

DELOS

NETWORK OF
EXCELLENCE ON
DIGITAL
LIBRARIES

ELAG 2006

Workshop WS1

The European Digital Library

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Participants in the workshop

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Disclaimer

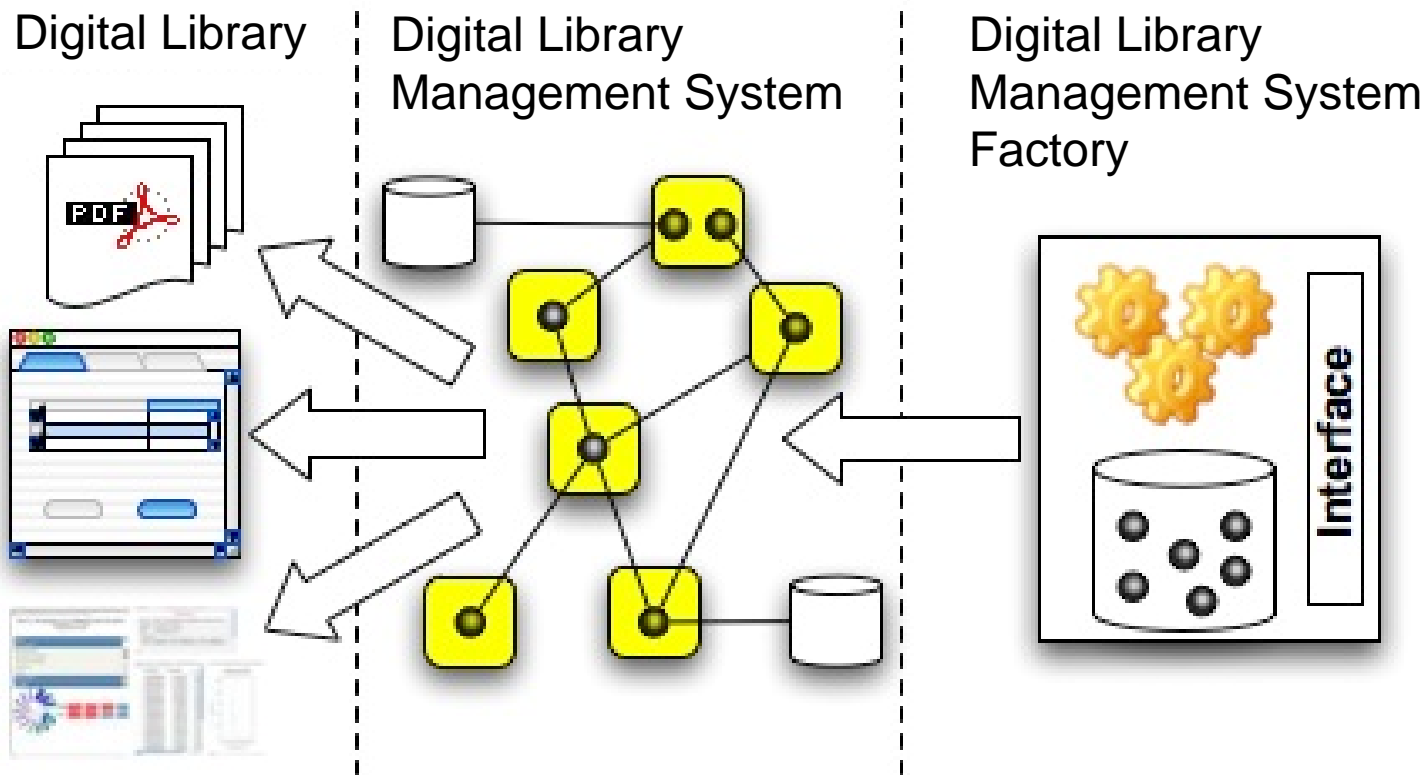
Many hot topics could (and should) be discussed under the heading “European Digital Library”. A decision was taken to restrict discussion to some of the “technology oriented” topics. In particular, relevant topics mentioned but not discussed were:

- Content of the EDL
- Preservation
- Access policies
- Intellectual Property Rights
- Will EDL change the role of librarians ? (lack of time)

