EVENTOS | 2004

IV WORKSHOP DE PROYECTOS DIGITALES

LA BIBLIOTECA DIGITAL Y LA INNOVACIÓN DOCENTE: OBJETOS DE APRENDIZAJE Y REPOSITORIOS DIGITALES

LAS NUEVAS TECNOLOGÍAS Y LA FORMACIÓN

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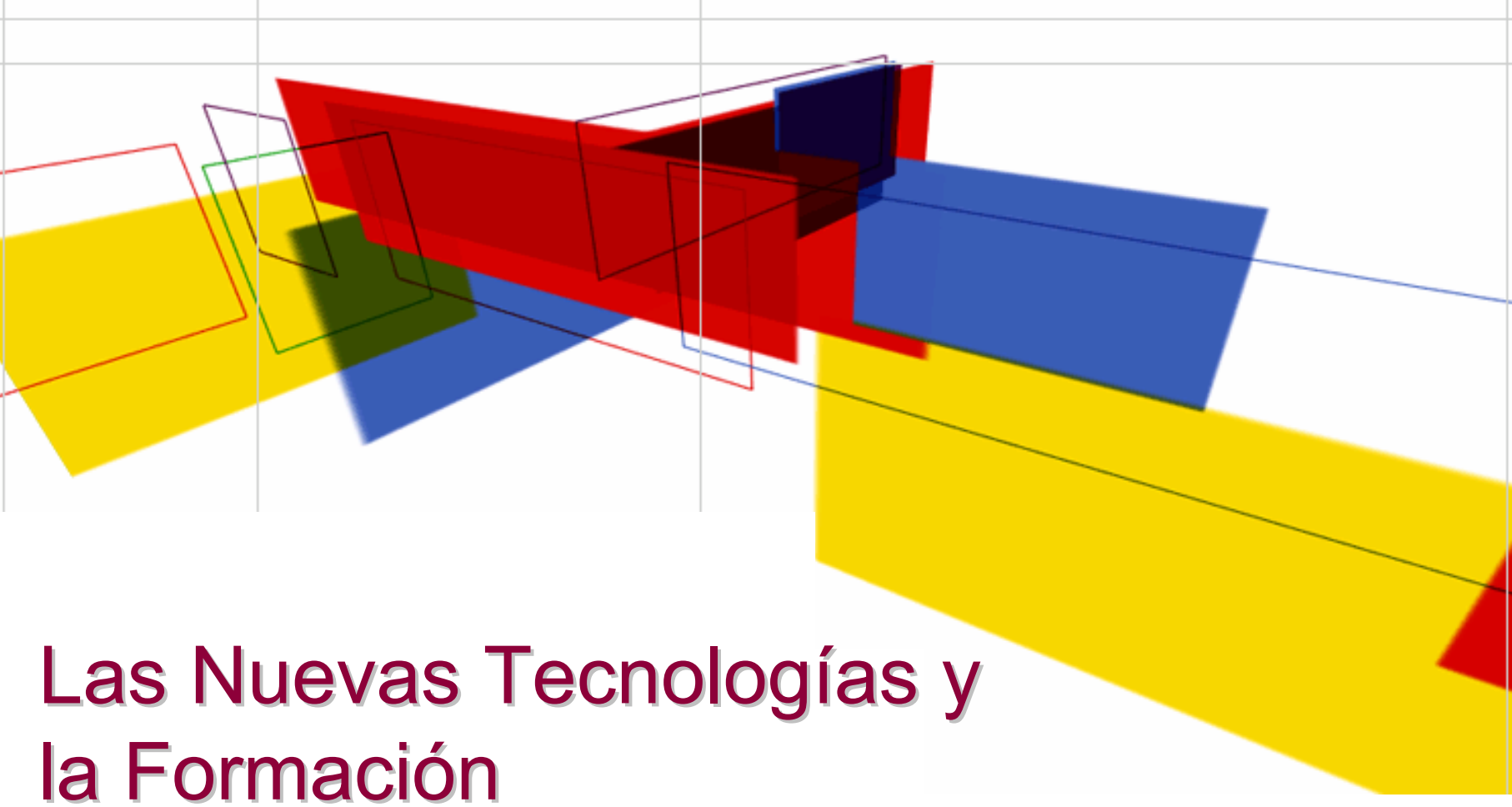

Las Nuevas Tecnologías y la Formación

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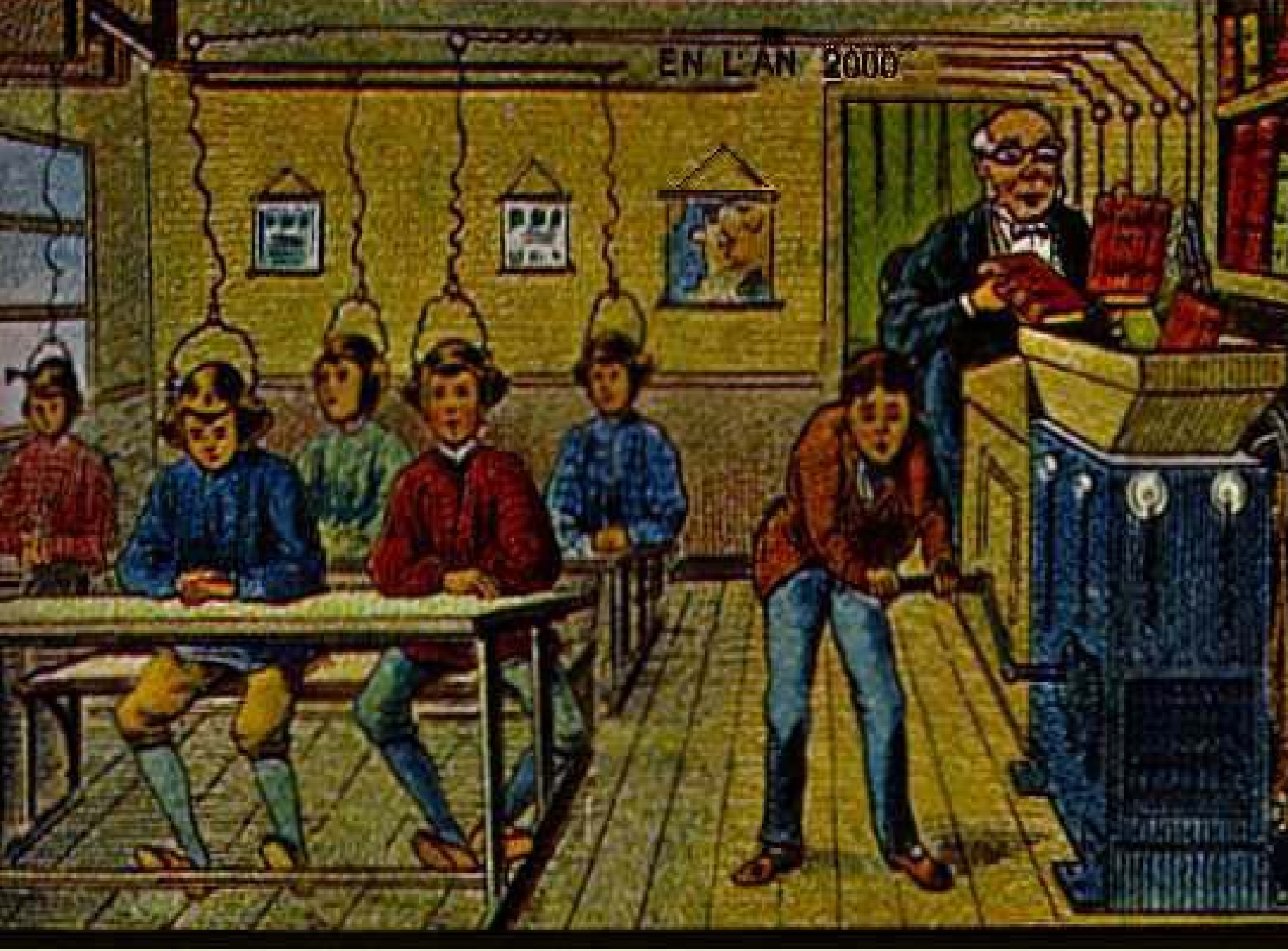
Departamento de Pedagogía
Universitat Rovira i Virgili. Tarragona

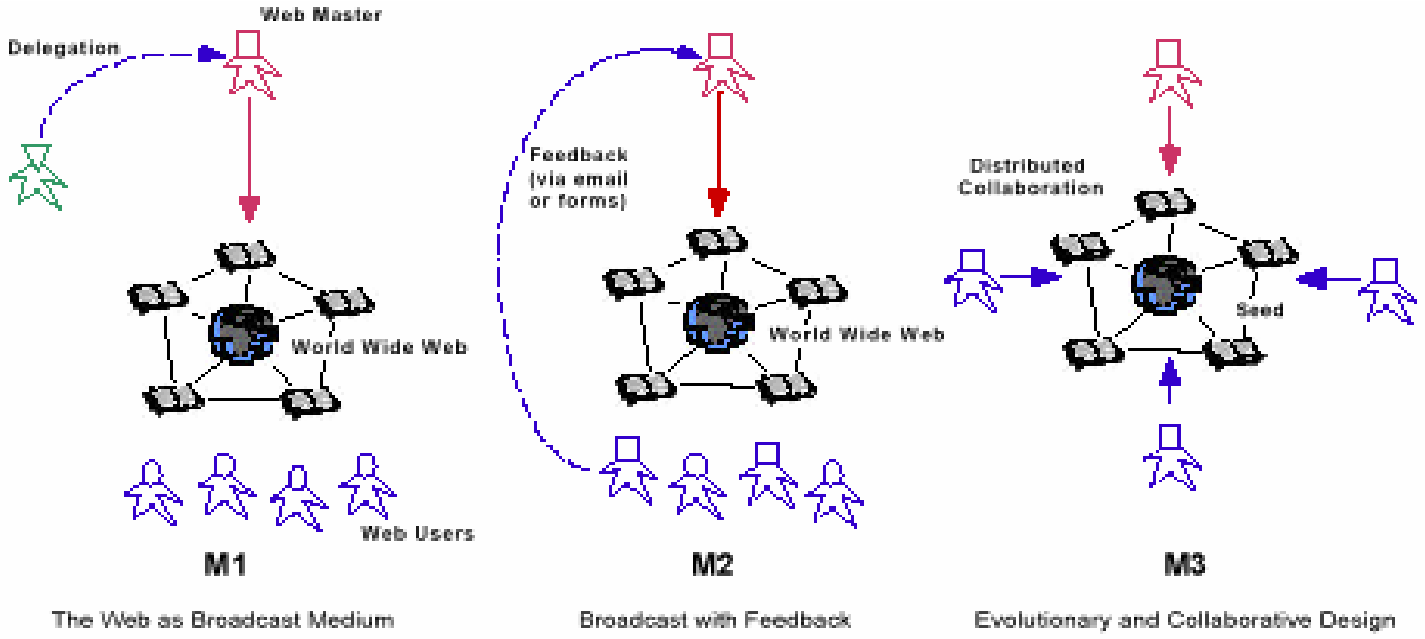
Guión:

- Evolución de los modelos de aprendizaje
- El marco de referencia: EEES
- Diseño y desarrollo de materiales formativos
- Gestión del Conocimiento
- Algunas conclusiones


