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UNFOLD Deliverable D2 - Awareness raising resources (Project Deliverable Report - Understanding New Frameworks of Learning Design UNFOLD)

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INFORMATION SOCIETY TECHNOLOGIES PROGRAMME
TECHNOLOGY ENHANCED LEARNING

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Abstract	This report describes the work carried out in the development of UNFOLD Project awareness resources. These include handouts, posters, and other publications, but the principal action has been to create a Web server which both raises awareness of the project, and of the specifications which it seeks to promote. The planning and development of the resources is described, and some conclusions provided.
Keywords	UNFOLD, awareness, Learning Design, Community of Practice
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Introduction

This deliverable reports on the preparation of the UNFOLD Awareness raising resources and website. The scope of the report does not extend to awareness raising activities carried out with these resources, which are described in D4, Awareness Raising Report.

A plan was developed which in addition to awareness raising resources also covered the wider awareness raising needs of the project, such as appropriate channels, mailing lists, etc. This plan is submitted with the present report as project milestone M2.1.

The material created by the project includes five handouts in English, Spanish, French and Portuguese, and two posters, a feature in the Learning Citizen newsletter, and PowerPoint presentations.

The principal instrument for awareness raising, however, is the Awareness Raising Web. This is a dynamic web, with information about UNFOLD, information about IMS Learning Design (IMS-LD). There is also an introduction to project activities and a description of what the CoPs can offer the three professional groups which they serve. A key feature of the Web is the resource base, which contains documents and links marked up with keywords. This enables subsets of the resource base to be served to different groups of users as appropriate.

Aims and objectives addressed

The primary goal of the UNFOLD awareness raising activities is to support the formation and effective launch of the Communities of Practice. A secondary goal is to promote awareness of open flexible learning standards in the wider European education community. The awareness raising materials described in this report address both these requirements. The are intended to:

- provide support for awareness raising activities with user groups. The user groups addressed will be, in order of priority
- generate a high level of awareness and interest in the UNFOLD communities of practice, to be launched in month 6.
- promote a high general level of awareness of UNFOLD activities, and of the eLearning specifications which it supports.

Development

Planning

Work on awareness raising resources was planned in project milestone M2.1, Awareness Implementation Plan, developed in February and March 2004 on the basis of meetings at Dagstuhl and LearnTec. The plan, UNFOLD Project Milestone 2.1, is submitted together with this report.

User group

The target user group for UNFOLD is very widely distributed, and also has a high level of technological awareness and use. A more detailed breakdown of the user group is provided in D4 Awareness raising report. Consequently the plan identified the Web as the key medium for Awareness raisin. To this was added the cost effectiveness of the Web compared with printed media, which is to be used primarily at conferences and other events where UNFOLD has an in-person presence.

Focus

The focus of the UNFOLD project is on open eLearning standards which support flexible pedagogies and multiple users. At present there is only one specification which meets these

requirements, IMS Learning Design[1]. Consequently the awareness raising materials described here focus on IMS Learning Design, but this does not preclude the possibility of responding to new initiatives should they appear in the lifetime of the project.

Web infrastructure

It established that partner UPF would set up a Web server which would be the repository of awareness raising resources and the means by which these are delivered to users.
The Web has been implemented using the Plone environment, available for download at www.plone.org. This is a Free Open Source application which is built on top of the ZOPE content management system, which is in turn written using the Python scripting language. This system was selected for three principal reasons

1) Plone has excellent content management facilities. Resources and links to remote resources can be tagged with keywords and dynamic pages created from saved searches of the resource base. In this way the content of the site is automatically upated as new resources are added to the resource base (so long as appropriate keywords are used to describe them). This makes it possbile for a single resource store can be maintained for both the public resources and the resource bases for the CoPs, making the appropriate resources available in each space by using keywords. In this way duplication of resources can be avoided, the whole collection of resources gathered in the project can be browsed without gathering them from four locations, and management of the resource base is greatly simplified.
2) Development in Plone is rapid, and scripting in ZOPE using Python is simpler than in many competing systems.
3) PLONE can also support threaded discussions, and it is planned to implement some CoP support functionality in this environment. This will ease integration issues.