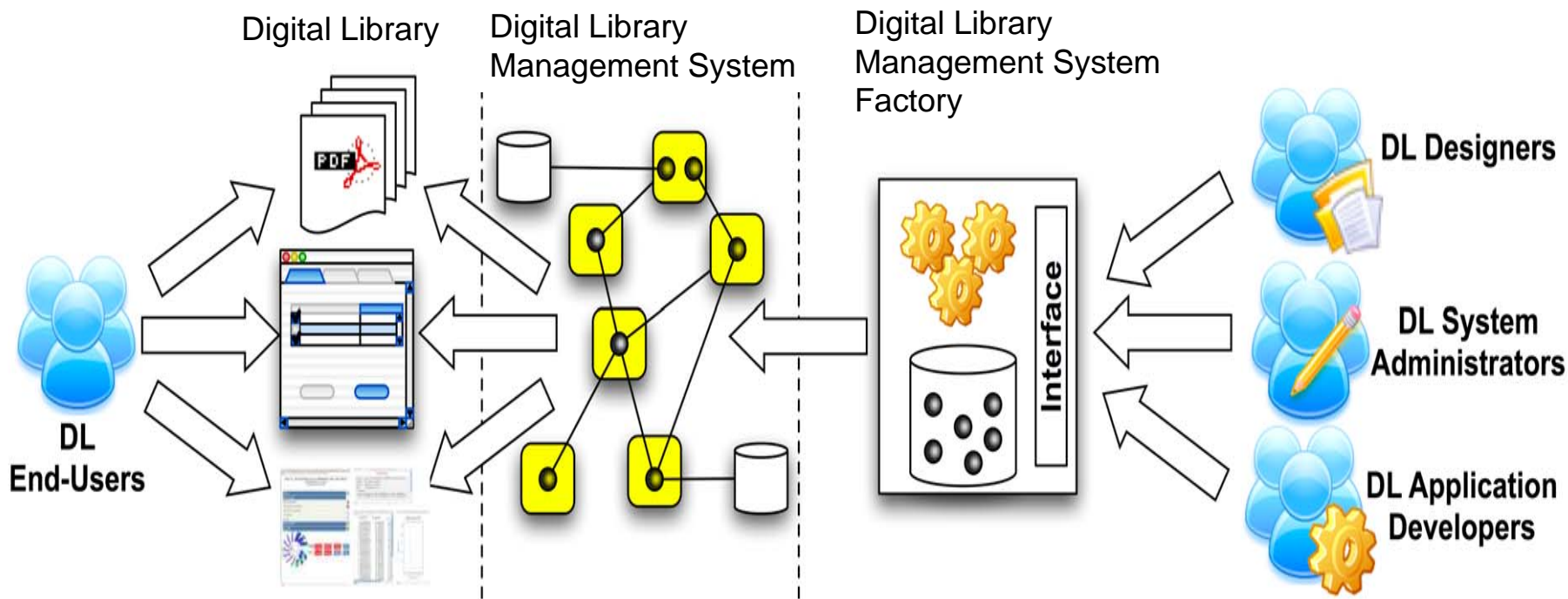
Questions addressed in the Workshop

- What is a digital library, after all ?
- What could be the architecture of the EDL ?
- Which tools and services should be provided by the EDL ?
- Is there a role for a “European Digital Librarian” in the EDL ? (this topic was not discussed for lack of time)
- Putting the pieces together