EN L'AN 2000

Evolución de los modelos de aprendizaje

- Modelos
  - Centrados en el profesor
  - **Centrados en el alumno**
  - Centrados en el grupo: cooperación/colaboración



El marco de referencia EEES

- Elementos básicos:
  - Comunicación (contacto activo)
  - Información (sobre el proceso de aprenendizaje)
  - Metodología (cooperación)
  - Temporalización (en función del alumno)
  - Proceso de aprenendizaje (centrado en el alumno)
  - Avaluación (adaptada al alumno)
- Las TIC como generadoras de **espacios de formación flexibles y adaptables**

Los ECTS

- Unidad de medida de la actividad del alumno
- *Volumen de trabajo necesario para que el alumno consiga los objetivos formativos especificados en términos de objetivos de aprenendizaje y competencias*
- Equivalencia: 25-30h / crèdit
- Cantidad de tiempo empleada por el profesor para enseñar al alumno → cantidad de tiempo requerida por el alumno para conseguir los objetivos formativos

Diseño y desarrollo de Materiales Formativos

Situación actual en el ámbito del e-Learning

- Diversidad de entornos LMS y LCMS: WebCT, ATutor, BlackBoard, Moodle …
- NO interoperables !
  - Incompatibilidades a diferentes niveles
- Diversidad de contenidos
  - Falta de estrategias comunes para el diseño, desarrollo e implementación de contenidos educativos

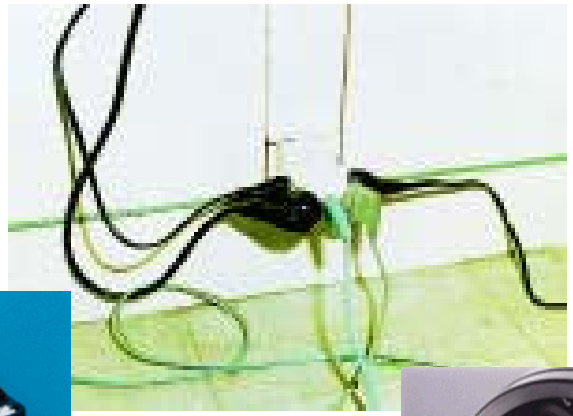
Arquitectura obierta para fomentar y facilitar el aprenendizaje on-line

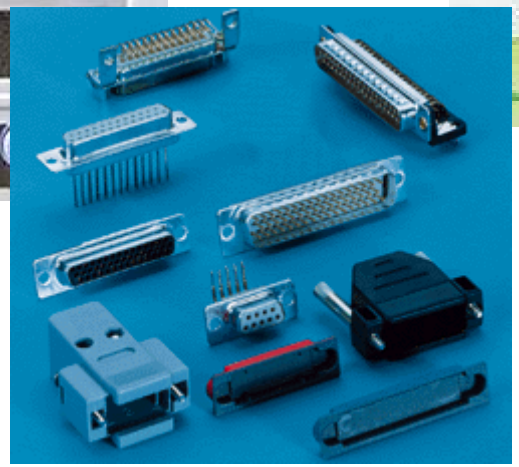
Retos actuales del e-Learning

- **Falta de estándares**
- **Contenidos educativos ligados a la plataforma**
- Contenidos **difícilmente adaptables y actualizables** (no reutilizables …)
- **Dificultades para la localización** de recursos útiles y de calidad) en la red

Los estándares

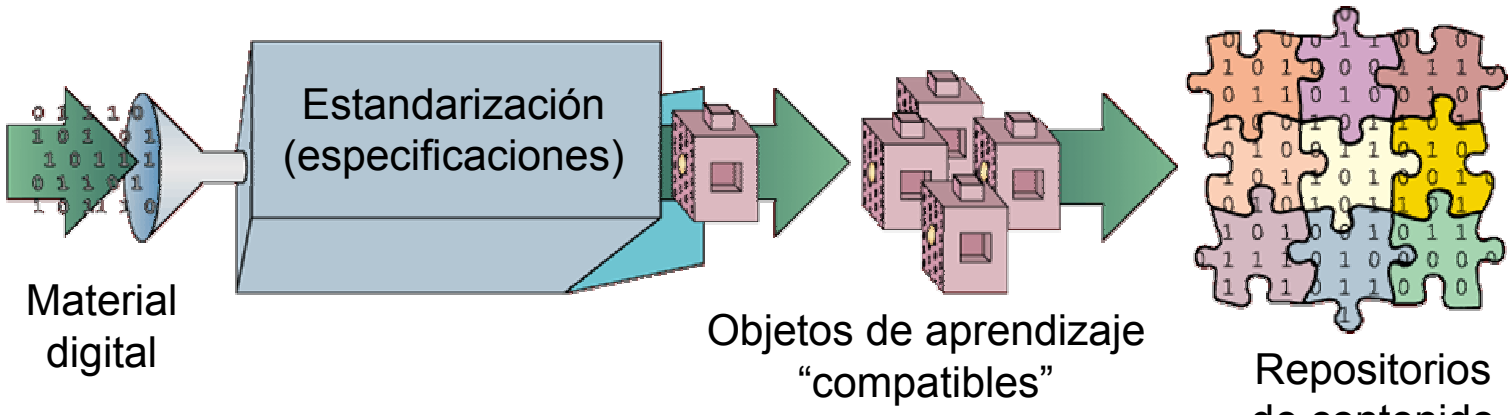
- Contínuamente presentes
- Especialmente en ámbitos tecnológicos





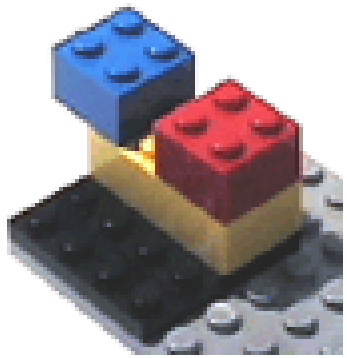
Hacia los “estándares obiertos”

- Estándares cerrados (propietarios)
  - Windows
- Moviento social:
  - Linux, iniciativas GNU
- Identica situación para el e-Learning

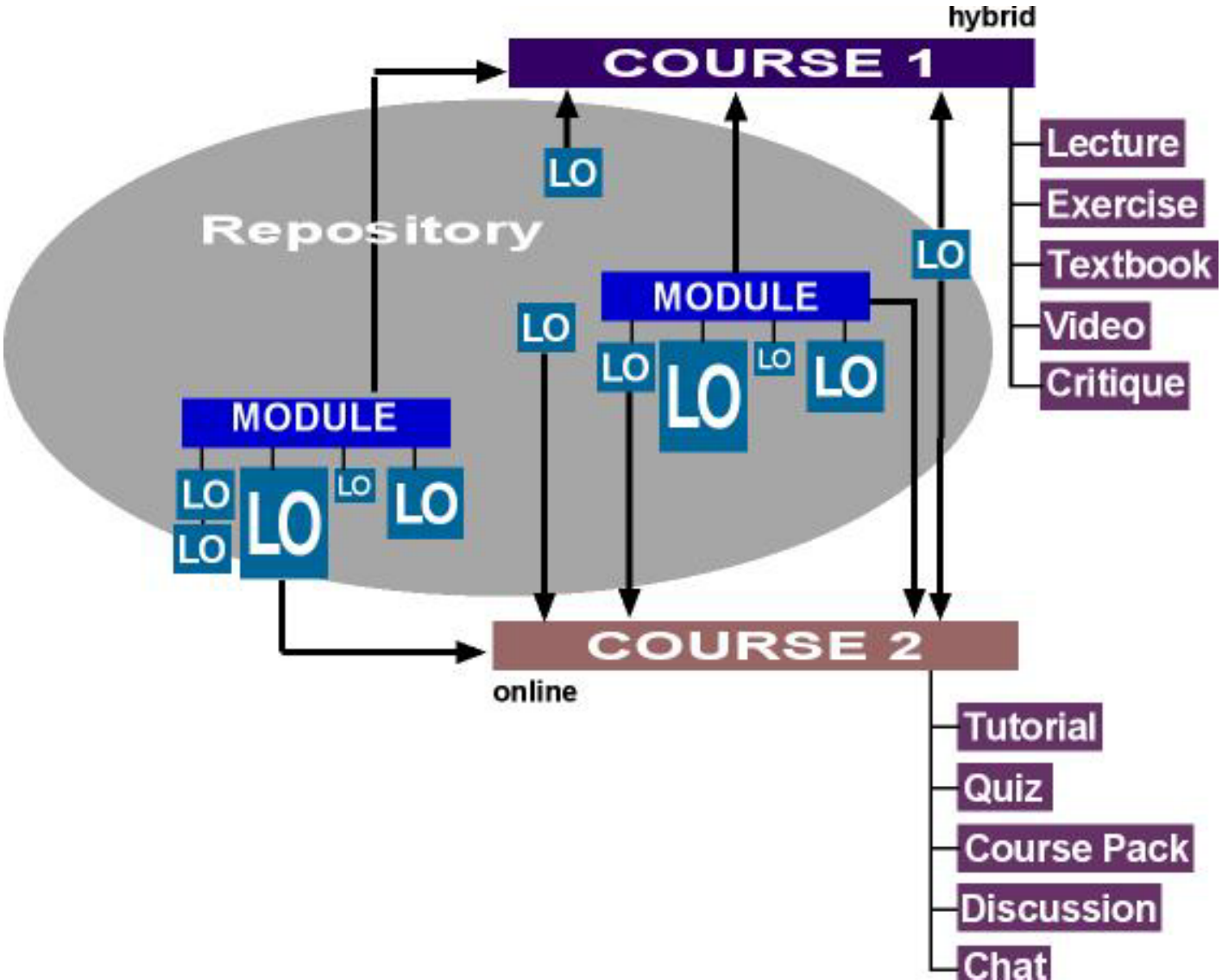


Objetos de Aprendizaje

- ¿Qué es un *Learning Object*?
  - Un fragmento de información digital (convencional) que puede ser usado en un proceso de aprendizaje (Wiley, 2000)
- Características:
  - Reutilizable
  - Identificable (distinguible)
  - Independiente (de otros LO)
  - Etiquetado
  - Propietario (¿coste asociado?)
  - Revisado y evaluado (control de calidad)

