

1st Face to Face Meeting, DL.org Content Working Group 15-16 July 2009, Pisa, Italy

DL.org - Interoperability, Best Practices and Modelling Foundations

The first face-to-face meeting of the Content Working Group took place in Pisa on 15 and 16 July 2009. Experts including Detlev Balzer (EFG), Leonardo Candela (ISTI-CNR), Donatella Castelli (ISTI-CNR), Stefan Gradmann (Humboldt University), C.H.J.P. (Kees) Hendriks (Dutch National Museum of Natural History), Paolo Manghi (ISTI-CNR), Luc Moreau (University of Southampton) had the opportunity to share their expertise. They provided valuable insights in interoperability issues pertaining to the Content Domain that help to promote a shared understanding of interoperability.

The main goals of this meeting were to finalize the Working Group Chapter and in particular to precisely define the scope of the WG activity and to identify a systematic approach to interoperability with a particular focus in the Content Domain.

Donatella Castelli kicked off the meeting by presenting an overview of the DL.org project in terms of its objectives, activities, expected results and impact. The major deadlines and the expectations on the members of this Working Group were also emphasized. Leonardo Candela then introduced the main characteristics of the current version of the Reference Model that will constitute the conceptual framework within which the Working Groups will operate. The WG members reported the major difficulties they have encountered in using the Reference Model as a communication tool and contributed various suggestions to improve it.



Donatella Castelli leads the proceedings

Expert Views

The second part of the meeting saw experts within the group report on important projects with relation to DL.org.

- Stefan Gradmann illustrated the approach in content interoperability adopted by the **Europeana V1.0** project. He, also, raised content interoperability issues such as the determination of essential parts of objects to be exchanged, the identification of object boundaries, the implications of object exchange and the impact of interoperability abstraction on these issues.
- Kees Hendriks presented **STERNA**, which is a best practice network project, and illustrated the interoperability issues faced in a federated digital library environment. Part of these issues are solved, in STERNA, by schema mapping and data exchange at the query level.
- Paolo Manghi brought his experience on interoperability gained by his involvement in the **DRIVER II** project. He approached the interoperability issues with a database mindset, in particular, he pointed out that the most general interaction model is a consumer/provider model and that the central idea of data interoperability is matching consumer's expectation.
- Luc Moreau presented the **Open Provenance Model (OPM)** that aims to be a unifying model of various provenance representations adopted in existing scientific workflow projects. This model is the result of the OPM community efforts through the organization of a series of open provenance challenges. He also addressed the problem of integrating provenance information into the digital library information objects and its impact to the content interoperability.
- Detlev Balzer presented the **European Film Gateway (EFG)** project, its goals and objectives and its relationship with the Europeana V1.0 project. He also addressed some issues regarding metadata interoperability.
- Leonardo Candela presented his personal view on content **interoperability** and brought into attention the necessity of defining an interoperability framework that partitions the interoperability problem space into tractable units.

Defining a “Content Interoperability Framework”

In the second part of the meeting the discussion focused on deepening the common understanding of interoperability and trying to outline a possible “Content Interoperability Framework”. It was agreed that this framework should be a multidimensional interoperability space with the following dimensions: *Resource, Abstraction, Interaction Model, Time and Quality*. It was also agreed by all the members that the Time and Quality dimensions should be deliberately disregarded for the time being despite that their importance is recognized.

Discussion also concentrated on the characterization of the Resource dimension. It was agreed that the Resource Dimension is characterized by: *Information Object Structure, Information Object Attributes, Context Link, Provenance Information and Identifier*. Experts Paolo Manghi, Detlev Balzer, Stefan Gradmann, Luc Moreau, C.H.J.P. (Kees) Hendriks will be respectively responsible for describing these

characterizations of the Resource Dimension by collecting input and feedback by the other WG participants.

The meeting was concluded with the election of John Mylopoulos as Scientific Chair of the Working Group and the definition of a plan of future activities and relative responsibilities and deadlines. This includes a critical analysis of the current version of the Reference Model with focus on its content domain and the contribution to the Project Milestone “Interoperability State of the Art Survey”. Furthermore, it was agreed that a more formal definition of the Reference Model and an enrichment of notions for capturing users interactions is required.

Content WG wiki: https://workinggroups.wiki.dlorg.eu/index.php/Content_Working_Group