These and other aspects of PLONE are described in greater detail in D5 Establishment of CoPs.

The site is hosted on a dual processor HP Proliant Intel Xeon 2, 2 gigabytes of ram, 4 hard disks of 80 gigabytes, and a gigabit ethernet connection. The operating system is LINUX Red Hat 9.2 Kernal 2.6.3, and the server software is Apache 2. The server is configured with a back up server to ensure continuity of service and reliability.

The on-line awareness raising resources also make use of some existing OUNL infrastructure, which is based on DSpace, the open source content management system developed by MIT. A substantial number of documents are served from that system, with links from the PLONE content management system.

In order to make it easier for users to remember and distribute the Web address, and to provide a more professional image for the project, it was decided to register a domain for the project. The domains unfold.net and unfold.org were both reserved, and so the domain unfold-project.net was registered for two years.

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[1] Other relevant specifications which have been considered are Educational Modelling Language, developed by UNFOLD partner OUNL but now superseded by IMS Learning Design, and PALO (http://sensei.lsi.uned.es/palo/), on which development work appears to have stopped.

UNFOLD Web strategy
A strategy was developed in order to maintain a coherent Web presence for the project, and which places the Awareness Raising materials presented here in context. In order to place the Awareness The strategy may be summarised as follows:

a) The UNFOLD dissemination web:

This Web is described in deliverable D1 and is available at www.tecn.upf.es/unfold/. It is a dissemination Web, and it contains basic information about the project and its activities.

Objective: To disseminate the UNFOLD project by providing information about the project and its achievements

Technology Used: This is a static web, because this enables it to be distributed on CD for dissemination purposes. It will be updated with reports, publications, press releases etc. as the project progresses.

User Group for this website consists of all those who are interested in the UNFOLD project for any reason, but are not intending to participate in project activities, or considering doing so. They include journalists, members of the European Commission, people interested in the general issues of the adoption of standards , etc.

b) The *UNFOLD Awareness Raising Web*.

This Web is described in the present deliverable and is available at www.unfold-project.net.

Objectives:
- To promote a high level of awareness of open flexible eLearning standards in the wider education community.
- To create a high level of awareness and interest in the UNFOLD Communities of Practice.

Technology Used:
To achieve these objectives the Web has to be responsive to the latest developments in the field, so a dynamic web has been developed using the PLONE system. Many resources are also stored on the OUNL dSpace server, and linked to from the PLONE server.

User Group:
- All those who are professionally involved in the implementation of IMS-LD or similar specifications.
- All those who are considering the use of IMS-LD or a similar specification.

c) Web support for the three UNFOLD Communities of Practice (CoPs).

These will be made available through links at www.unfold-project.net, and will be described in D5 Establishment of CoPs

Objectives: To provide on-line support for the three UNFOLD CoPs, including both communication spaces and resources shared and developed by the CoP.

Technology Used; Two dynamic Web sites have been created. The Systems Developers and the Teachers and Learning Providers are supported by PLONE based sites hosted at F-

UPF, while the Learning Designers are supported by a site created with PHP Nuke hosted at the OUNL, mainly based on their own resources. This aspect of the Web presence is described in deliverable D5 Establishment of CoPs report.

User Group: Registered members of the UNFOLD Communities of Practice.

The contents of the resource base

The contents of the Awareness Raising Resource base were also specified in the Awareness Raising Plan, as follows:

- Project handouts
- Project posters
- Information about the UNFOLD project
- Information about the IMS Learning Design specification (IMS-LD)
- Description of why IMS-LD is important for the different user groups
- How interested people can join.
- PowerPoint presentations of UNFOLD and IMS-LD

As the project develops these will be complemented by gold instances of UoLs and practice (as they become available) and also discussion papers and presentations produced by the project.