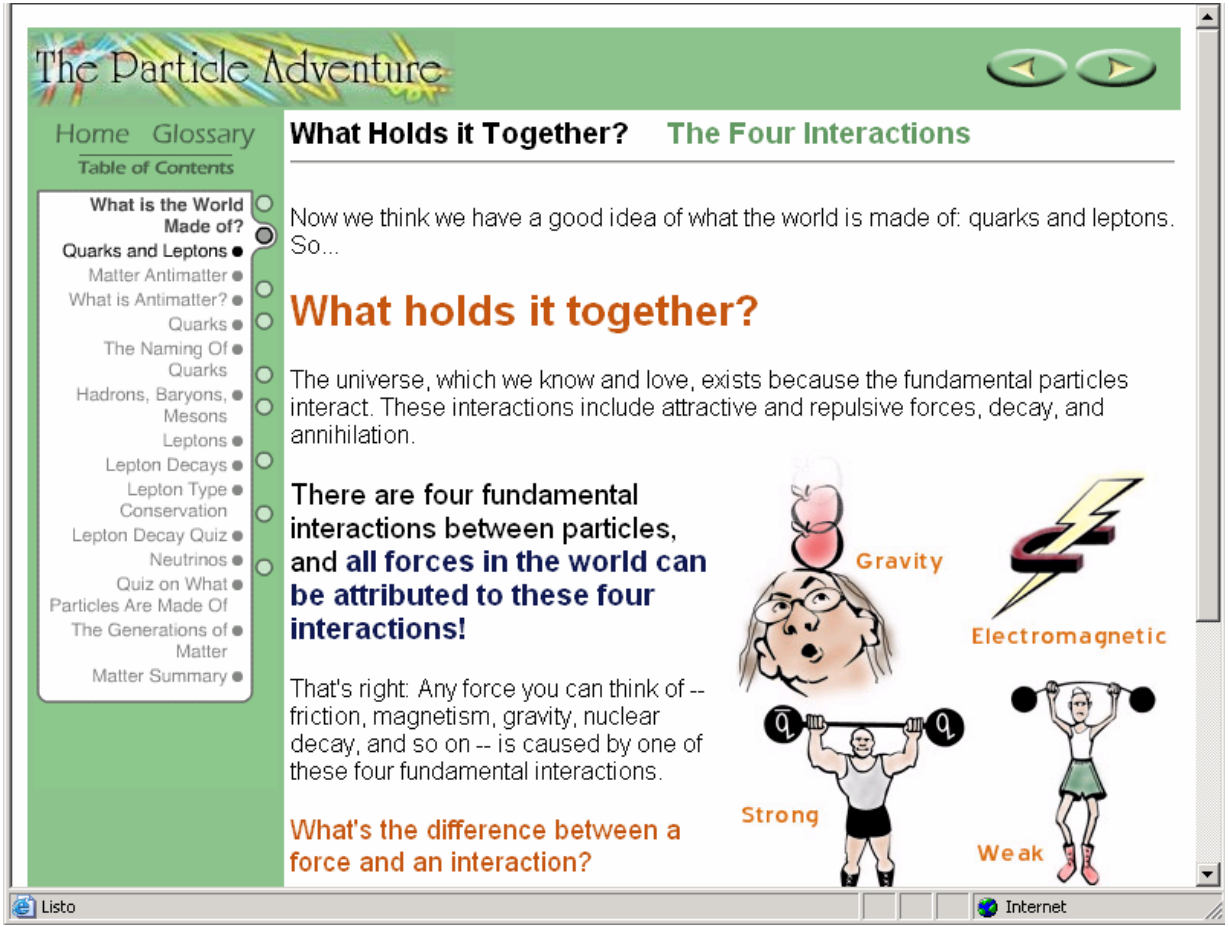


LOs, Agregación y Repositorios



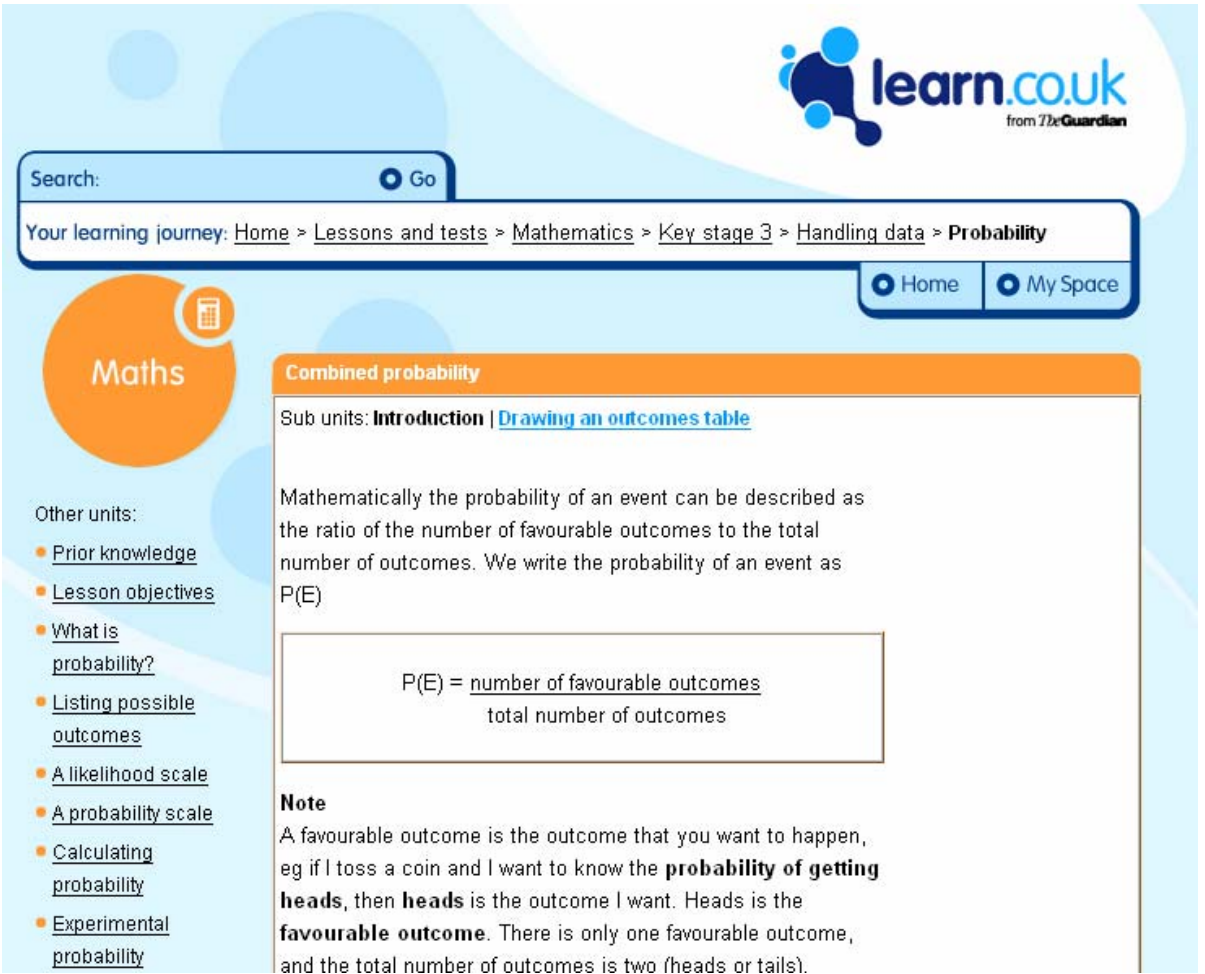
Un ejemplo de LO ...

- http://particleadventure.org



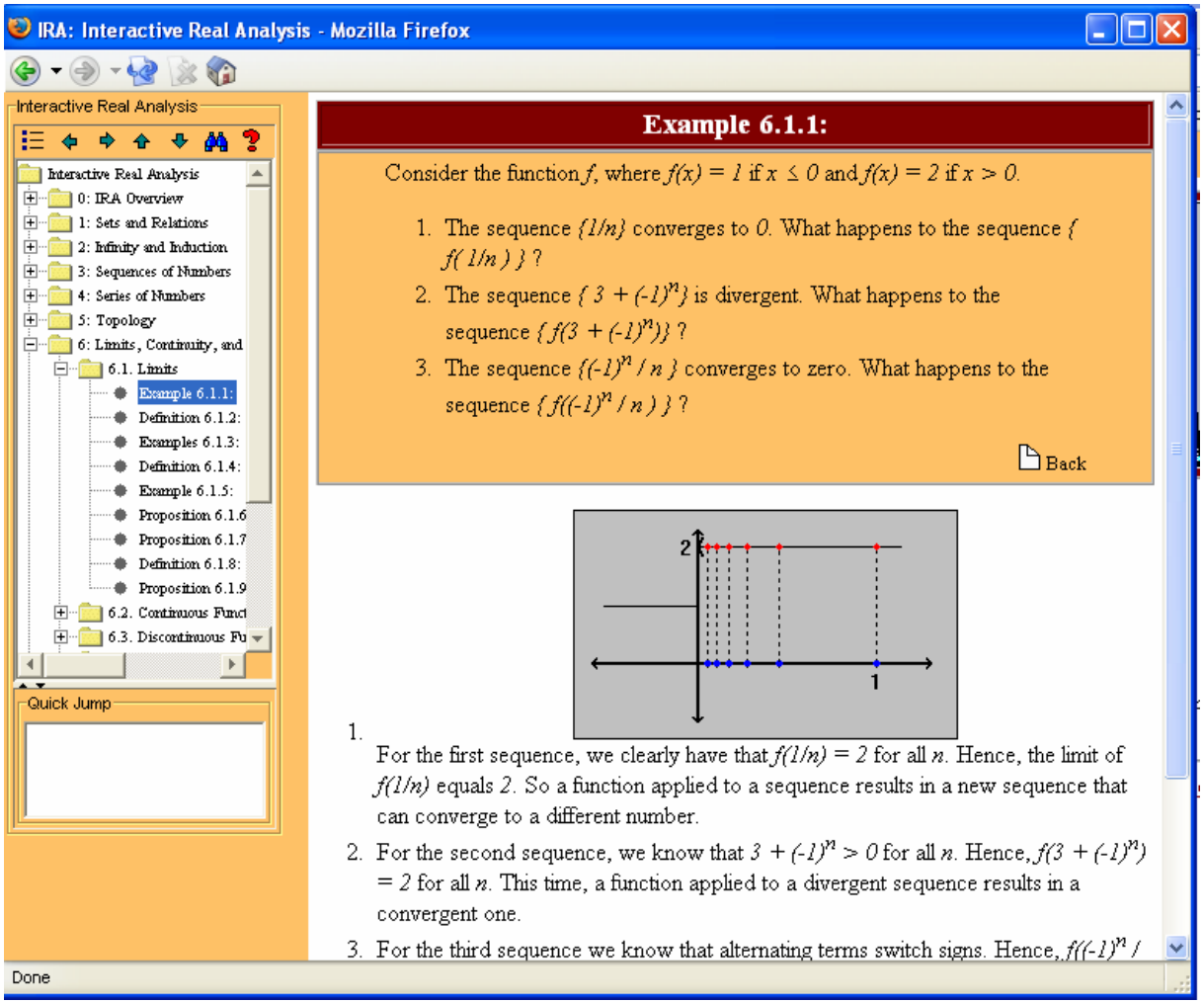
Un LO sobre probabilitat

- http://www.learn.co.uk/default.asp?WCI=Unit&WCU=4583



Un ejemplo más complejo ...