A DL conceptual framework



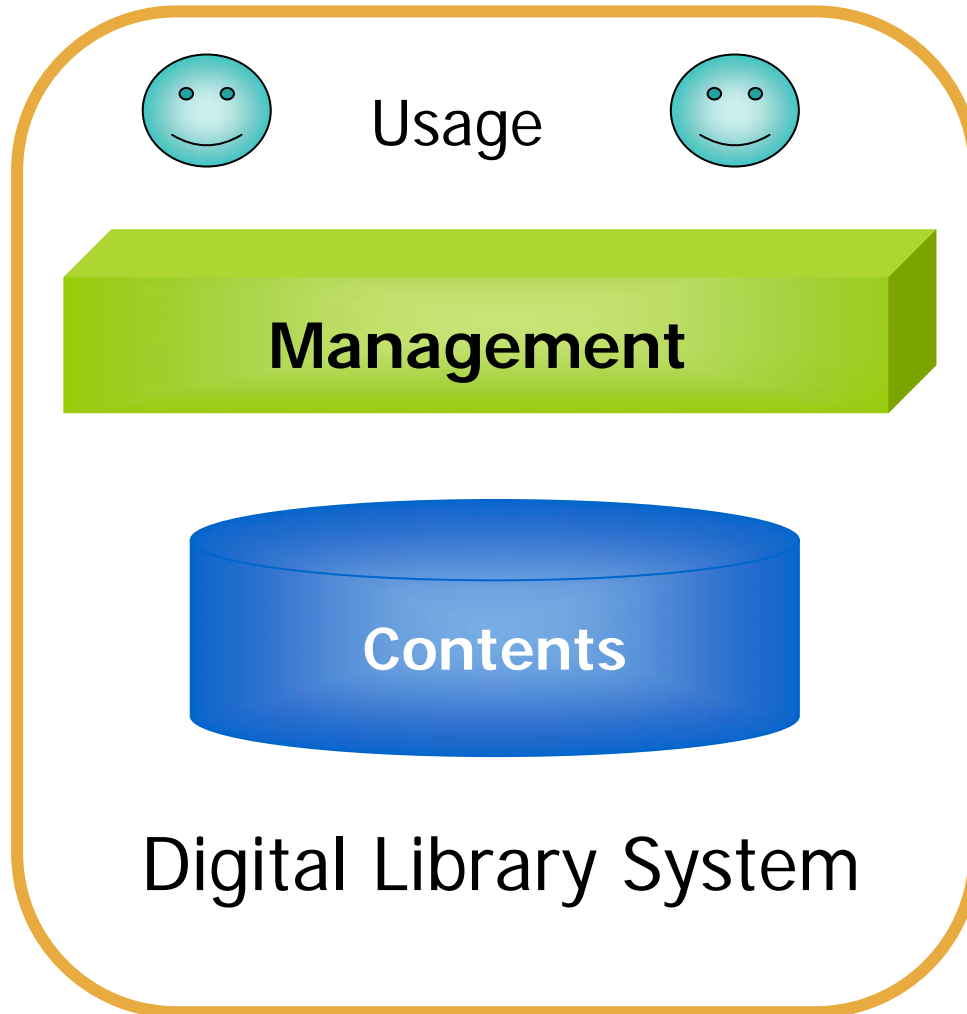
A conceptual framework with users



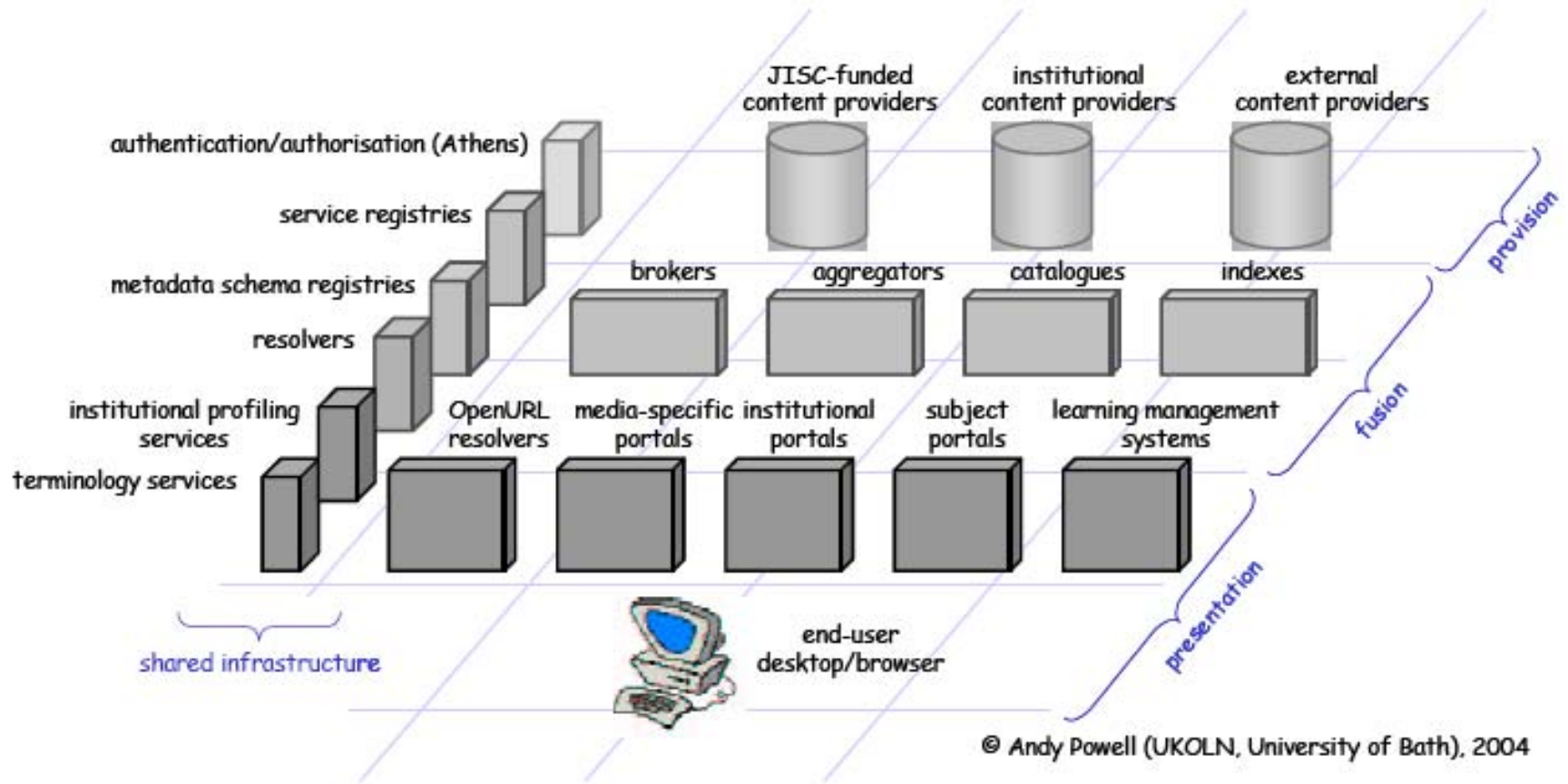
Definition of Digital Library

- A DL is the combination of content and services (abstract view)
- A DL is the combination of content and (external) services (end user view)
- An instance of a DL is the combination of distributed content and distributed services (DL designer and administrator view)
- A DL is an entity providing the functionality to mediate between information objects and information users in the context of distributed collections of information objects. This (external) functionality includes access, publish, delivery, preservation, personalization, etc...(combination of the two preceding views)
- A DL factory is the set of (internal) services and tools (i.e. software) that allow the instantiation of a DL (DL developer view)

