



eMadrid
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eMadrid Seminar on "Learning Process Design"

University Complutense of Madrid, UCM

Friday, 14th January 2011

Organizes: eMadrid Network

On Friday, January 14th 2011, a seminar organized by the eMadrid network on "**Learning Process Design**" will be held at the University Complutense of Madrid.

eMadrid is a R&D program involving research groups of several Universities of Madrid. It is funded by the Region of Madrid and promotes research and development of Technology-Enhanced Learning. Coordinated by the University Carlos III of Madrid, eMadrid includes Autónoma University, Complutense University, Politécnica University, King Juan Carlos University of Madrid and the Distance Learning University UNED as full members and involves other universities, companies and related entities.

The schedule of talks is as follows:

15:00–15:45

Iván Martínez (UCM): "Authoring and reengineering of Learning Designs: the <e-LD> approach"

15:45–16:30

Luis de la Fuente Valentín (UC3M): "IMS Learning Design services integration: use experiences"

16:30–17:15

Dai Griffiths (CETIS, UK): "Delivering flexible services for IMS Learning Design using widgets: achievements, limitations and prospects"

Where?

Universidad Complutense de Madrid
Faculty of Information Technology,
Sala de Grados
C/ Prof. José García Santesmasas, s/n.
28040 - Madrid
<http://bit.ly/ikkYwc>

How to get there?

- **Subway:** Line 6 (Ciudad Universitaria)
- **Bus:**
 - **U (University bus)**
 - **F (Cuatro Caminos)**
 - **G (Moncloa)**
 - **82 (Moncloa)**



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Summary of talks

Authoring and reengineering of Learning Designs: the <e-LD> approach.

The Educational Modeling Languages (EMLs) allows instructors to describe and formalize the learning processes by a document called learning design. These learning designs deal both with the educational contents and also with the complementary activities needed to achieve an effective use of the educational contents and foster the learning process. The learning designs formalized with an EML have the advantage that can be automatically processed by a software tool. This automatic processing of a learning design allows for the automation of the virtual learning environment configuration to support the teaching process and for the execution of the activities represented in the learning design. This explicit representation of the teaching process has additional advantages, such as these learning designs can be reused by other instructors just as an example of good practices or as an starting point to create their particular learning design specifically adapted for their learners' needs.

Despite of the great potential of the EMLs, their use by educators is rather limited probably due to the difficulty imposed by the high expressiveness of these languages and by the lack of mature user-friendly authoring tools. The <e-LD> approach aims to facilitate the adoption of EMLs through two main lines of work:

- To close the gap between the EMLs terminology and the common terminology used by educators.
- Promote and simplify the reuse of the existing learning designs by providing tools that allow to considering at the same level the learning designs' reengineering and the authoring of the learning designs from scratch.

IMS Learning Design services integration: use experiences

The actual web offers a wide catalogue of tools (the so called web 2.0 applications) that are related to many different topics. Most of those tools can be used in educational practices to facilitate activities. IMS Learning Design (IMS LD) is a specification that allows reusing activity sequences of arbitrary complexity. Therefore, a sequence (called UoL) that has shown to be successful can be used several times at a low implementation cost. When introducing web 2.0 tools as part of one of these sequences we find that the resulting UoL loses the most relevant IMS LD characteristics: interoperability, reusing capacity, adaptability and collaboration capacity.

Generic Service Integration (GSI) is a proposal that extends the IMS LD possibilities and allows the web 2.0 tools integration in an activity sequence without losing the previously mentioned characteristics. The talk will focus on the use experiences developed by the GSI proposal and the related conclusions.



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Delivering flexible services for IMS Learning Design using widgets: achievements, limitations and prospects

The IMS LD specification has attracted considerable interest since its publication in 2003 as a means of modelling and orchestrating educational activities. It aims to make these models interoperable, but one major barrier to this, has been the inability to make a range of services available across multiple systems. This has also meant that Learning Design runtime systems are often rather impoverished with regard to services.

The Institute for Educational Cybernetics developed the Wookie widget server as a response to this need, together with authoring and runtime systems which can author and run Learning Designs including widgets. The Wookie server is a reference implementation of W3C widgets, and has been accepted into the Apache incubator.

Wookie can handle multiple users, making it possible to implement forums, chats and other social applications through widgets. The system does not implement its own identity management and authorisation processes, but inherits these from the host application in which the widget is embedded, while anonymising all user interactions. This means that wookie can be embedded with ease in a wide range of systems.

The search for a solution to the flexible delivery of services in IMS LD has thus led to the development of a system with a wide range of applications. In IEC we are using it to develop an "Educational App Store" for use by teachers in a range of systems and classroom contexts, and also using it as the basis for a mobile mash-up platform.



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Keynote Presenters' Biographies

Iván Martínez (UCM)



group on e-learning technologies <e-UCM>.

Iván Martínez Ortiz has a Master Degree in Computer Science by the Complutense University of Madrid –UCM- (2007). From 2004 to 2007 he was a Lecturer at CES Felipe II of Aranjuez, Spain, and since 2007 he is a Full-time Lecturer in Computer Science at Computer Science School of UCM. Mr. Martínez Ortiz has co-authored more than 40 research papers published in journals and conferences. His research interests include e-learning technologies, authoring in e-learning, and the integration of educational modeling languages and workflows technologies. He is currently finishing his PhD at UCM, where he is a member of the research

Luis de la Fuente Valentín (UC3M)



Luis de la Fuente is an Assistant Professor at the Universidad Carlos III of Madrid, and PhD candidate at the same University. He graduated as Telecommunications Engineer at the Universidad of Valladolid in 2005. In 2007 he completed the Master's Degree in Telematic Engineering at the UC3M. He has visited the OUNL in the Netherlands in 2008 and the Fraunhofer Technology Institute (FIT) in 2010. He is part of the GRADIENT group where he works in the IMS Learning Design field and more recently in the students' activity profile recognition system.

Dai Griffiths (CETIS, UK)



His professional engagement with eLearning started in as a multimedia developer, and expanded into research focused on the use of robotics with young children in the éTui project. In recent years a principal concern has been the development, use and implications of specifications for eLearning. In particular he has published extensively on IMS Learning Design. He was coordinator of the UNFOLD project, funded by the IST programme, during which led six international events for communities of practice involved in IMS LD. He led the IEC contribution to the TENCompetence project, within which IEC developed the Wookie widget server, (Apache Wookie). He is now coordinating IEC work on two projects which make use of Wookie technology in the areas of telecoms mash-ups and in secondary school classrooms.

Dai Griffiths is a Professor at the Institute for Educational Cybernetics (IEC), where he coordinates research activities. His background is in the arts and in education, and he has taught at many levels including primary and secondary education, higher education and continuing education, and in industry. Since the early 1990s he has worked on a range of projects focusing on various aspects of technology and education, as a developer, researcher and project manager.

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