- http://www.shu.edu/projects/reals



Etiquetaje de Contenidos

<XML>

<LOM>

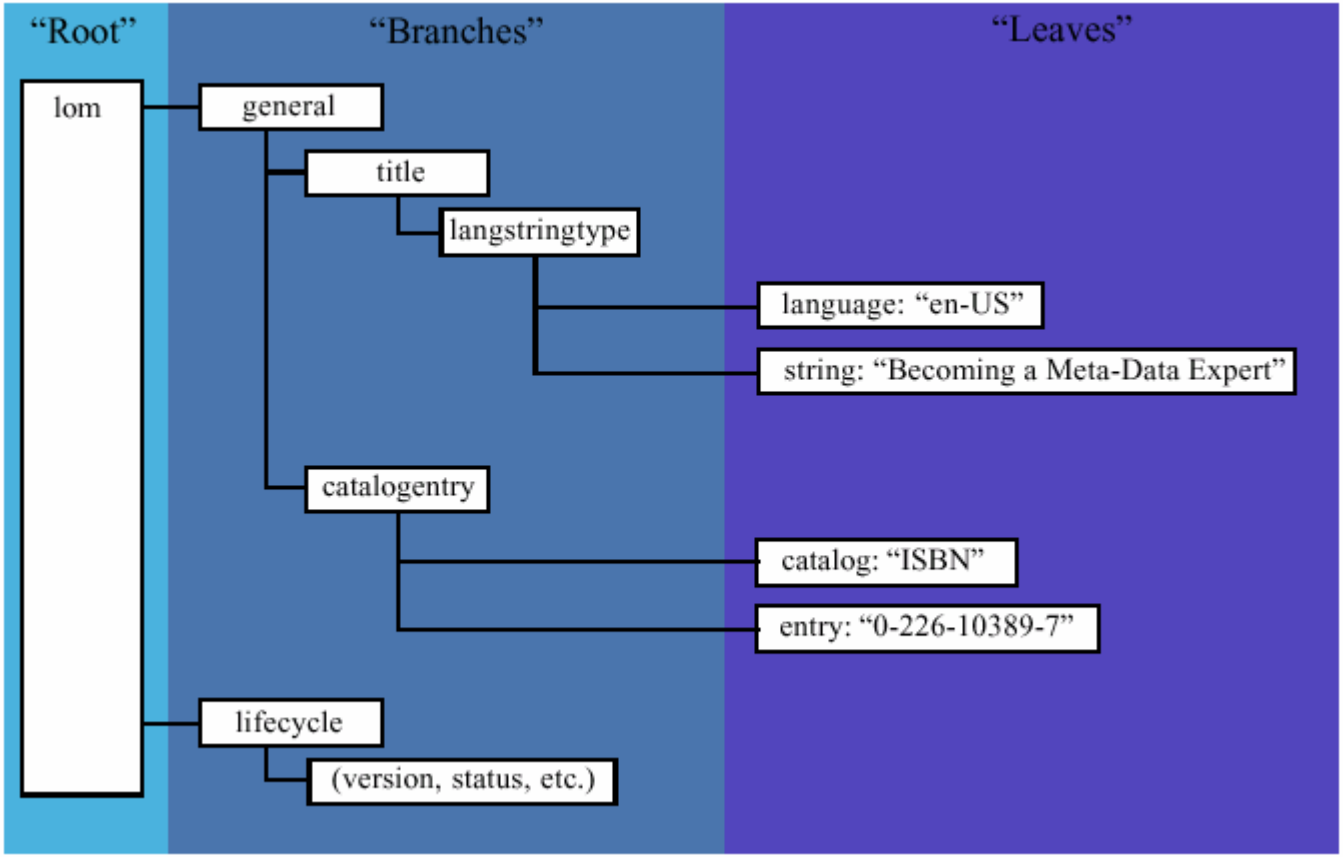
Etiquetado de LOs

- Para localizar fácilmente los objetos de aprendizaje hemos de etiquetarlos
- Disponemos de la especificación IEEE/LOM
- Expresa diversas características que permiten la catalogación de los LO

- ***¿Quién cataloga estos recursos ?***

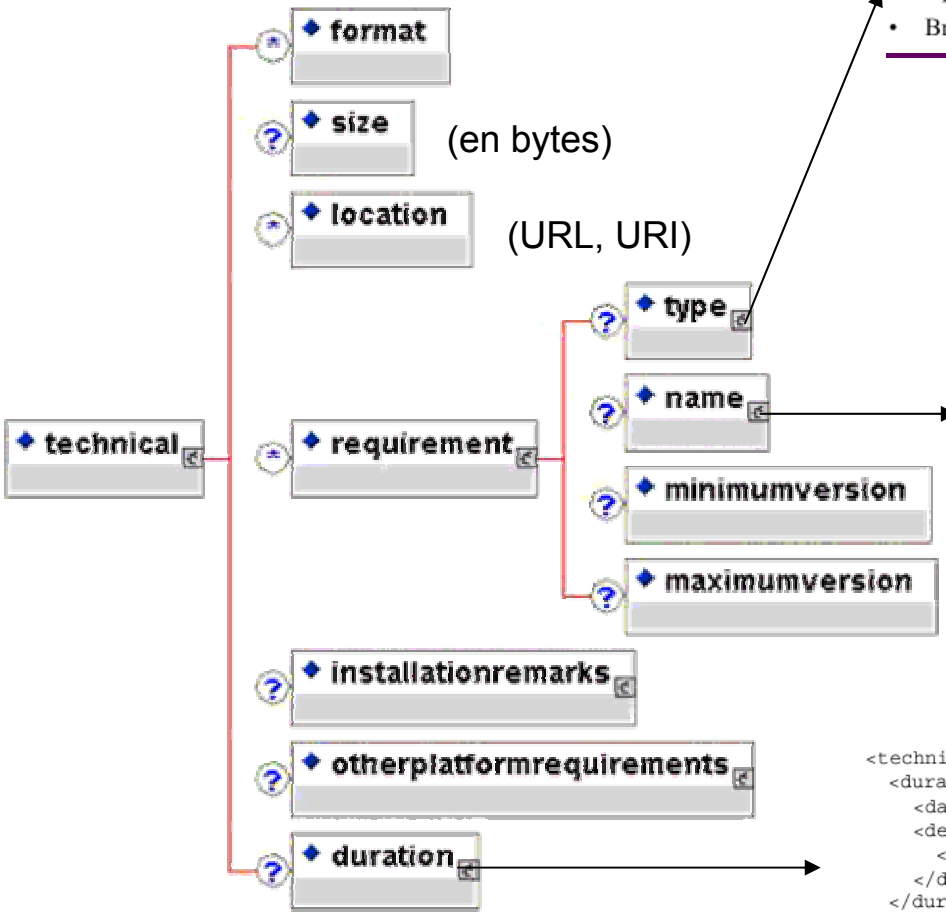
Estructura del árbol LOM

- Representación estructurada de los metadatos LOM según las especificaciones de IMS/IEEE



LOM.technical

- Enumera los requerimientos técnicos y características del LO



LOM Defined Vocabularies (<source> element set to LOMv1.0)

- Operating System
- Browser

LOM Defined Vocabularies (<source> element set to LOMv1.

If Technical.Requirement.Type="Operating System"

- PC-DOS
- MS-Windows
- MacOS
- Unix
- Multi-OS
- None

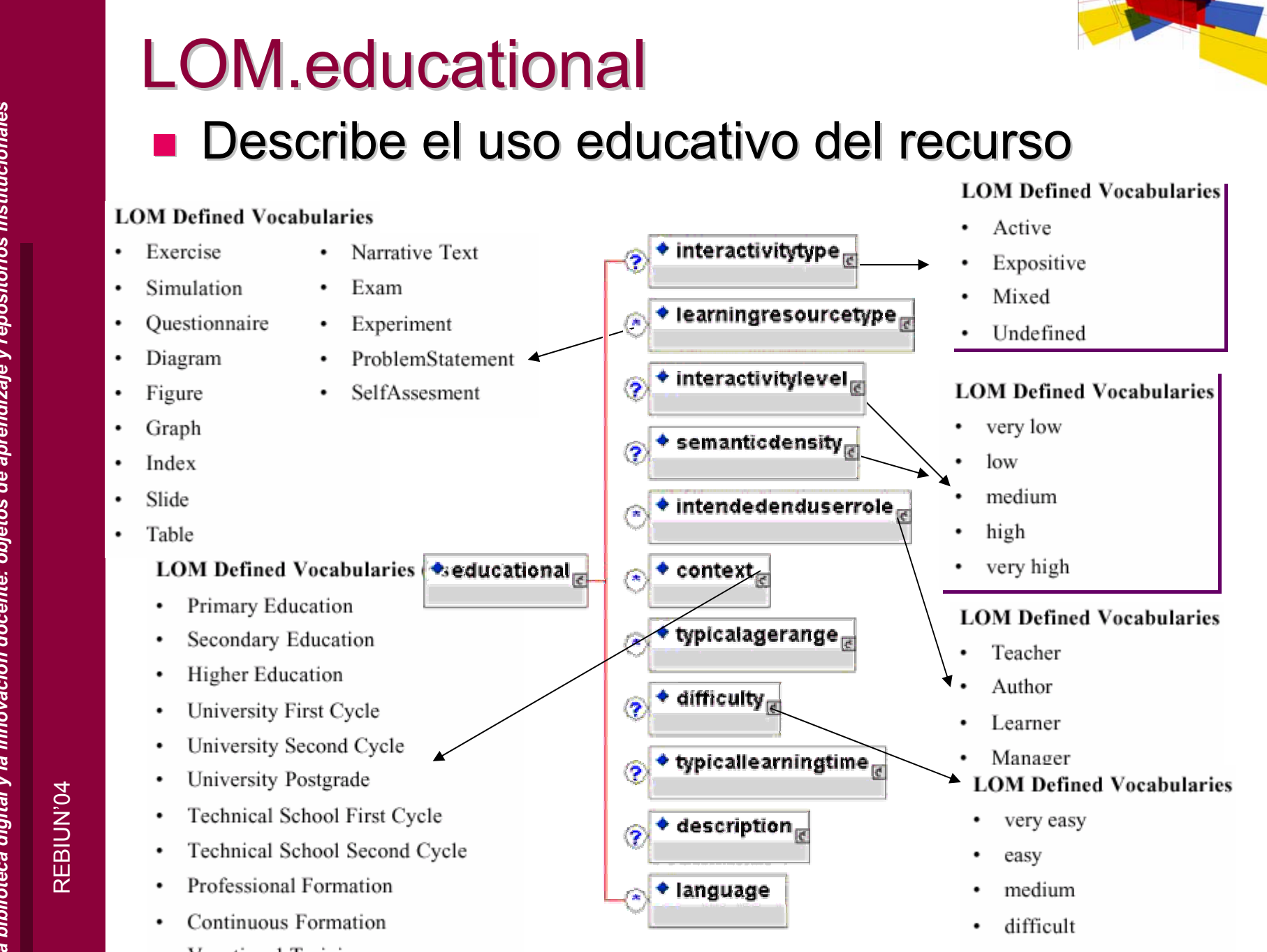
If Technical.Requirement.Type="Browser"

- Any
- Netscape Communicator
- Microsoft Internet Explorer
- Opera
- Amaya

```
<technical>
  <duration>
    <datetime>00:00:15</datetime>
    <description>
      <langstring>Length of time to play the simulation</langstrin
    </description>
  </duration>
</technical>
```

