Putting Historical Data in Context: How to Use DSpace-GLAM

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1 Aims, Scope and Learning Objectives

The proposed tutorial introduced attendees to DSpace-GLAM (Galleries, Libraries, Archives, Museums), the Digital Library Management System based on DSpace (http://www.dspace.org) and DSpace-CRIS (https://wiki.duraspace.org/display/DSPACECRIS/DSpace-CRIS+Home), developed by 4Science for the management, analysis and preservation of digital cultural heritage, covering its functional and technical aspects.

DSpace-GLAM is an additional open-source configuration for the DSpace platform. It extends the DSpace data model providing the ability to manage, collect and expose data about every entity important for the cultural heritage domain, such as persons, organizations, projects, events, places, concepts and so on. The extensible data model was explained in depth, through examples and discussions with participants. Other main topics were DSpace-GLAM "components", relationships management and network analysis.

Finally, 4Science new add-ons for digital cultural resources fruition and analysis (the IIIF-International Image Interoperability Framework-Image Viewer, the Audio/Video Streaming Module, the OCR Module and the CKAN integration) were illustrated. At the end of the tutorial the participants were able to understand the DSpace-GLAM data model, to adapt it to their needs and to evaluate if DSpace GLAM fits the needs of their institution.

2 Relevance to TPDL 2017 and Significance for the Research Field

In the last years humanities are witnessing a growth of available data, thanks to the increasing use of databases, electronic journals, digitization of cultural heritage and tools for data extraction and analysis. In this context, scholars and cultural heritage professionals have to be able to correlate different data sources, to better investigate the articulation of historical phenomena and of the transformation processes that affected human history and culture. In the analysis of the digital data, indeed, it is essential that they are not considered in isolation but in conjunction with all the contextual information needed to answer the research questions. Historical data are often fragmentary,

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partial and biased, so frequently we can understand a content only in a contextual framework, analyzing its relationships within a global and multidimensional approach.

Since almost two decades Digital Libraries have been managing a variety of objects, like texts, audios, videos, blogs and so on, and they are still evolving to scale into Virtual Research Environments (VREs), integrating the entire extent of an institution's scholarship, including articles, theses, dissertations, journals and also research datasets.

In the Big Data Age, Digital Library Management Systems have to forcefully enter the research process to manage both qualitative and quantitative aspects of digital cultural heritage and allow researchers also to analyze data, highlighting and enhancing their relationships at different scales and to explain their interpretations about the important dimensions of variation and about the network of contextual links that affect the historical sources. Therefore, the flexibility of the data model and the availability of tools for analysis and interpretation become fundamental features for such systems. DSpace-GLAM has been developed to face these challenges.

Using DSpace-GLAM, institutions will be able to manage, analyze and preserve digital objects. together with historical, archaeological or other cultural datasets, relating them with other entities (persons, events, places, concepts, contexts, etc.) for describing the context of cultural objects and data, according to different granularity levels.

3 Target Audience and Expected Prerequisite Knowledge of the Audience

The level of this tutorial was introductory. It was addressed to librarians, archivists, historians, archaeologists, researchers and to those who wanted to build their own digital library, but did not want to write their own software, nor buy a proprietary solution. No programming ability was required. Basic knowledge of digital libraries and repositories architectures and of the relational model, though not mandatory, can guarantee a better learning experience.