

Task 1.4 - A Reference Model for Digital Library Management Systems

- CNR-ISTI (Italy)
- University of Athens (Greece)
- University of Glasgow (UK)
- University of Basel (Switzerland)
- UMIT (Austria)

Outline

- Motivations
- Achievements
- Plans for the future

Before we talk about ~~SOA~~ ^{DLs} and where we want to go



- Would be nice if we had consensus on what **DLs are!**
 - Is it sufficiently different from other types of **information systems?**
If **a DL** is “X”, what is not **a DL?**

Duane Nickull
Senior Technical Evangelist
Adobe Systems, Inc.
<http://www.oasis-open.org/>

What is a Reference Model?

- A reference model is an **abstract framework** for understanding significant relationships among the entities of some environment, and for the development of consistent standards or specifications supporting that environment
- A reference model is based on a **small number of unifying concepts** and may be used as a basis for education and explaining standards to a non-specialist
- A reference model **is not directly tied to any standards, technologies or other concrete implementation details**, but it does seek to provide a common semantics that can be used unambiguously across and between different implementations

The Reference Model for DLs...

- Is not intended to be a representation for a single DL system
- Is an *ABSTRACT* model for a range of DLs and analysis / comparison thereof
- Is a framework for understanding significant relationships among the entities in a DL environment
- Is based on a small number of unifying concepts of all DLs

A model of real systems

Identification of a first set of modeling concepts
Structuring of the model

M30 – D1.4.2

Evaluation and Comparison of the
Service Architecture, P2P, and Grid
Approaches for DLs