LOM.educational

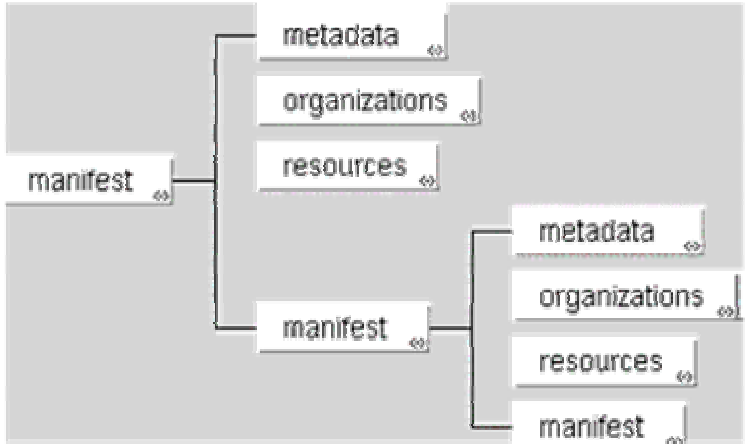
- Describe el uso educativo del recurso



Empaquetado de Contenidos

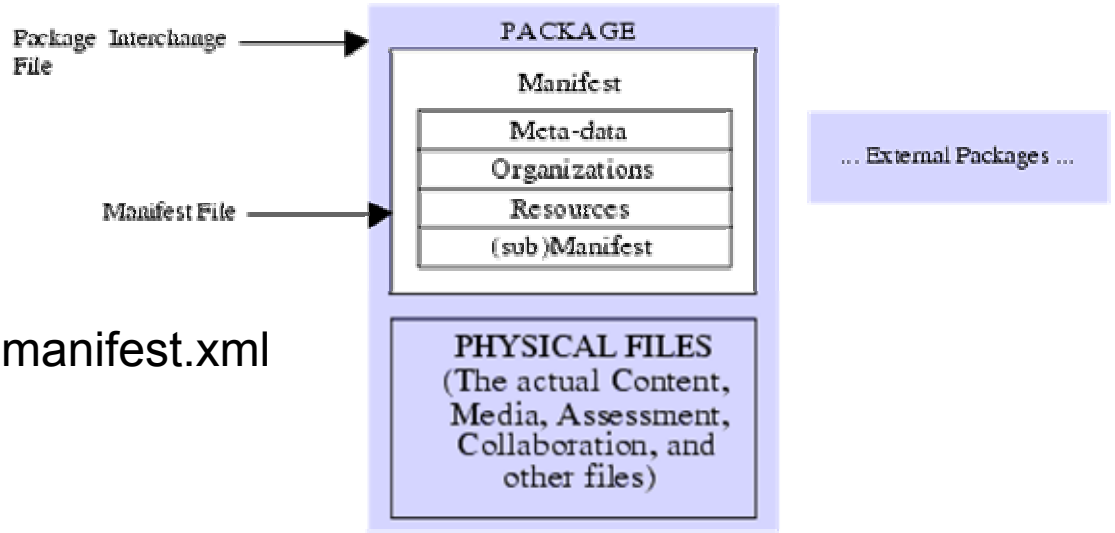
Empaquetado de Contenidos

- El objetivo de esta especificación es permitir el encapsulado de todos los recursos, definiciones de estructura y descripciones associadas a un contenido educativo
- Un paquete representa una unitat de contenido (re)usable
- El modelo de datos asociado se basa en un conjunto de “manifest files”



IMS-CP. Modelo Conceptual

- Un “package” incorpora
  - Metadatos
  - Organización(s) del contenido
  - Referencias a los recursos utilizados
  - Referencias a otros “packages”
  - Todos los ficheros referenciados

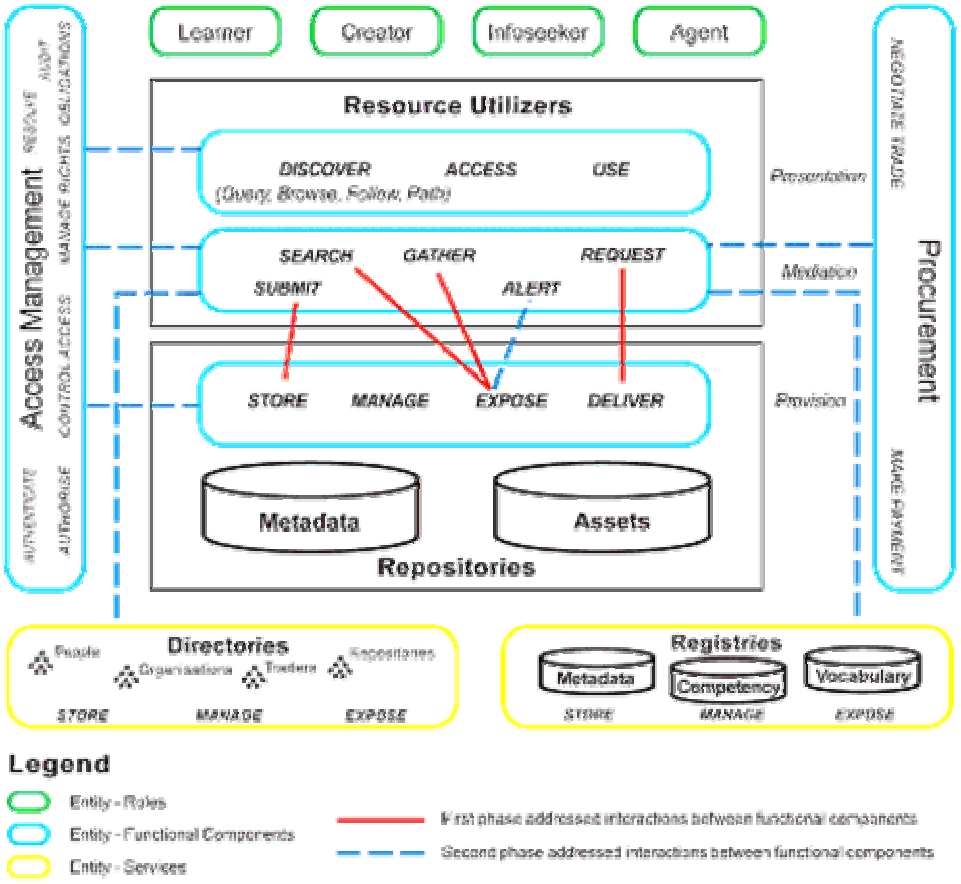


imsmanifest.xml

Repositorios de Contenidos

Repositorios Digitales

- Definen recomendaciones para que diversos tipos de repositorios sean interoperables



Apple Learning Interchange

- http://ali.apple.com

Teaching Practice

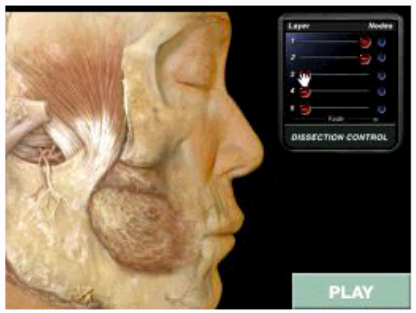
Anatomy Revealed ®

THE LESSON

Anatomy Revealed as a Useful Review

In lectures, Anatomy Revealed is a useful and easy way to present anatomy and its clinical relevance. For example, instructors can show a dissection or X-ray of an area that can be correlated with a clinical case. In the laboratory, Anatomy Revealed is an excellent supplement and guide to dissection. Outside of the formal class setting, students can use Anatomy Revealed to review and reinforce their lessons. An additional use of the software is for continuing medical education.

Dissection



Dissections of the human body (cadavers) are presented in a user-friendly interface that permits each layer of anatomy to be "melted-away," revealing relationships between structures found at different depths.

Introduction
The Lesson
Assessment
Student Work
Reflections
Resources
Step Guides
Technology
Background

Provided by:

Medical College of Ohio

Healing Begins with Knowledge

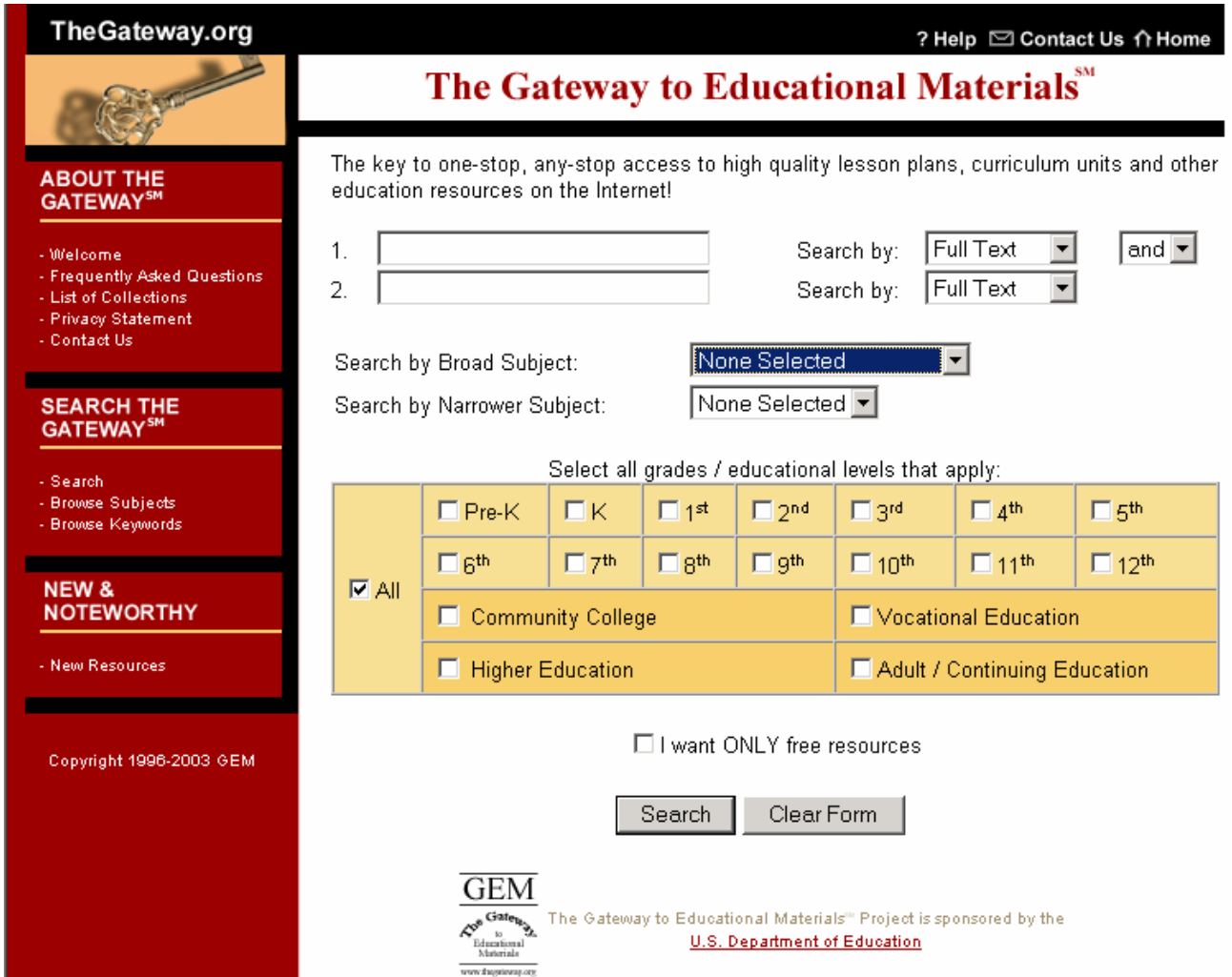
School: Medical College of Ohio

Credits:

