The UC Berkeley Digital Chemistry Library: Streamlining The Creation And Cataloguing Of Learning Objects

Organizational Support: NSF, Macromedia, Inc., Hewlett Foundation

Project Directors
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http://digitalchem.berkeley.edu

Welcome to Digital Chemistry
The world's cut open!

Project Goals
Create a general method for streamlining the creation and cataloguing of rich media learning objects.
Demonstrate viability of method by establishing a digital library composed of tightly integrated learning objects drawn from blended/distance learning resources in use at UC Berkeley.

Challenges
- How can technology streamline the process of collection design, encourage new contributions, and promote anytime, anywhere access?
- What cataloguing strategies are required to support resources that carry extensive, domain-specific metadata or tightly integrated educational connections?

Strategies
- Build on existing practices to capture content (e.g., use of PowerPoint slides in lecture, peer interaction and concept testing)
- Provide immediate benefits for students and instructors (feedback, ePortfolios, assessment)
- Minimize efforts to catalog resources using intelligent indexing agents
- Suggest learning goals based on semantic relationship between resources and keywords

Products
Content Creation: PRISM (Presentation, Replay, & Interaction With Streaming Media)
Content Cataloguing: LOTIS (Learning Object Tagging and Information System)

Content Creation
Presentation, Replay, & Interaction With Streaming Media
PRISM is a web-based suite of interactive tools that support peer interaction, concept testing, and the recording, streaming and playback of digitally captured presentations.

Cataloguing
Learning Object Tagging & Information System
LOTIS is a web-based system for managing Learning Objects (LOs) and assigning metadata values. LOTIS uses customizable templates and personal/shared workspaces to prepare LOs for digital libraries.

LOTIS: Learning Object Tagging & Information System

Research Questions
1. Can document engineering techniques help streamline the creation of learning objects?
2. How can intelligent linking patterns assist students access to and use of digital resources?
3. What are the access patterns and indications for optimal use of digital library resources?
4. How can specific instructional strategies and tools be enhanced for digital library environments that are not represented by the core library?

Metadat Template Editor

Integration of content creation, cataloguing, and export consistent with LOM standards

LOTIS: Learning Bridge & Information System

LOTIS is a knowledge management system for digital libraries

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