

1st Face to Face Meeting, DL.org Architecture Working Group 29-30 June 2009, Pisa, Italy

DL.org - Interoperability, Best Practices and Modelling Foundations

The first face to face meeting of the Architecture Working Group¹ was hosted by the Italian National Research Council (CNR) at the Institute of Information Science and Technologies (ISTI), the 29th and 30th June 2009.

The “external” experts attending the meeting were Pasquale Pagano (CNR-ISTI), Robert Sanderson (University of Liverpool), Thornton Staples (Fedora Commons) and Bram van der Werf (Europeana). In addition to them, Leonardo Candela, Donatella Castelli and Costantino Thanos (all from CNR-ISTI) attended the meeting in the role of DL.org members.

The meeting was organised in two main session: a project overview session and a brainstorming-oriented session.

Project Overview

During the project overview session, the DL.org project members provided the participants with project-oriented information while the “external” experts presented their visions of the Architecture working group, i.e. interoperability from the architecture perspective. In particular, **Leonardo Candela** focussed firstly on the structure and the rationale of DL.org, the main deadlines as well as the role of the working groups and their modus operandi and secondly, introduced the main characteristics of the current version of the Reference Model which will be used as foundational tool during the working group operation.

Pasquale Pagano brought into sharp relief the **D4Science**² and **DRIVER**³ concrete experiences toward large-scale Digital Library System architectures and interoperability-related aspects. He stressed the commonalities and the differences between the two systems and identified through resources representations, compound objects management and standards & guidelines exploitation as three aspects that should be dealt by this working group.

Thornton Staples introduced **Fedora**⁴, and the approaches put in places to manage compound objects and the difficulties for making such objects “durable”⁵. He identified global persistent identifiers, cross domain policy enforcement and compound object (aggregations) boundaries management as important aspects to be investigated from the interoperability perspective.

¹ https://workinggroups.wiki.dlorg.eu/index.php/Architecture_Working_Group

² <http://www.d4science.eu>

³ <http://www.driver-repository.eu/>

⁴ <http://www.fedora-commons.org/>

⁵ <http://www.duraspace.org/>

Bram van der Werf presented the **Europeana**⁶ mission and goal and focuses on the current approach, the difficulties and future plans. **Robert Sanderson** meanwhile, introduced three initiatives **Cheshire3**⁷, **OAI-ORE**⁸ and **SRU**⁹. In particular, he focussed on the architectural aspects of the Cheshire3 Information Analysis Framework, reported on the plans toward SRU2.0 and presented exploitation experiences on OAI-ORE. During these presentations, a lot of helpful discussions occurred resulting from the participants' experiences and previous work.

Brainstorming

The goal of this session was to finalise the overall mission of the group, to identify the topics having high priority and to agree on future actions and deadlines. The discussion started by analysing the various definitions of (architecture) interoperability as perceived by the participants and collected before the meeting. Due to differing perceptions members decided to pragmatically avoid any unifying definition and to focus on the identification of architecture-oriented interoperability aspects.

The five topics initially identified are,

1. **Software component description**
2. **System component description**
3. **Software and system component cross-system reuse patterns**
4. **Architectural components promoting interoperability**
5. **Framework specifications promoting interoperability** were considered valid but too gross grained and generic.

The working group members also decided to focus on two very specific and challenging problems related to Repositories "federation", related to any content-oriented management service or system component "federation".

Challenge A: An investigation of approaches making the repositories interoperable with respect to the content access facility point of view

Challenge B: An investigation of approaches making the repositories interoperable with respect to the content storage facility.

By analysing these issues, all the five topics will be analysed as well. The meeting concluded with the election of the Scientific Chair and the definition of actions and responsibilities.

⁶ <http://www.europeana.eu/>

⁷ <http://www.cheshire3.org/>

⁸ <http://www.openarchives.org/ore/>

⁹ <http://www.loc.gov/standards/sru>

Pasquale Pagano has been nominated as the Scientific Chair of this Working Group. One of its first duties will be to present the working group early findings at the DL.org Workshop¹⁰ jointly organised with ECDL '09.

Future activities planned includes the formalisation of the decisions taken in the working group charter, the analysis of the current version of the Reference Model by focusing on its architecture domain, the contribution to the state of the art survey.

¹⁰ <http://www.dlorg.eu/index.php/dl-org-events>