Authors:
Roy Schneider, M.S.
Medical Illustrator
Center for Creative Instruction

Gateway to Educational Materials

- http://www.thegateway.org



Wisconsin Online Resource Center

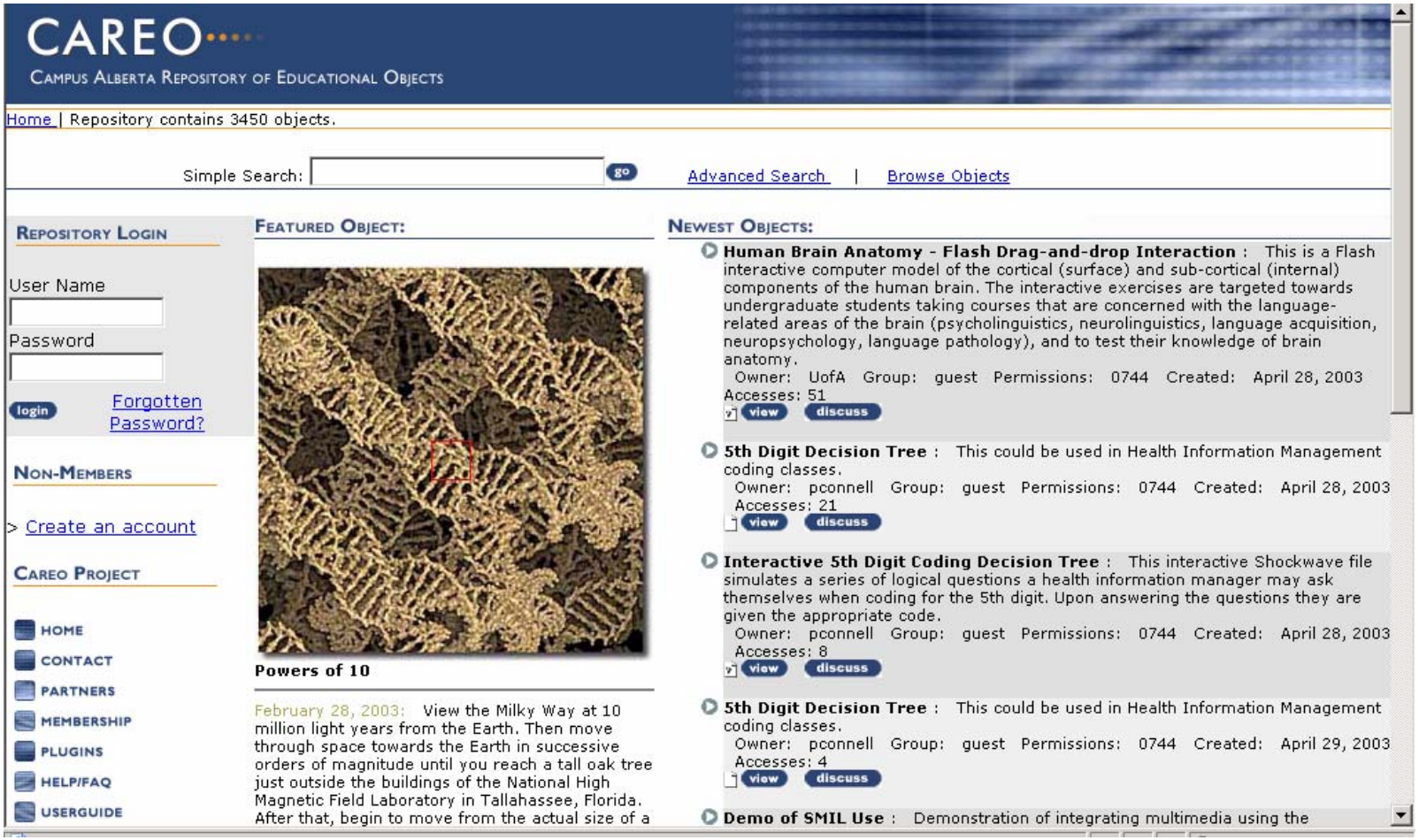
- http://www.wisc-online.com

MERLOT

- http://merlot.org

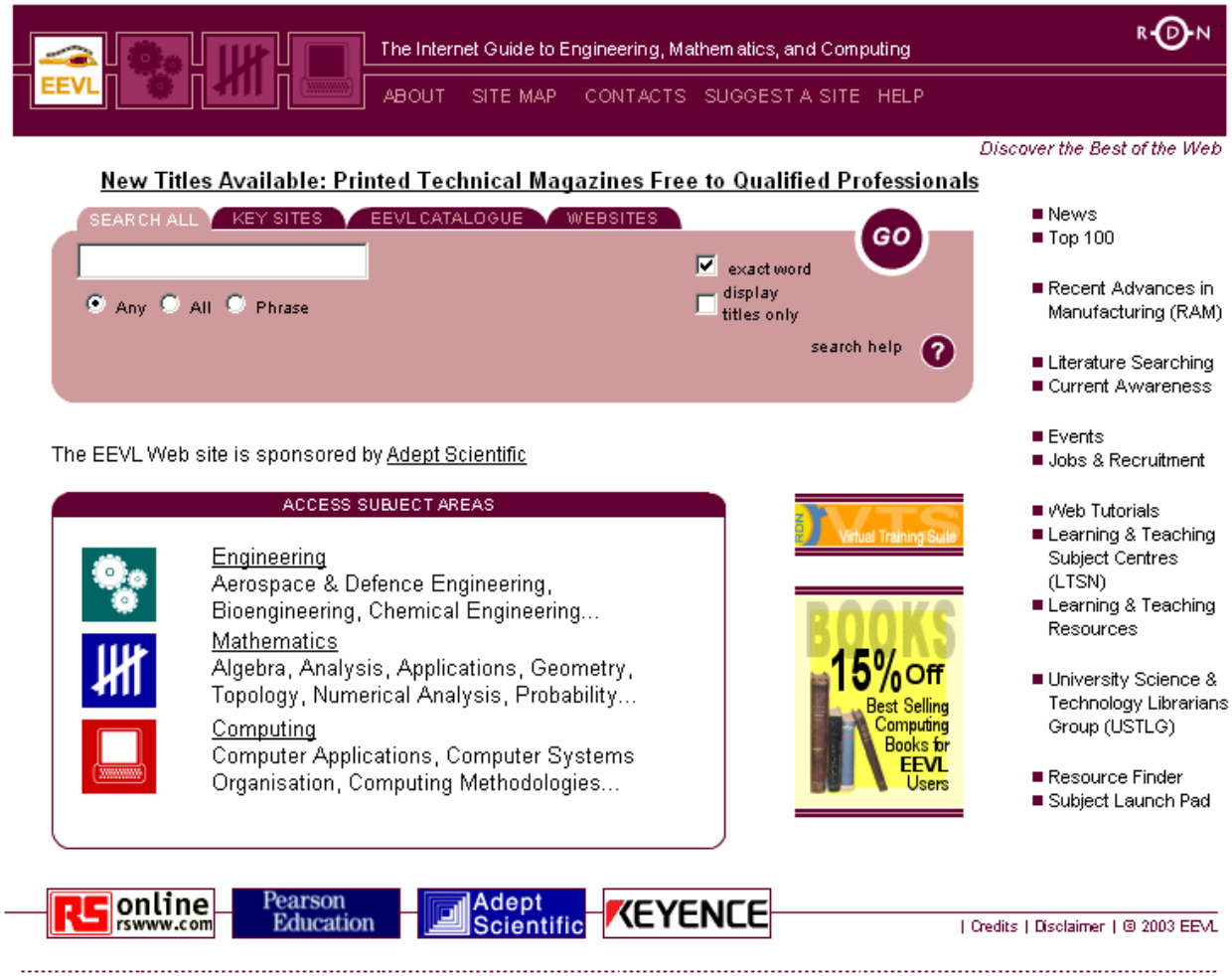
CAREO

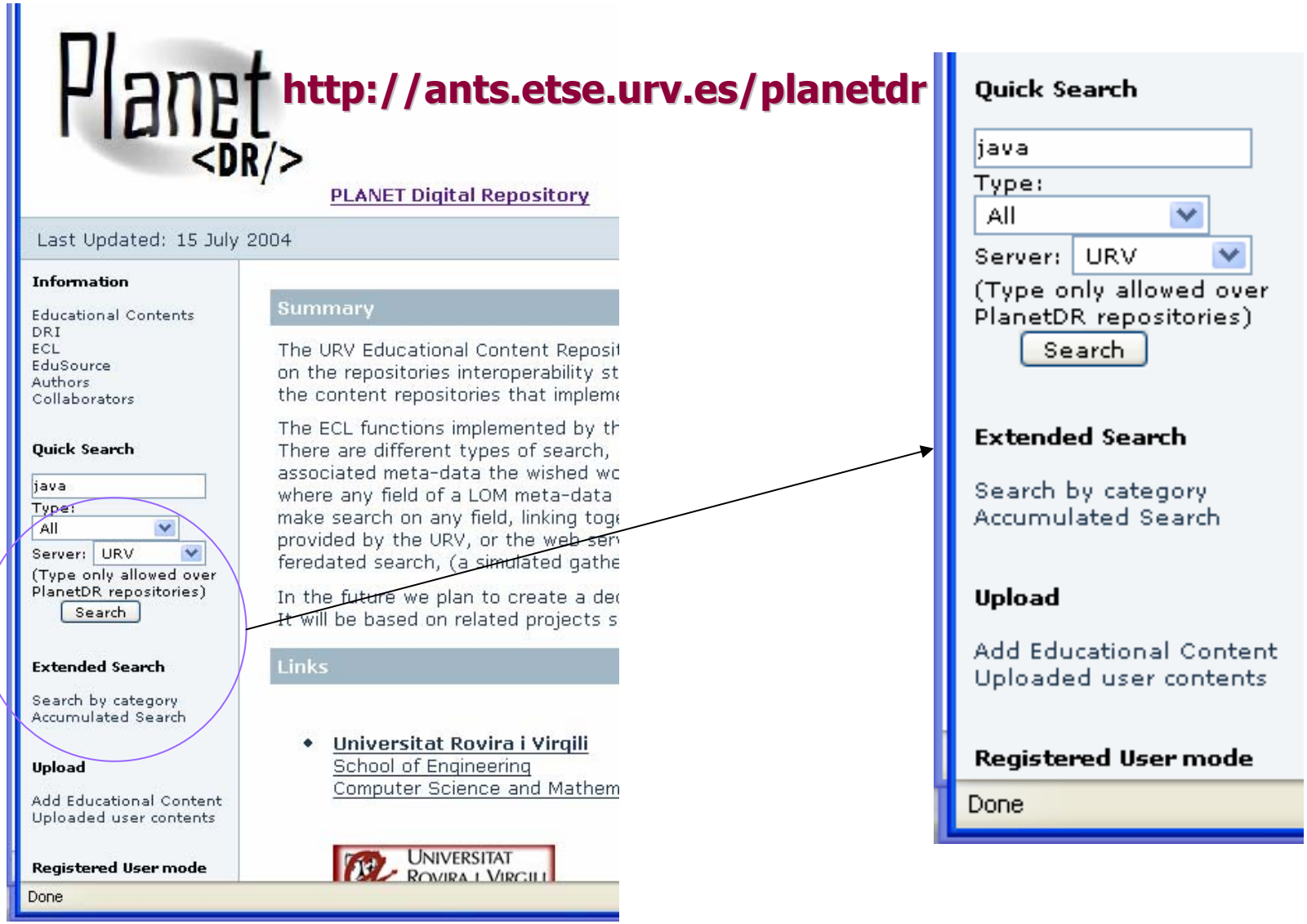
- http://careo.netera.ca



EEVL

- http://www.eevl.ac.uk




Planet <DR/>
http://ants.etse.urv.es/planetdr
PLANET Digital Repository
Last Updated: 15 July 2004
Information
Educational Contents
DRI
ECL
EduSource
Authors
Collaborators
Quick Search
java
Type:
All
Server: URV
(Type only allowed over PlanetDR repositories)
Search
Extended Search
Search by category
Accumulated Search
Upload
Add Educational Content
Uploaded user contents
Registered User mode
Done
Summary
The URV Educational Content Reposit
on the repositories interoperability st
the content repositories that impleme
The ECL functions implemented by th
There are different types of search,
associated meta-data the wished wc
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make search on any field, linking toge
provided by the URV, or the web serv
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In the future we plan to create a dec
It will be based on related projects s
Links
Universitat Rovira i Virgili
School of Engineering
Computer Science and Mathem
UNIVERSITAT ROVIRA I VIRGILI
Quick Search
java
Type:
All
Server: URV
(Type only allowed over PlanetDR repositories)
Search
Extended Search
Search by category
Accumulated Search
Upload
Add Educational Content
Uploaded user contents
Registered User mode
Done