M18 – D1.1.1

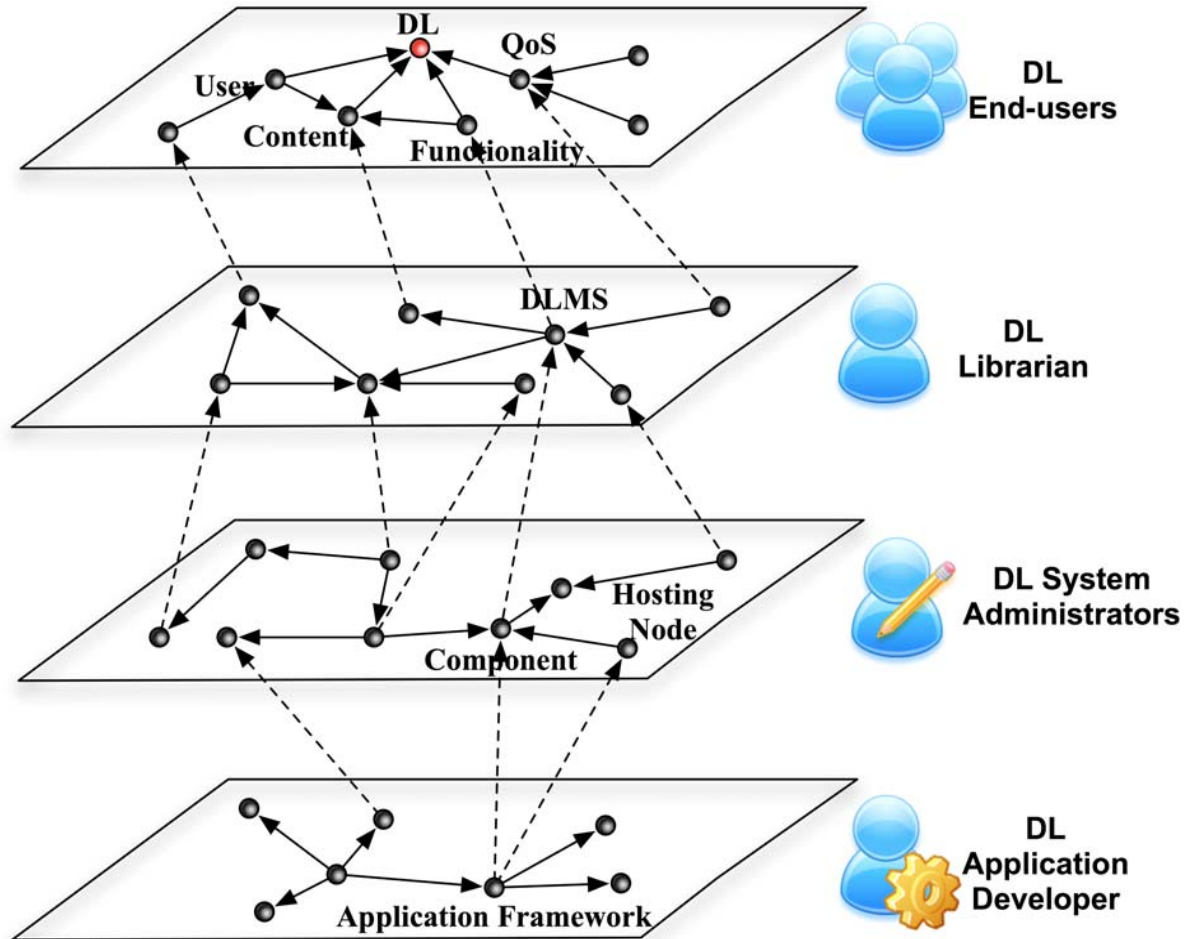
Survey on current DL
systems

M24 – D1.4.1

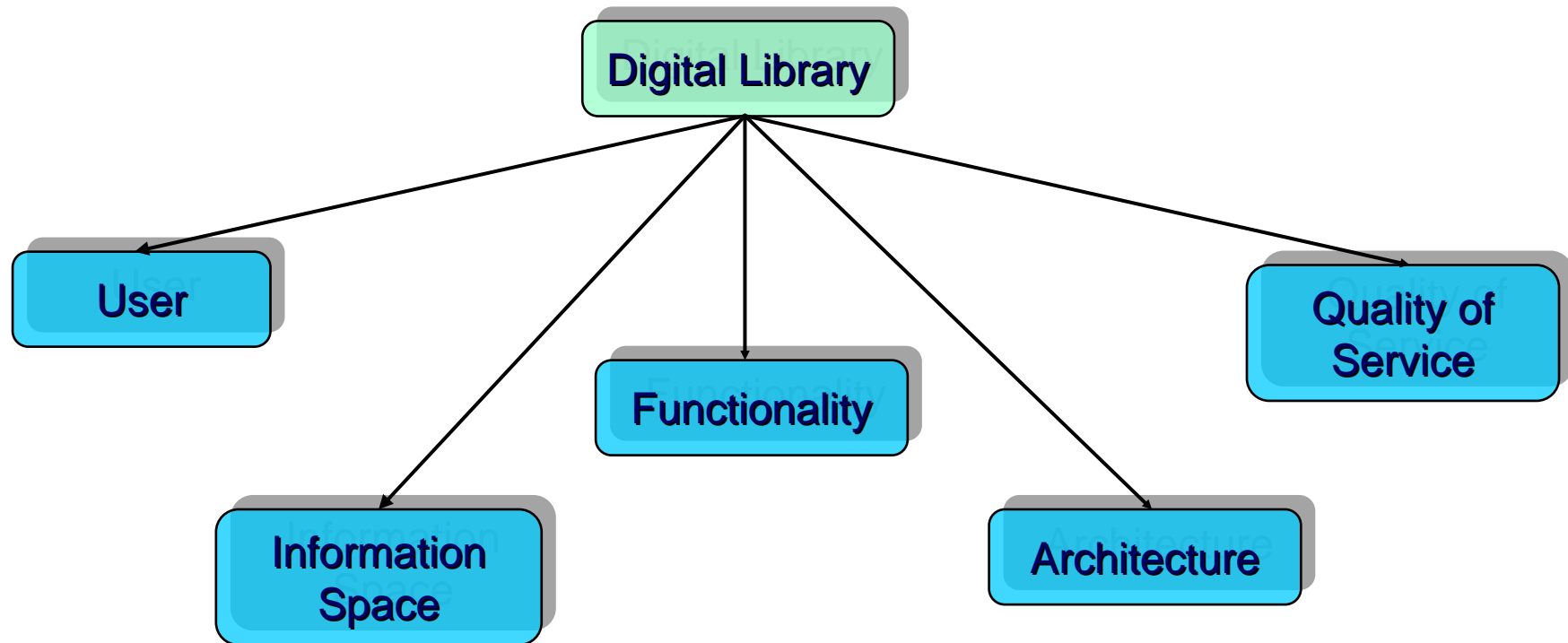
A model for what/who?

- **DL end-users:** exploit the DL functionality for providing, consuming and managing the DL content. They perceive the DL as a stateful entity which serves their functional needs.
- **DL Librarians:** by exploiting their knowledge of the application domain semantics, customize and maintain the DL aligned with respect to the information and functional needs of its end-users. These actors perform their task by interacting with the *Digital Library Management System (DLMS)*.
- **DL System Administrators:** select the software components to install in order to implement the required DL and decide where to deploy them. They interact with the DLMS by invoking specific operations that require to provide architecture configuration parameters.
- **DL Application Developers:** develop the DLMS or extend the software components made available by a DLMS in order to satisfy the additional needs of a DL specific application framework.