The UNFOLD Awareness Implementation Plan also describes how the Awareness Raising Resources link to related work on the establishment of the Communities of Practice, and the means whereby the interesest groups to whom they are directed can be reached. Details of these aspects will be made available in the reports on Awareness Raising Activities and Community of Practice Establishment.

All resources, both printed and on-line, feature prominently the UNFOLD logo, developed early in the life of the project, and shown on the front page of this deliverable.

Printed resources

Project handouts

The following project handouts were developed, and printed in colour

1) A4 handout in English, folded into a diptych.
   This was designed as a concise introduction to the project for an audience of potential participants.
2) A4 handout in French, based on (1)
3) A5 handout in Spanish
   This was designed as a more general introduction to the UNFOLD project for
4) A5 handout in Portuguese, based on (3)
5) A5 handout in English, intended for a general Educational conference audience.

The working language of UNFOLD is English, but it was decided that it would be valuable to have some awareness raising material in other languages. This was for two reasons. Firstly, because this may help to present the project in a favourable light in countries where English is not widely spoken. Secondly, while almost all the potential participants have good English language skills, their superiors may not. This can be a problem, as participation in project activities takes time, and this has to be authorised. UNFOLD has no budget for producing multilingual materials, so a pragmatic decision was taken to produce material in the languages which can be handled by the project team. It is intended

to extend this policy by requesting the assistance of members of the Community of Practice in reaching other linguistic groups, once a strong level of participation has been achieved.

The handouts were distributed at events, and details of their distribution will be provided in the Awareness Raising Report scheduled for month 6. PDF versions of the handouts are also included in the Awareness Raising Web.
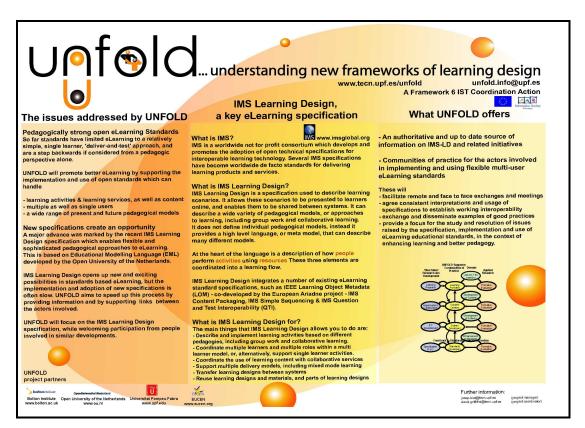
The printed handouts are included as an appendix to this report, and the PDFs are forwarded with the electronic version.

Posters

Two posters were produced and printed. They have the same graphic structure but different content.
1) Poster for the Luxembourg concertation meeting, 24th February 2004.
2) Poster for the EUCEN conference held at Limerick, 9-12 June, presenting the project to an audience of distance learning professionals (shown below)

The posters are submitted on a CD version of this deliverable, and a one is reproduced below:

Article in The Learning Citizen

A three page feature on UNFOLD was written and published in the Learning Citizen no. 8, May 2004, with the title "UNFOLD: Participate in the next generation of eLearning".

A print of this article is included in an appendix to this report.

The newsletter is available for download at http://www.learningcitizen.net and is included with the electronic version of this deliverable.

Video clip on The Learning Citizen website
Building on this well received article, it has been arranged to create a video clip for the Learning Citizen website. A script has been accepted, and filming is scheduled for 22nd July.