Educational Content search by General category

Title:	
Language:	
Structure:	
Coverage:	
Aggregation level:	
Keyword:	java
Catalog:	
Catalog Entry:	
Logical operator:	AND
Server:	URV
Type (Only URV):	URV EXPLORA POND CAREO All

Search Clean

Back

Results of the requested search

Selected content number 1

Server which owns the content: EXPLORA

Title (en): Java for C and/or C++ Programmers
Description (en): This online course instructs C and C++ programmers to become proficient in Java programming. Instruction covers creating applets and applications and understanding Java object-oriented programming, as well as presents interesting laboratory assignments using a variety of Java features, including graphics, sound, animation, GUI components, GUI event (...)

Show metadata

Download not allowed for this content.

Title (en): Java for C and/or C++ Progr
Description (en): This online course in:
and understanding Java object-oriented
animation, GUI components, GUI event

Title (en): Java Server Programming ar
Description (en): Students will learn hc
will look at integrating the business lay
Java//u0027s cross-platform ability (...

Complete metadata information of the educational content

General category

Title (en): Java for C and/or C++ Programmers

Language: English

Description (en):

This online course instructs C and C++ programmers to become proficient in Java programming. Instruction covers creating applets and applications ar understanding Java object-oriented programming, as well as presents interesting laboratory assignments using a variety of Java features, including graphics, sound, animation, GUI components, GUI event handling, multithreading, and networking. Topics include Java-enabled World Wide Web browsing, Java Development Kit (JDK) and the Java programming environment (compiler, interpreter, appletviewer, debugger), Java virtual machine, Ja Applications Programming Interface (API), Hypertext Markup Language (HTML), Javascript and CGI scripts, Java Foundations Classes (JFC), security issues, and many others

Identifier (catalog): (POND):
Identifier (entry): luiE5838C8F5686408598CE9C133194DDF3

MetametaDada category

Language:x-none

Contribute (1):

Role (source):
Role (value):
DateTime: 2004-02-04
DateTime Description:

Vcard:

Information

Educational Contents
DRI
ECL
EduSource
Authors
Collaborators

Quick Search

Type: All
Server: URV
(Type only allowed over PlanetDR repositories)
Search

Extended Search

Search by category
Accumulated Search

Upload

Add Educational Content
Uploaded user contents

Registered User mode

Wellcome Robert!
Change the login
Change the password
LogOut

Upload of Educational Content

Step 2 : Information of the Educational Content

Metadata XML File Name:
Content type: Programming
Privacy: Allow downloads Deny downloads

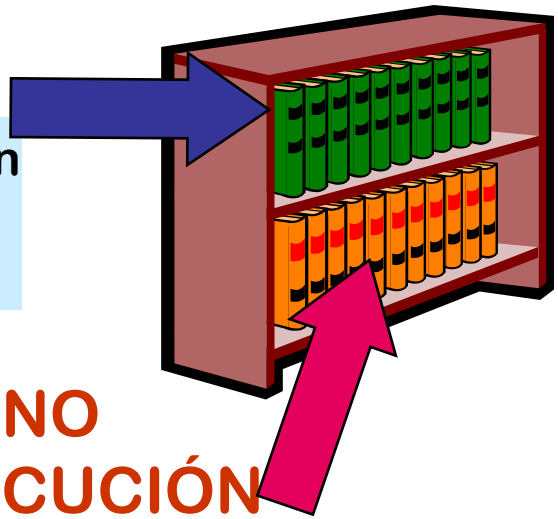
Continue

Back

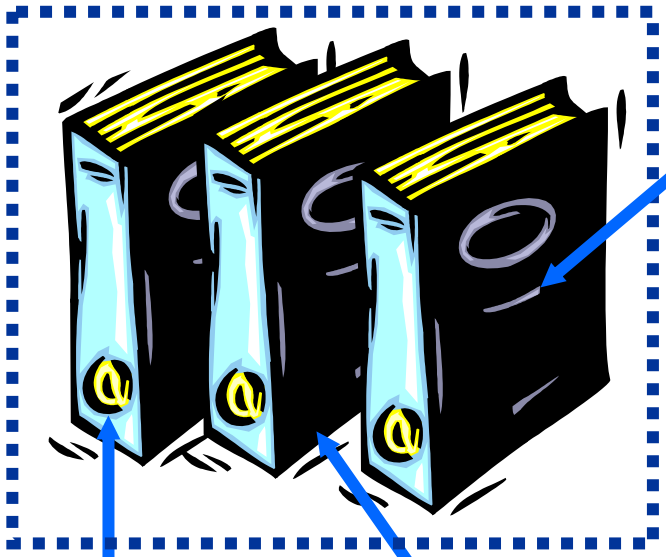
Integración con los Entornos de Gestión de Contenidos (LMS)

El Modelo de Referencia: SCORM

MODELO DE AGREGACIÓN



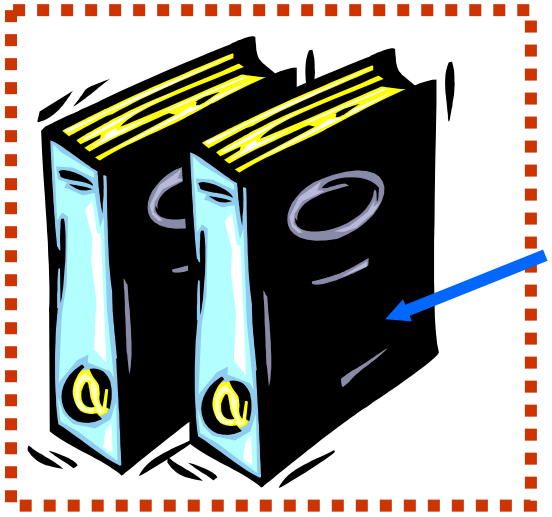
Representación LOM en XML (IMS)



Formato de Estructura del curso (AICC)

Metadatos (IEEE-LOM)

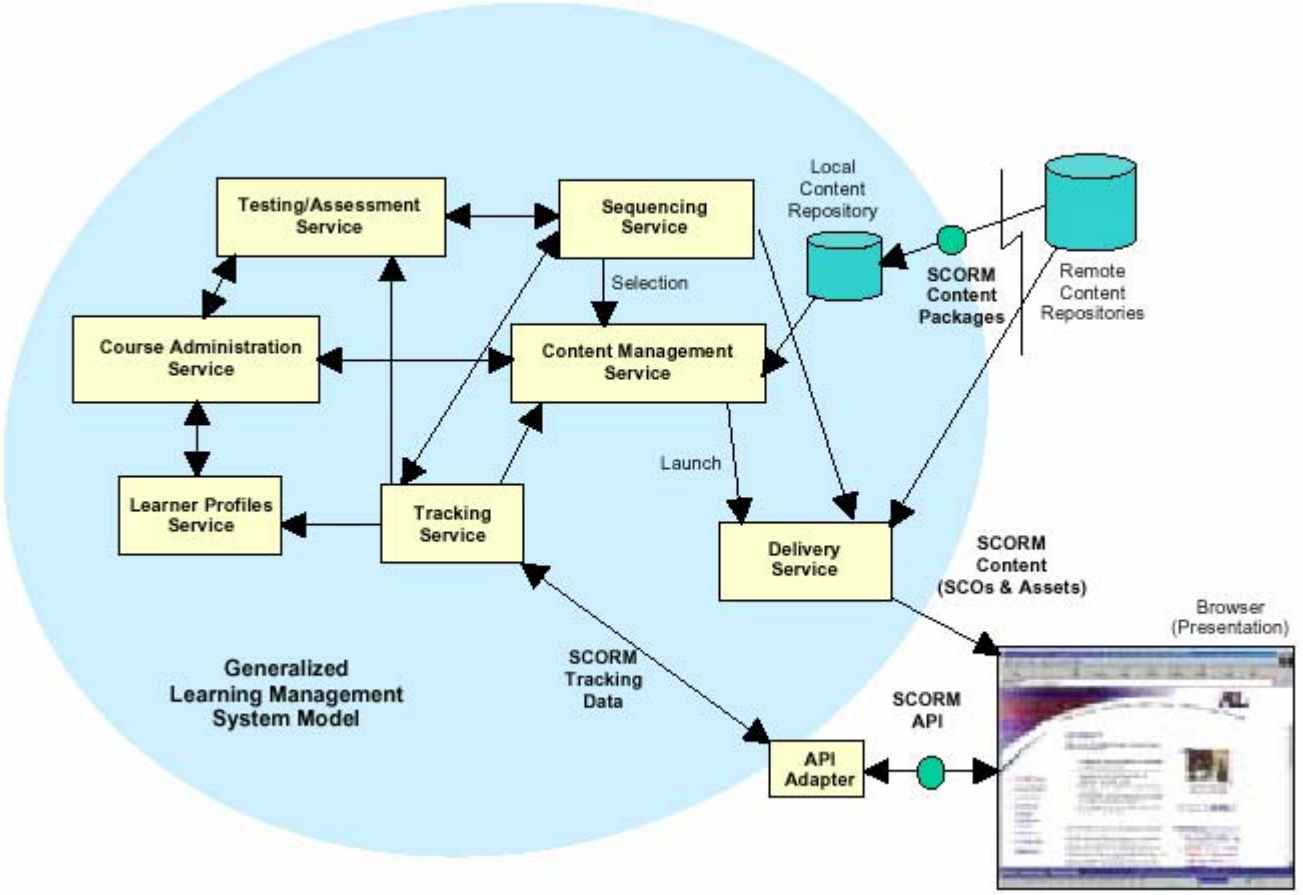
ENTORNO DE EJECUCIÓN



Contenido LMS API (AICC)

