

A New Project for the Pompeii's Superintendence Website: a Case Study. Perspectives for the Integration and On Line Publication of Digital Resources in an Institutional Repository

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Abstract

- Analysis of the Pompeii's Superintendence existing Website;
- The project: integrating and publishing digital resources in a renewed Website for the SAP;
- Description of the resources to be integrated (Pompeii's GIS, SIAV Archive, The 'Fortuna visiva' of Pompeii Project);
- The 'Fortuna visiva' of Pompeii Project: a case of integration and interoperability with other digital resources on the Cultural Heritage in the BRIKS Project;
- The Project for the Italian Portal of the Culture: another example for the publication and integration of digital resources;
- Conclusions: some possible solutions and applications for the SAP Website. Metadata harvesting, developing of standard proposals, XML applications.

1 Preface

The Scuola Normale Superiore of Pisa (Italy) will develop the scientific and technical project for the new website of the Pompeii's Superintendence.

The Project, promoted and financed by ARCUS S.p.A., and developed in accord with the SAP (Archaeological Superintendence of Pompeii), aims at presenting, both to the broad public and the scientific community, the archaeological site, the Institution of the SAP and the various activities (excavation, scientific research, landscape musealization, etc.) that different institutions are carrying out in Pompeii and in all the Vesuvian environment under the SAP coordination, allowing different kinds of users to build up a deeper knowledge on those arguments from afar and giving them information on the cultural supply that they will find on the place.

2 The Project: Integration of Digital Resources in a Renewed Website for the Soprintendenza Archeologica of Pompeii

The existing SAP Website (<http://www.pompeiisites.org/>), that was thought and published in 1999, had 2.400.000 visitors until 2004 and at the moment contains 1.800 documents in various formats (information about the administration, news for the tourists, scientific contents, etc.): texts, images, animations and other moving images. A synthetic analysis of this Website has brought to the conclusion that it is not aligned with the recent tendencies of the Cultural-Institutional Websites, as in the last years many evolutions have interested this field, developing a new way for communicating the cultural resources, indications and best practices for the accessibility and the interoperability.

The technical and scientific evolution and developing for the digital publication, the interoperability, integration and retrieval of cultural resources offers the possibility to import, export and share documents and interactive resources from and with other repositories. They consequently give to the communication experts more material and a broader range of choice through the available contents, in order to design an impressive and efficient interface that will be able to reply to the expectations of different kinds of users.

In this panorama many researches, projects and discussions have been carried out in the last years, regarding the Institutional Websites, conceived as central nodes for collecting and divulging information and data pertaining to public and private entities subordinated to the Institution. This data came especially from databases, digital libraries and other resources that have been produced in the context of research projects for the cataloguing and the organisation of different kinds of documents and information. Thus, the main objective of an Institutional Website is more and more centred on the porting and the publication of various resources and contents on a unique structured platform.

2.1 Description of the resources to be integrated

The Pompeii's Superintendence renewed Website will be conceived to import data from various content providers, in order to make them interoperable and to publish them in different forms, depending of the various kinds of users, that will have different rights.

The contents to be imported on the Website consist of the Pompeii's GIS (Geographic Information System), the Digitised Archive of the SIAV (Archaeological Information System of the Pompeii's Superintendence for the geographic area around Mount Vesuvio), the Project 'Fortuna Visiva' of Pompeii, and other digital resources produced by the SAP, by its internal departments and by other projects carried out by different Institutions and research groups in connection with the SAP:

- The GIS 'Un piano per Pompei' was carried out by the architects Giovanni Longobardi and Andrea Mandara on behalf of the SAP, as an organisational tool that manages the information concerning Pompeii on a Geo-referenced platform. The GIS consists of a two-dimensional geo-referenced map of the archaeological site that utilizes the vector digitalisation of the Rica Map as a cartographical basis. An overlay from the year 79 B.C. was designed and inferred thanks to the precious work of L. Esherbach. The 'plan' is connected to a databank that contains various information: the first is an 'address book' of Pompeii, which indicates the name of each building and street, of 'Insulae' and of 'Regiones'. There are also data about findings situated at, or originating from, the various buildings, and data related to the conservation conditions of specific monuments, to the various degrees of risk, to the restoration work carried out, to the necessary maintenance, taking into consideration priority and cost.
- The Digitised Archive of the SIAV consists of different kinds of digitised resources that have been ordered and catalogued by the SAP: it's built up of a database containing records on the Archaeological Objects (mostly paintings and mosaics from Pompeii) and Monuments (private houses and public buildings from all over the Vesuvian area), both conceived on the Standard metadata schema of the ICCD (Italian Central Institute for the Unified Catalogue), and of the digitised documents pertaining to the excavations diaries and reports.
- The 'Fortuna visiva' of Pompeii (<http://pompei.sns.it>) is a project conceived and carried out by a scientific team from the Scuola Normale Superiore of Pisa and the Consorzio FORMA. The SAP works alongside the two institutions, in order to promote this project. The research group benefits from the collaboration of the software designers from Liberologico, with whom they worked to create the architectural layout of the software. The Deutsches Archäologisches Institut in Rome, an important partner in the project, contributes precious resources of paintings and designs from its Archives as well as antique and rare books from its Library. The Project intends to analyse the perception of the monumental and archaeological ensemble and the landscape of Pompeii through the graphic sources and texts produced starting from the years immediately following its discovery, in 1748, until the end of the nineteenth century. It harbours an organisational system, based on data that inter-relates images and texts. It collects and, at the same time, examines in detail individual testimonies, respecting criteria, when possible, void of subjective interpretations, and thus contributing both to the specific research of the analysis of the selected sources and to the conservation, the arrangement and to the accessibility of rare documents which possess historical, artistic and cultural value. The final product is an on-line Archive of visual and written documents from the 18th and 19th centuries, ordered in an inter-related database and in a digital library.
- Other digital resources will be integrated in the SAP Website: they will pertain to different kinds of resource (databases, digital libraries, hypertexts, 2D and 3D digital images, audio-video, etc.) and will contain various contents, for different kinds of user (experts and researchers, amateurs and tourists with a high level of alphabetisation, general users and simple tourists, young people and students). In the next months a census of the available digital resources on Pompeii will be done, in order to select the resources that will be integrated and published in the Website.

