for using the specification to create interoperable e-learning processes
- ★ Examples of the use of learning design in production processes

Koper · Tattersall (Eds.)

Rob Koper  
Colin Tattersall (Eds.)

## Learning Design


E-learning is still in its infancy. This can be seen in both in the limited pedagogical quality and lack of portability of e-learning content, and in the lack of user-friendly tools to exploit the opportunities offered by current technologies. To be successful, e-learning must offer effective and attractive courses and programmes to learners, while at the same time providing a pleasant and effective work environment for staff members who have the task to develop course materials, plan the learning processes, provide tutoring, and assess performance.

To overcome these deficiencies, the IMS Global Learning Consortium Inc. released the Learning Design Specification in 2003. With Learning Design it is possible to develop and present advanced, interoperable e-learning courses embracing educational role and game playing methods, problem-based learning, learning community approaches, adaptivity and peer coaching and assessment methods.

In this handbook Koper and Tattersall have put together contributions from members of the so-called "Valkenburg Group", consisting of 33 experts deeply involved in e-learning and more specifically learning design. The result is a rich and lasting source of information for both e-learning course and tool developers, providing information about the specification itself, how to implement it in practice, what tools to use, and what pitfalls to avoid. The book not just reports first experiences, but additionally goes beyond the current state of the art by looking at future advancements and innovative applications.

ISBN 3-540-22814-4



 [springeronline.com](http://springeronline.com)



Learning Design

# Learning Design

A Handbook on Modeling and  
Delivering Networked Education  
and Training

 Springer

# TELCERT



## Technology Enhanced Learning: Conformance - European Requirements & Testing



# Key Aspects of the Project

- A Model for Conformance
- Application Profiles
- Application Profiling Tool
- Content Re-Engineering Tool
- Testing Technology Research
- Test Suite Architecture
- Key Deliverables
- Outreach Workshops



# LD RTD

- Work of PhD students (see dspace server), mostly on extensions or implementations
- Work on LD automatically generated, reusable LD patterns
- Validation of pedagogical expressiveness requirement =>

# Validation

- lesson plan sites (merlot, eric lesson plans, etc.)
- random selection of 16 lesson plans
- Expert designers:
  - expert analysis: judge how difficult to model
  - document analysis
  - created LD files and noted problems
- a. do the three methods differ?  
b. possible to create the LD?  
c. difficulties?



# selected lesson plans

- 1 Pizzaz!...tongue twisters
- 2 Lincoln's secret weapon
- 3 Jazz and Math: Rhythmic Innovations
- 4 Considering copying
- 5 The darien adventure
- 6 Carnival safety success
- 7 Exploring disability
- 8 Ecosystems and Well-Being
- 9 Kermit the hermit
- 10 Inventions
- 11 Cracking dams
- 12 The Works Progress Administration and the New Deal
- 13 Learning microsoft excel 2000
- 14 How do people express their faith through the arts?
- 15 Eyes in the Sky
- 16 A Pittsburgh Memory, A Memoir Study Focusing on Location

# Outcome

- All could be modelled in LD
- different categories (behaviourist, cogn., soc. constructivist)
- identification of easy/difficult parts, e.g. difficult (but possible) is dynamic grouping
- .... still working on it

# Events

- Unfold/Surf Six meeting Heerlen Oktober
- Unfold LD Workshop Kaunas November
- LD Workshops etc. Online Educa Berlin Dec.
- Plugfest LD tools Heerlen Febr 2005
- Online events every month
- ...

# Thank You!

- [www.unfold-project.net](http://www.unfold-project.net) (Unfold)
- [In4ld.learningnetworks.org](http://In4ld.learningnetworks.org) (Learning Network for Learning Design)
- [www.coppercore.org](http://www.coppercore.org) (sourceforge)
- or: [rob.koper@ou.nl](mailto:rob.koper@ou.nl)