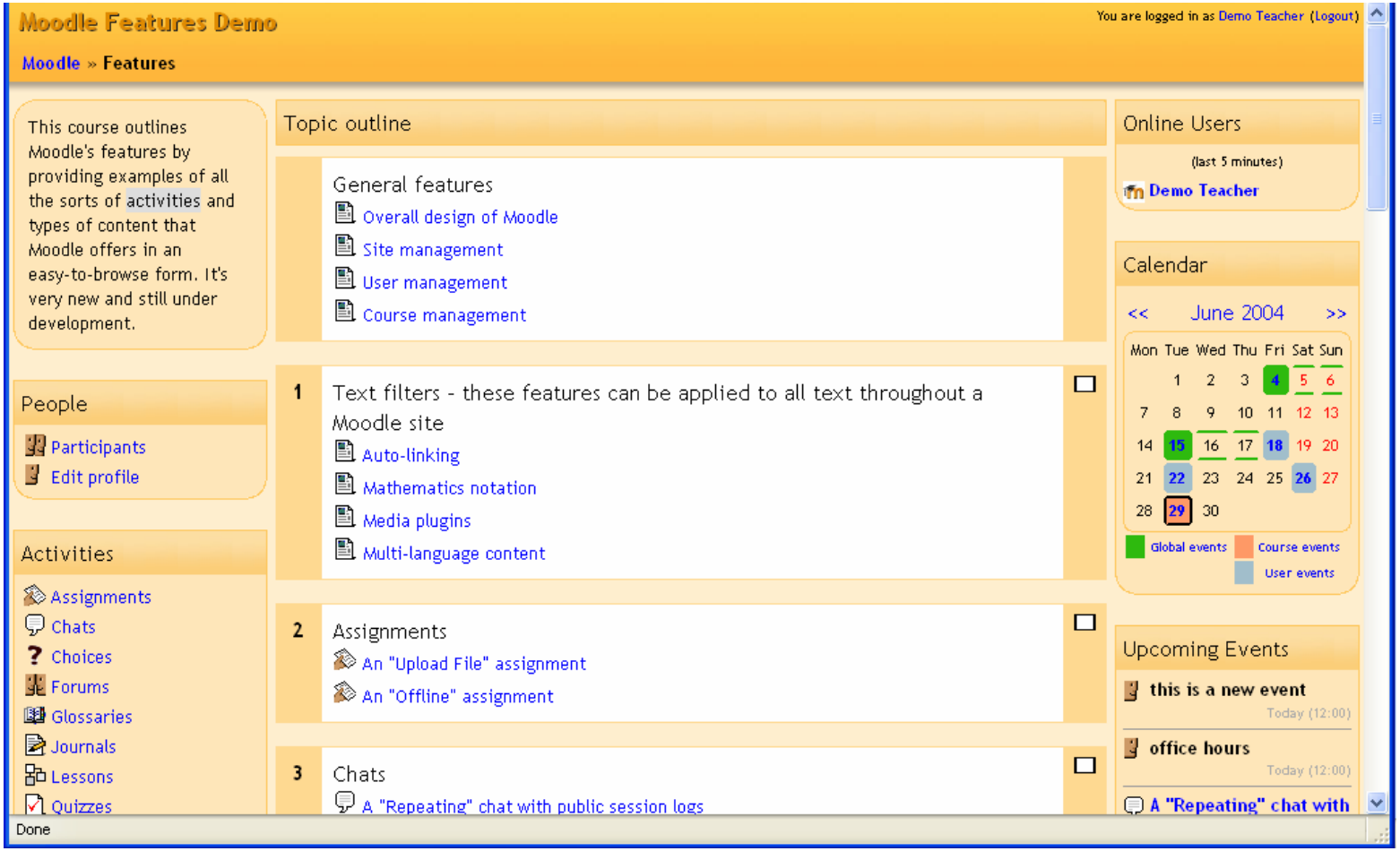
LMS i SCORM

- SCORM no especifica el funcionamiento interno del LMS



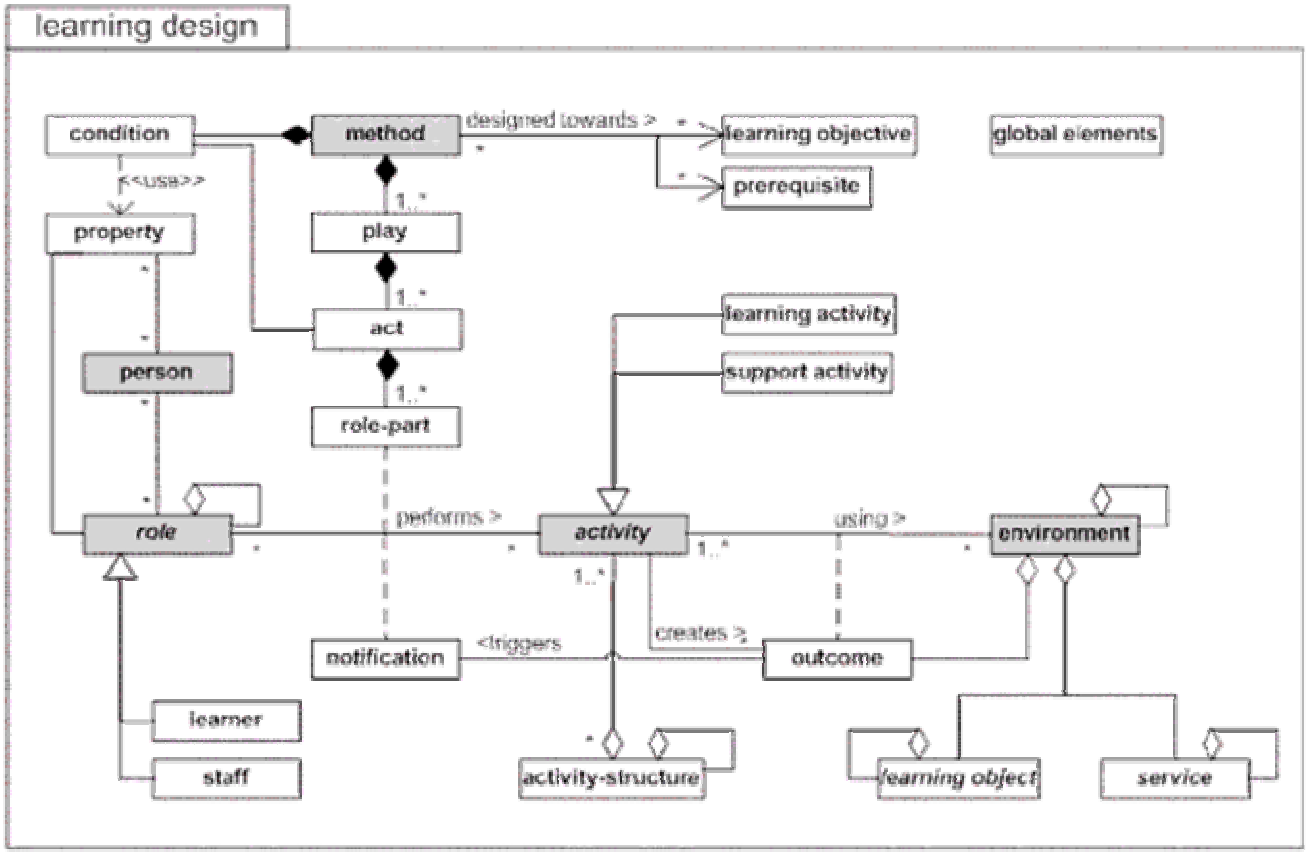
Moodle

- LMS de dominio público



Diseño del Aprendizaje

- Especificación que permite definir modelos de aprendizaje



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- Comparative Media Studies NEW
- Earth, Atmospheric, & Planetary Sciences
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- Engineering Systems Division
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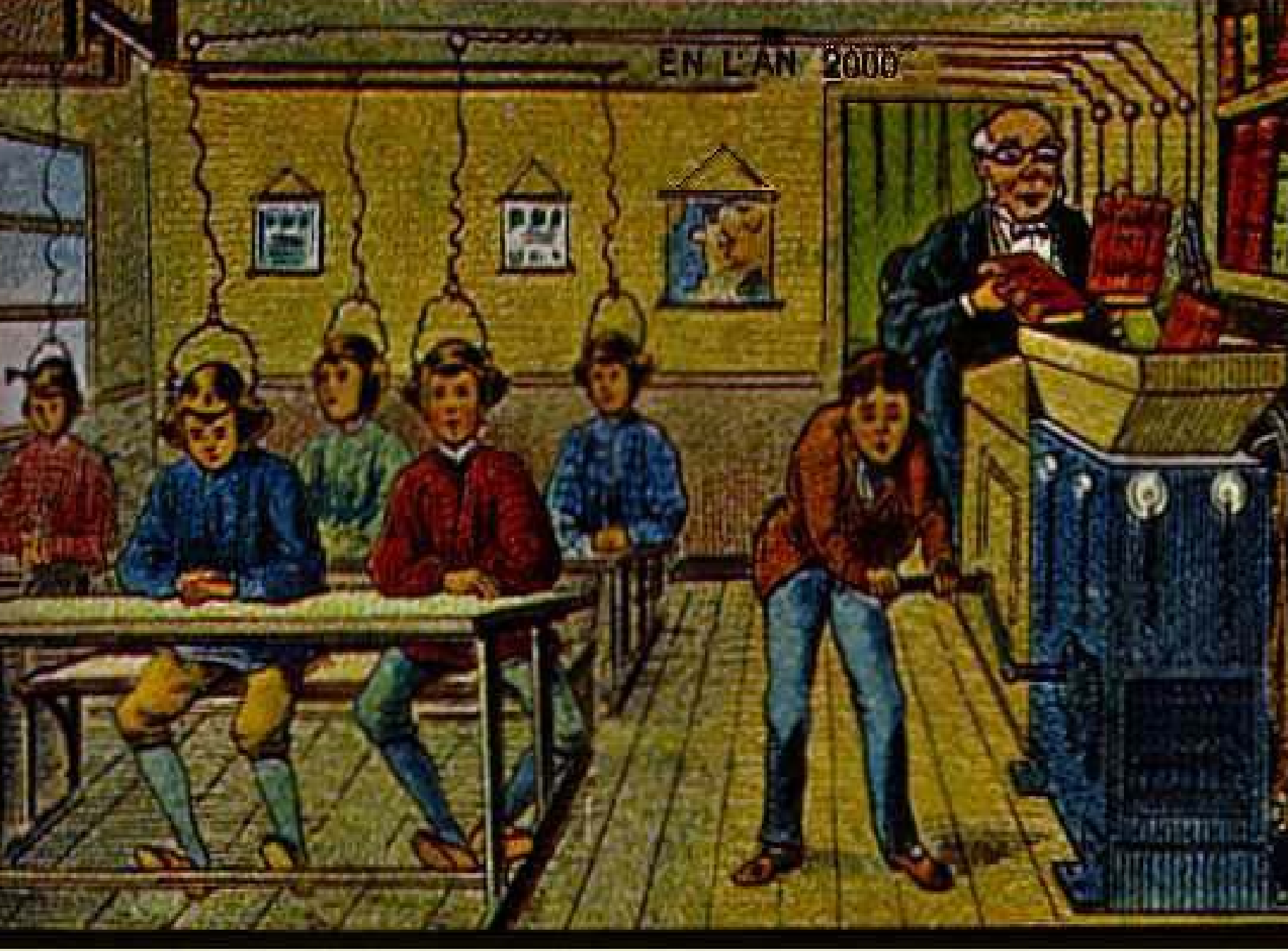
September 2002	**September 2003**	**September 2007**
MIT OCW pilot	Official launch with	Virtually all of MIT's courses

Conclusiones

- El EEES implica flexibilizar el procese de E-A
- Evolución hacia modelos semipresenciales
- Uso intensivo de las TIC
- Actualmente disponemos de:
  - Estándares para la reutilización de contenidos
  - Repositorios de contenidos
  - Herramientas de desarrollo de dominio público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