3 Perspectives of Integration of the ‘Fortuna Visiva’ Project with Other Digital Resources on Cultural Heritage into Cultural Networks and Peer-to-Peer Systems. A Case Study

The contents of the database created within the Pompeii’s ‘Fortuna Visiva’ Project have been provided, even as a demonstrator, to the digital library created by the European Project BRICKS (Building Resources for Integrated Cultural Knowledge Services), into the work-package ‘Archaeology’.

BRICKS is an Integrated Project of the 6th Framework Program of the European Commission, involving 24 partners selected amongst institutions devoted to the Cultural Heritage preservation (Italian Ministero per i Beni e le Attività Culturali, the Uffizi Gallery, English MLA—Museum, Libraries and Archives, Schoenbrun Castle, European Museum Forum), universities and research centres (Italian Consiglio Nazionale delle Ricerche, Universities of Florence, Lousanne, Oxford, Athens, Sheffield, Consorzio Forma), information technologies enterprises (Metaware, Engineering, Fraunhofer).

BRICKS aims at creating a continuously increasing digital library, which will allow search and browse, annotation and editing of other digital collections. The core of the project is the building of a distributed platform for cultural resources, in a peer-to-peer network, within which each database, legacy system or repository could be physically stored by the single promoting institution and, at the same time, could support queries as in a whole. Moreover the resources found by the user could be organized in a new ‘cross collection’.

The retrieval of the resources is based on the descriptive metadata harvesting, using the codification in XML of documents and the metadata porting with OAI-PMH; besides the adoption of metadata codified by Dublin Core Metadata Initiative, the BRICKS retrieval system can identify other metadata sets and the related ontology.

Moreover, the BRICKS system provides some web services, distributed on single nodes of the net, but available by each partner of the DL, as the automatic indexing, the protection with Digital Rights Management System, and tools for the editing of new collections and of annotations on the existing resources (according to the credentials and authorizations owned by each user).

The resources of the Pompeii ‘Fortuna Visiva’ project, such texts and mostly images, could be selected by the user and related to other resources provided by other digital libraries concerning archaeology, for instance to images of art pieces and finds originally coming from Pompeii area and now owned by English museums, or, in the future, to texts concerning the discovery of the Pompeii archaeological site preserved in some European libraries.

The creation and editing of new collections of digital resources in BRICKS (inside and out the group of the partners involved) can be used for academic researches, for personal study, for exhibitions or virtual museums, for the preparation of texts or thematic guides for cultural tourism or for education, etc.

Another example of search, annotation, and editing of digital resources within BRICKS is the work-package ‘Scriptorium’, especially focused on texts, as the title itself declares. The first task has been the codification in XML of documents (*Vite dei più eccellenti architetti, pittori et scultori italiani* by Giorgio Vasari, in the two editions of 1550 and 1568; the inventory of the collection of coins and medals owned by Medici family, written by M. A. Migliarini; some essays on Geometrics of the 16th century mathematician Francesco Maurolico), to use on those resources web services useful for the ‘collatio’ (that is the comparison) between ancient manuscripts and the following critical or diplomatic edition (tested on documents owned by Archivum Secretum Vaticanum) and for full text search on XML documents.

A similar solution has been adopted from the Scuola Normale in the Project for the Italian Portal of the Culture: in this case, a wide range of digital resources on the Italian Cultural Heritage will interoperate on the Portal, thanks to the metadata harvesting in XML with OAI-PMH on data coming from different repositories. In this case, a Dublin Core Application Profile has been created ‘ad hoc’ for the Portal, following the DCMI recommendations, in order to detail the quality and quantity of the imported information and to increase the retrieval possibilities.

In this scenario, the renewed website of the Pompeii’s Superintendence, which will harvest part of the contents from the ‘Fortuna Visiva’, will provide metadata and contents to the Italian Portal of the Culture and will constitute a case-study for the configuration of an institutional Sub-Portal.

The Project for the renewed Website of the Pompeii’s Superintendence offers a new case study to design a model of Institutional Website, applying the experiences acquired for the BRICKS and for the Portal of the Culture Projects, developing new methodologies for the data harvesting and interoperability, for the codification of metadata standard proposals and applications.

References

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- Dublin Core Metadata Element Set (DC): <http://dublincore.org/documents/dcmi-terms/>
- Extensible Markup Language (XML): <http://www.w3.org/XML/>
- ‘La Fortuna Visiva di Pompei’ Project: <http://pompeii.sns.it/>
- Open Archives Iniziative Protocol for Metadata Harvesting (OAI – PMH):
<http://www.openarchives.org/OAI/openarchivesprotocol.html>