

eCMS
Content Management
Middleware for the Support of
eLearning across Europe

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Background

- Popularity of asynchronous eLearning is increasing
- Growing demand for:
 - Overcoming geographical and temporal constraints
 - Self-paced learning
 - Life-long training for professionals
 - Employee skill development for corporations
 - Educational opportunities for disabled individuals
 - Specialized teaching availability in remote locations
 - Complementary educational material
 - Updating of educational methods through new technology



Project Positioning

- On-going asynchronous eLearning activities:
 - Content **development**
 - Content **management** (publication, dissemination, etc)
 - **Virtual classroom** (examinations, interaction, student tracking, statistics, accreditation, certificates, etc)
- Project vision:
 - An **open content management system** that **promotes** educational content **dissemination** through straightforward web-based content publication and use

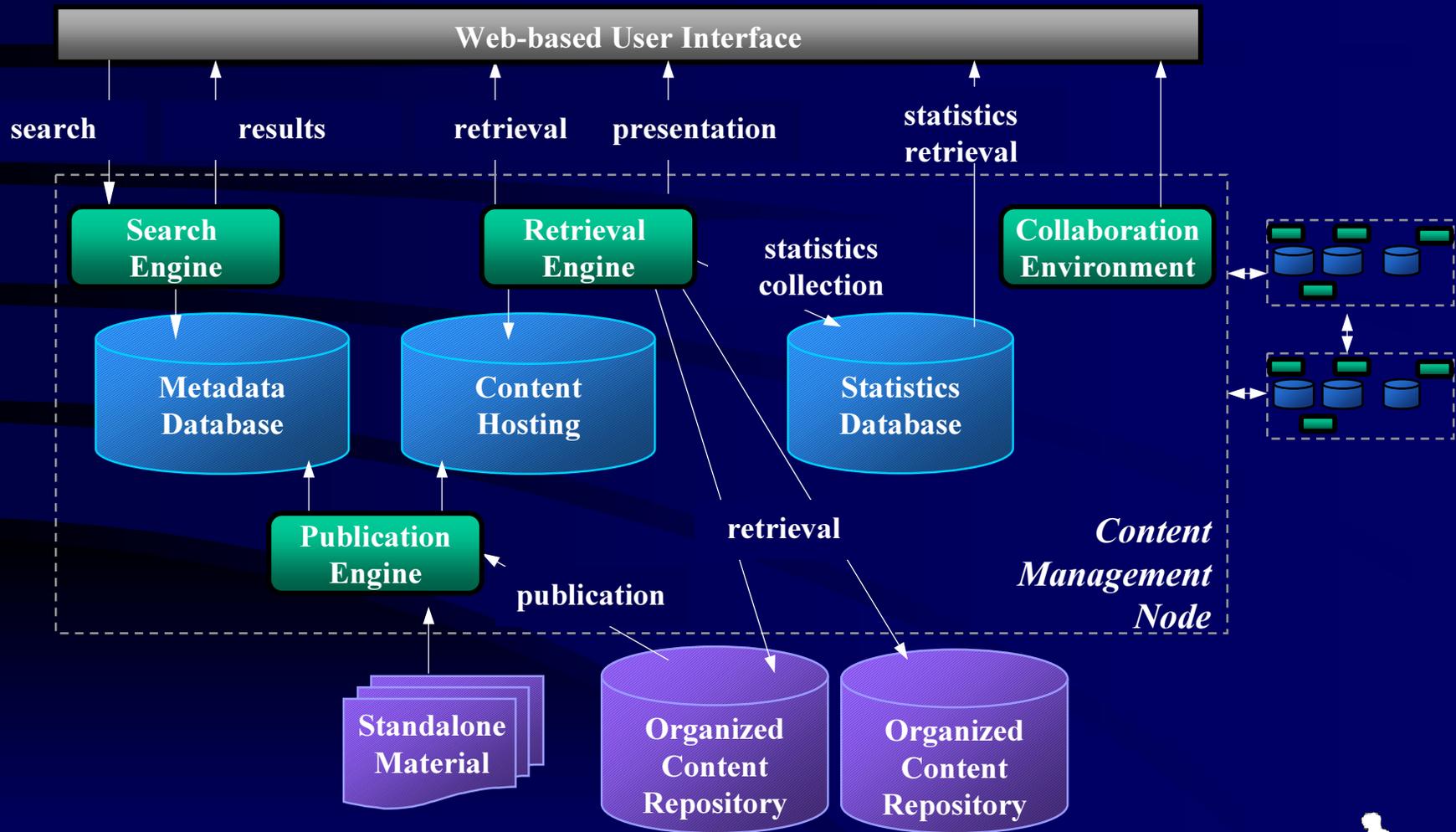


Objectives

- Content organized in the form of a distributed digital library
- Access from a single point on the web
- Customized library views
- Services for learners, providers, administrators
- Efficient information discovery through metadata, indexing, search, and navigation
- Support for material hosting
- Autonomy of providers through distribution of material and metadata
- On-line structured course development and editing
- Private workspaces for course developers
- Basic support for the development and execution of on-line examinations
- Support of learning process through a collaboration environment
- Generation of system and educational statistics



Content Management Architecture



Services

- Learners
 - Distributed **content discovery** and **retrieval** through a **single point** on the web
 - Participation to **on-line exams**
 - **Collaboration tools**
- Educational content providers
 - **Metadata management**: generation, publication, editing, deletion
 - Optional **content hosting**
- Course developers
 - Structured **course developer** and editor in a private workspace
 - **Content sharing**
 - **Examination developer** and editor
- Administrators
 - **Indexing**
 - **System statistics**
 - Importing of **external metadata**
 - **Resource management**



Evaluation Strategy

- Goal is the **generation of feedback** for the constant improvement of:
 - The **organization of content** (infrastructure, metadata design)
 - The **content** itself
 - The system **interface**
 - The **acceptability** of the system
- Processes:
 - **Population** of system repositories with **content**
 - Standalone content designed for specific user groups
 - Plug-in of the Hellenic Pedagogical Institute organized educational repository
 - Automated generation of **statistics** on system use
 - Evaluation by **external user groups**



Evaluation through Statistics

- **Monitoring** of system usage aiming at the identification of **possible improvements**

Statistic	Purpose
Keywords used in queries	Improvement of user interface through thesauri, additional menus, navigation, drop down lists, etc
Query hits	Improvement of metadata design, metadata descriptions, interface
Reviewed metadata records	Improvement of content and metadata
Support for module ratings and reviews by learners	Improvement of content and metadata



Evaluation by External Users

- 2 external learner groups consisting
 - Secondary school teachers from Greece
 - Engineering students from Norway
- Diversity in terms of familiarity with the internet, cultural background, and educational goals
- Preliminary round of evaluation starts on October 7, 2002
- Main evaluation phase starts in January 2003
- Questionnaires will be included as parts of courses
- Interviews with system and content users



Project Web Site

- <http://elearning.noc.uth.gr>
- Information
 - Project description and data
 - Access to organized on-line content
 - Access to *eLearning* services