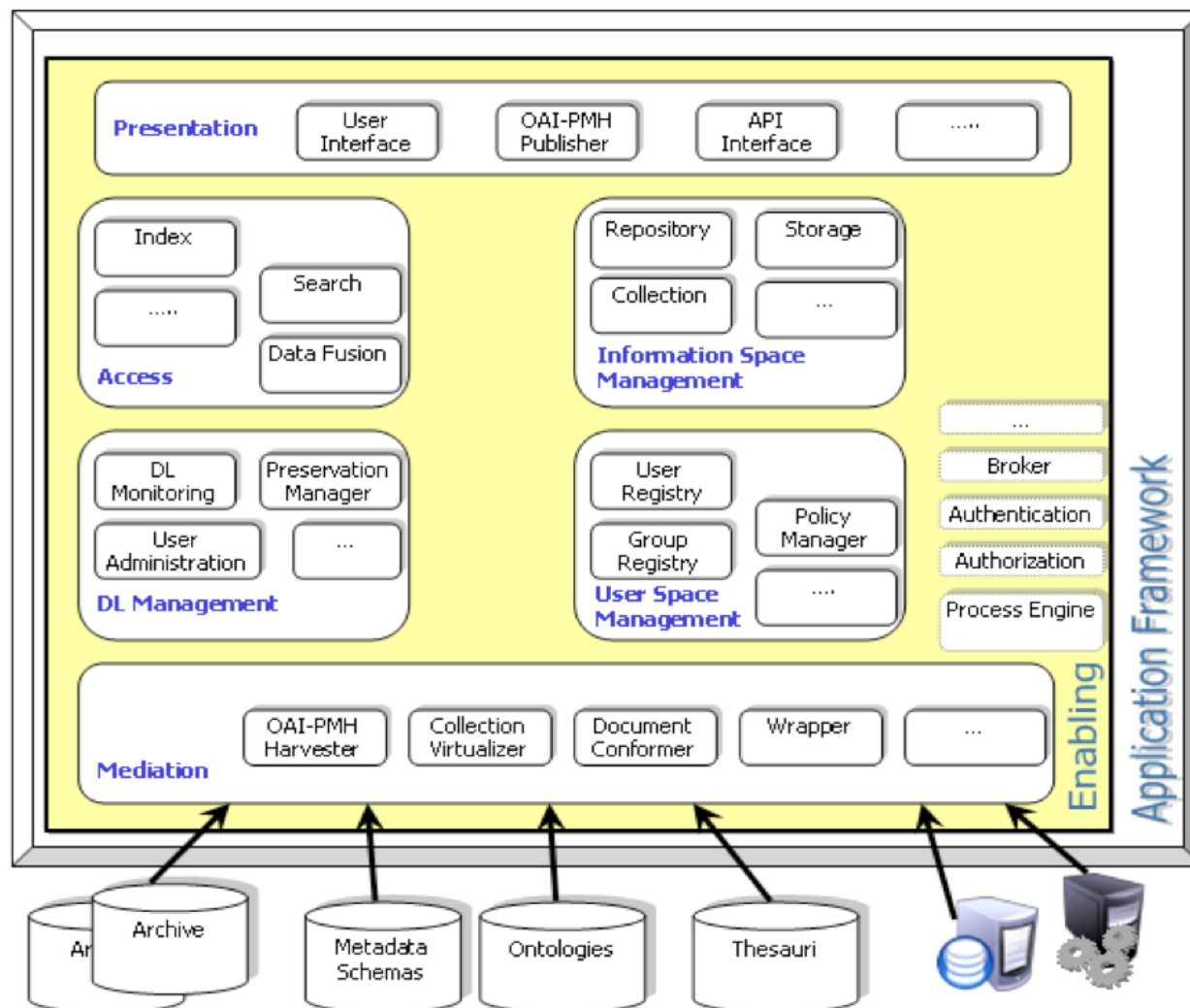
Simple conceptual architecture



JISC IE Architecture



DELOS Reference Model



Digital Library architecture

- The EDL should be a loosely coupled “federation” of many different DLs
- The P2P Service Oriented architecture seems to be the most suitable one
- The EDL should recommend (enforce) “standards” for participating in the federation
- The EDL should have a central index (to provide better services), while allowing also distributed indexes
- The EDL should make its (external) services available also as web services

Tools and services summary

- Combined text and audio-visual search functionality (to be integrated also with data streams)
- Personalized browsing and searching
- Information visualization and relevance feedback tools
- Processing of retrieved information
- Annotation and tools for collaboration

- Simple configuration and adaptation tools (reliable and scalable)

Transition from TEL to EDL

- EDL should provide value add over Google
- Provide multilinguality
 - Query in one selected language, results in all selected languages
 - Translation service
- Provide a European combined thesaurus / authority
- Capitalize on the availability of structured metadata
 - Better organization of content
 - Support and use of semantic tags
 - Make use of (European) “value indicators” in ranking
- Support fee-based access to information and services
- Support collection navigation within EDL and creation of “virtual collections”
- Support annotation and collaboration tools
- Support establishment of a “service registry” (under discussion)
- Be a vehicle for the elimination of digital divide (e.g. provide text readers in less used languages)
- Ensure EDL is accessible from any search engine (e.g. Google, Yahoo, etc.)

EU online consultation for EDL

- In December 2005 the DELOS NoE convened a “Brainstorming meeting” to discuss the questions posed by the Commission about the establishment of a European Digital Library. The participants in the workshop represented a broad range of academic and research institutions, libraries and government organizations. The outcome of the workshop was submitted as an answer to the online consultation and published as a DELOS report.
- The slides that follow present a concise summary of the main points and recommendations contained in that report, and are included here to provide a broader perspective on the issues related to the establishment of a European Digital Library. Those slides were not discussed during the ELAG 2006 WS1 workshop.

Input to online consultation

- A two-pronged strategy is recommended:
 - Put a short-term focus on extensive digitization of materials and their organization into a system with unified access across Europe
 - Pursue the long-term vision of a much broader system of highly interlinked information and services that will provide very rich functionality, supporting new ways of intellectual work, communication, and process execution in business, education, government, and daily work.

Answers to the specific questions of the Commission

- Use incremental user requirements analysis
- Coordinate digitization efforts
- Encourage creation of borne-digital material
- Develop comprehensive metadata registries (use standards)
- Put emphasis on multilingual material and multimedia material
- Deploy advanced search engines
- Allow for integration with other components in the future
- Establish the appropriate legal and organizational framework copyrighted material
- Provide users with seamless access to fee-based information
- Base the EDL on a service-oriented architecture

Specific answers for preservation

- Encourage preservation
- Establish a clear legal framework that mandates ownership of digital objects
- Introduce legislation to allow deposit in a single European country
- Conform to international standards, especially for unique object identifiers
- Capture provenance information among metadata to ensure traceability
- Encourage community consortia to ensure multiple distributed copies of objects
- Establish service centers for monitoring technology obsolescence and to provide migration services

Recommendations for immediate actions

- Prepare several state-of-the-art reports and tool repositories, and establish competence centers on:
 - tools for digitization, OCR, and other related technologies;
 - metadata standards for all kinds of objects;
 - multilinguality
 - multimedia and other complex objects;
 - search engines
 - annotation, personalization, collaboration, data integration
 - preservation issues, strategies, and techniques
- Establish large-scale test beds

General principles for the development of EDL

- Use a user-centered and task-centered approach
- Support unified access to materials from libraries, archives, museums, other memory institutions
- Configure the EDL as a federation of interoperable components
- Encourage a unified service-oriented framework for all digital library projects sponsored by the European Commission
- Fund research and development that is focused on enabling the long-term vision for a DL