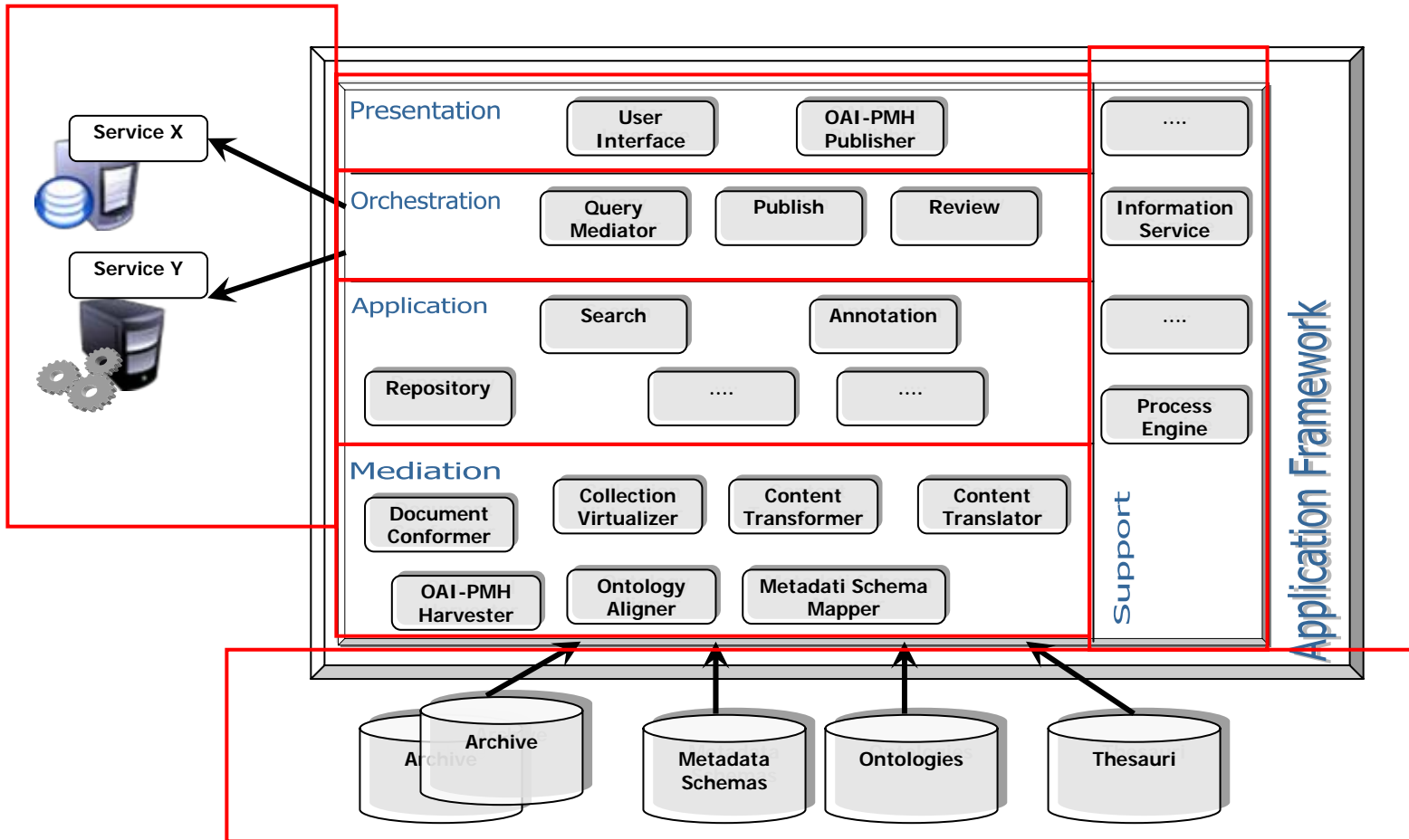
4 perspectives - 1 model



The most general concepts: 5 main areas



Reference Architecture



Future plans (1)

- Refine/complete the set of concepts
We need the contribution of the experts in each of the 5 areas
- Validate the model against existing systems
We need the contribution of those that have studied/developed DL system components

Future plans (2)

- February -Circulate the model draft
- Spring - Workshop
 - Objective: to make progresses in the model refinement and to create appropriate working groups
 - Participants: DELOS members + others working in the area
- Priority: Architecture model