The UNFOLD Awareness Raising Web
The UNFOLD Awareness Raising Web is available at www.unfold-project.net.
The contents of the Awareness Raising Web resource are divided into two main categories: resources about UNFOLD and resources about IMS Learning Design.
The partners have in the past produced much relevant material relating to the issues addressed by UNFOLD. This is particularly true of OUNL, given its role as the originator of EML, and its transformation into IMS Learning Design, and also of CETIS who are funded by JISC to provide support for eLearning Standards in the UK. UNFOLD has provided the opportunity for partners to bring this material together with other resources from around the world, select the most relevant for our user group, classify it, and present it to the user. The existing material is in general stored on the original servers, as this avoids legal problems with copyright. These existing resources have been complemented by new material developed specifically for the project, both relating to Learning Design, and, of course, describing the activities of the project and what they can offer potential participants. The contents of the UNFOLD Awareness Raising Web are as follows:

Resources about UNFOLD

An introduction to Learning Design.
An introductorion to IMS Learning Design for the newcomer

About the Communities of Practice.
How the UNFOLD Communites of Practice are organised
Privacy and IPR policy
How you can be involved
Focus of the Systems Developers CoP
Focus of the Learning Designers CoP
Focus of the Teachers and Learning Providers CoP

What is UNFOLD?
Project overview
The Partners
Aims and Objectives
What UNFOLD offers participants
Project handouts and leaflets
Project handouts

News
News items will be added continuously as the project progresses.

UNFOLD events.
An updated list of events, automatically linked to the calendar available on
the site.

UNFOLD handouts and posters.
7 items available for download

Resources about UNFOLD

Webs related to IMS LD
IMS Global Learning Consortium, Inc IMS developed the Learning
Design specification, and many other significant eLearning
specifications.
The Valkengurg Group This is the Web of the Valkenburg Group, which
brings together institutions and organisations from across the world
which are actively engaged in producing EML/IMS-LD authoring
tools and content management tools.
CETIS, The Centre for Educational Technology Interoperability Standards
CETIS represents UK Higher and Further Education on international
educational standards initiatives, including the IMS Global Learning
Consortium. The site has a wealth of information about eLearning
standards in general, and about IMS Learning Design.
Web site: R2R Learning Design A Canadian Web site set up to extend
and enhance the contributions and efforts in the area of IMS Learning
Design

Architecture and tools

- The Valkenburg Reference Architecture
- Generic tools covering parts of the Valkenburg Reference Architecture
- Specialised Learning Design tools needed
- Learning Design tools currently available or under development

Introductory material
- *CETIS Briefing on IMS Learning Design* An introduction to IMS Learning design written by Ann Jeffrey and Sarah Currier.
- *UNFOLD: Participate in creating the next generation of eLearning* A discussion by Dai Griffiths of the value of IMS Learning Design to teachers and educational institutions published in the The Learning Citizen newsletter.
- *IMS Learning Design: what's in it for the teacher?* Dai Griffiths and Riina Vuorikari discuss the relevance of Learning Design to teachers (17th March 2003)
- *EML and IMS Learning Design: From LO to LA* This short paper by Colin Tattersall and Rob Koper of the OUNL addresses the key question: How can digital resources be used to support learning, or rather, how can learning be supported by digital resources?
- *IMS Learning Design* This Power Point presentation by Rob Koper of the OUNL at an Open University UK seminar, provides an introduction to the rationale and structure of IMS Learning Design by one of the chief architects of the specification. The download is nearly 1 megabyte.
- *A Review of Learning Design: Concept, Specifications and Tools* This is draft report for the JISC E-learning Pedagogy Programme by Sandy Britain (MS Word doc, June 2004). The first part of the article is an overview of the nature and history of learning design. The extended second part is a review of a number of learning design tools, including some which are not IMS Learning Design compliant.
- *IMS-LD Frequently Asked Questions* This FAQ for IMS Learning Design is maintained by Colin Tattersall of project partner OUNL

Papers and articles
- *From Change to Renewal: Educational technology foundations of electronic learning environments* The OUNL inaugural address (2000) by Rob Koper, who was one of the chief architects of OUNL Educational Modelling Language, and subsequently of IMS Learning Design.
- *An Exploration of Technologies for the Inductive Analysis of Learning Design Patterns* Francis Broun of OUNL and her fellow authors suggest the use of patterns in developing effective online courses (2004).
- *Educational Modelling Language and Learning Design: new challenges for instructional re-usability and personalized learning* In this paper from the International Journal for Learning Technology, 2004, Hans Hummel and his colleagues at the OUNL explain why we need an Educational Modelling Language centered around learning activities to give instructional meaning to learning objects.
- *Educational Modelling Language and Learning Design: new challenges for instructional re-usability and personalized learning* In this paper Rob Koper and his colleagues present a conceptual model for the support of lifelong learning which is based on notions from

self-organization theory, learning communities, agent technologies and learning technology specifications such as IMS Learning Design.

- *Delivering courses modelled using IMS Learning Design* This article by Colin Tattersall and his colleagues at the OUNL (November 2003) provides an analysis of the requirements for multiple deliveries of courses. It describes the design of an approach which meets these requirements in the domain of integrated e-learning systems, together with experiences resulting from implementation of the design.
- *Combining reusable learning resources and services to pedagogical purposeful units of learning* This chapter by Rob Koper is taken from A. Littlejohn (Ed.), Reusing Online Resources: A Sustainable Approach to eLearning, 2003. In it Rob Koper explores some current underlying issues in the reuse of learning resources and presents them within the context of a teacher and an instructional designer who wish to reuse resources within their own practice.
- *Building Communities for the Exchange of Learning Objects: Theoretical foundations and Requirements* This article by Rob Koper and his colleagues from the OUNL was published in Research in Learning Technology, 12.1 2003 (ALT-J). It describes how in order to reduce overall costs of developing high-quality digital courses (including both the content, and the learning and teaching activities), the exchange of learning objects has been recognized as a promising solution, and makes an inventory of the issues involved in the exchange of learning objects within a community.
- *Implementing Learning Design: The Learning Activity Management System* A paper by James Dalziel describing a system inspired by IMS Learning Design, but not compliant with the specification.

Implementing IMS-LD

- *Coppercore, the IMS Learning Design Engine* Here you can download CopperCore, which is a J2EE runtime engine for IMS Learning Design which can be used to incorporate IMS Learning Design in your own application(s). The current version of CopperCore supports IMS LD level A. Level B and Level C support is planned for future versions of CopperCore.
- *Implementing a learning design engine as a collection of finite state machines* An article by Hubert Vogten and other OUNL personnel, describing the implementation of an engine for LD as collection of finite state machines.
- *Implementing a learning scenario with IMS LD* This Power Point presentation by Jocelyn Manderveld of the OUNL provides an introduction to the way in which a learning scenario can be implemented in IMS LD. The download is almost 4 megabytes.
- *SURF-CETIS meeting: QTI and Learning Design* In this Power Point presentation Colin Tattersall provides an overview of the issues raised by integrating IMS QTI and IMS LD.

Conclusion

The materials created successfully correspond to the objectives set for this task. Specifically, they address both the formation and launch of the Communities of Practice, and the promotion of the eLearning specifications identified by the project. They range of materials produced is wide, from printed handouts to posters, articles, and soon to be added a video clip. The coverage is also strong, providing a clear view of the function of the CoPs, and a body of resources on Learning Design which combines newly authored material, and a filtered and catagorised set of existing material gathered from a range of sources, and leveraging partners' existing resources and infrastructure.

The only shortcoming identified by the project is that development of the Plone server was delayed, being launched to the general public in the first week of July. This was largely due to the time necessary for statutory procedures for contracting project personnel in Bolton Institute, and difficulties in the availability of suitable project staff in FUPF. These factors were particularly serious in a project with only four partners, one of whom did not start full effort until month 6. This delay has not, however, led to a wider delay in project implementation, and the Communities of Practice have been launched on schedule.

The UNFOLD awareness resources described in this deliverable provide a solid base for project work. It is, however, expected that they will be developed and extended as the Communities of Practice become established and active in the coming 18 months, and start to generate and gather their own material. This will be organised in the resource bases for each of the individual Communities of Practice.

It is our ambition that the UNFOLD IMS Learning Design resources should become a reference point for those working in this field, and we believe that we have made a solid start to achieving this end.