

ICT and Art Heritage: a Project of the University of Udine for the Dissemination of Knowledge

Donata Levi

Dipartimento di Storia e Tutela dei Beni Culturali, Università di Udine
donata.levi@uniud.it

Abstract. The article illustrates some activities of LIDA, the Information Laboratory for Art History of the University of Udine. It focuses on a regional pilot project on ICT and cultural heritage, InfoBC. The project is based on the integration of existing electronic databases on the cultural heritage of the Region and the diffusion of data through both Web and mobile phones. The project's aim is to develop a multifaceted tool which can be used by local Governments and Institutions to preserve and promote the cultural heritage of the territory.

Keywords: ICT, Cultural Heritage, Cultural Tourism.

1 Introduction: LIDA

LIDA - Information Laboratory for Art History [1] - founded in 2004, is part of the Department of History and Preservation of Cultural Heritage of the university of Udine. LIDA experiments the ICT in relation with art heritage, not only, as usual, in the cataloguing of works of art, but in relation with the history of art heritage as a whole. Its work focuses on those documents - both texts and images - which allow to reconstruct those events and vicissitudes which affected the works of art, historical sites and urban contexts in the past. LIDA's projects are therefore mainly centered on the use of ICT tools in art historical fields, such as art collecting, conservation and restoration, preferences of taste and fashion, that is, those processes (material and cultural) by which art heritage has been preserved until now. Moreover, one of the LIDA's main concerns is the necessity to make people aware of the importance of these processes in their own perception of the art heritage; in this sense ICT can provide innovative solutions also in the dissemination of information among various kinds of people: tourists, citizens, students, etc., be they expert or not.

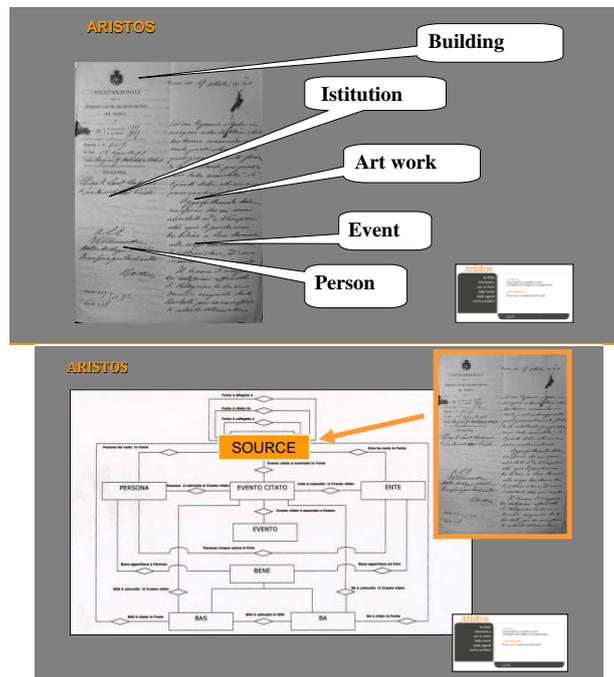
The Laboratory belongs to a humanistic Department; as far as contents are concerned, the research is carried out by art historians and archaeologists who, however, work in close connection with computer scientists and engineers of the Science Faculty. This collaboration between two highly (and separate) specialized disciplines is the core of all our projects and favors a fruitful dialogue. The two disciplines maintain their specificity, without overlapping, while mutually enriching. The art historians can benefit from the use of the ICT because it allows a rational and efficient retrieval of information and a more effective dissemination of knowledge, and because ICT may

suggest new and fruitful approaches to the research, with potentially important results. The scientists, on their part, can test their tools in a highly complex and challenging field, such as the production of works of art and their subsequent vicissitudes.

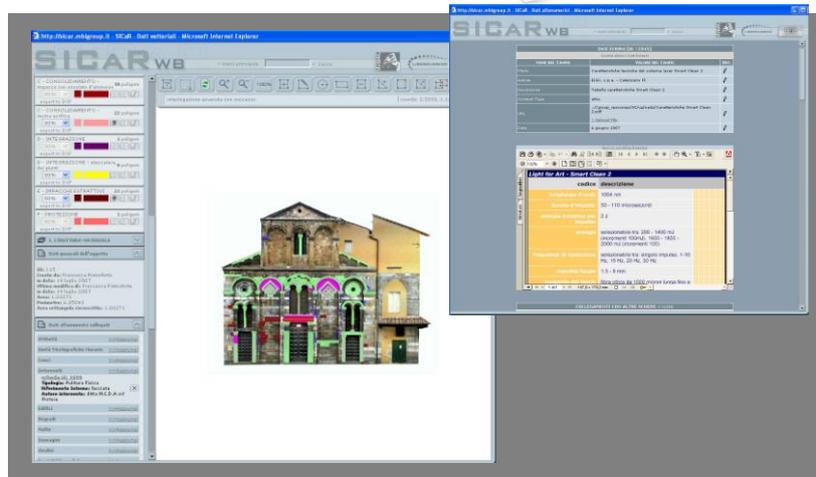
2 Recent projects

In the last years, in collaboration with the Soprintendenza PSAE-BAP of Pisa and under the aegis of the Ministry of Cultural Heritage, LIDA has participated as coordinator in the experimentation, on a national scale, of two software systems: ARISTOS and SICAR.

ARISTOS [2, 7, 8, 9] – Web application for the History of the Protection of Historical and Art Objects – regards specifically the history of protection of works of art. The relational database is used to organize and manage data from historical documents existing in the archives of the Soprintendenze (the local offices of the Ministry of Cultural Heritage). It scans thoroughly a single document, it extracts the relevant data and it organizes them according to categories, such as ‘people’, ‘institutions’, ‘works of art’, ‘buildings’, ‘events’. The latter category includes everything which affected a work of art in the past, such as an ancient restoration, a move for an exhibition, its being included in an inventory, its graphic or photographic reproductions, as well as damages or, in the worst case, partial or total destructions.



SICAR [3, 5, 6] – Web-based GIS for the documentation of ongoing restoration works – collects data related to conservation activities. It is a kind of restoration journal and, as it works on line, allows to store day by day and to easily retrieve all sorts of documents: diagnosis, relations on technique and materials, chemical analyses, maps, etc. The peculiarity of this system is that it allows to link each piece of information to a specific point in the digitalized image (orto-photogrammetry) or the map of the object under restoration.



Besides these databases, LIDA has experimented E-DVARA (E-Contents Platform for Heritage and Science), developed by the university of Udine. This platform allows to store, organize and manage large amounts of different kinds of data. The most important feature of the platform is that has been conceived and developed as an easy-to-use, friendly and flexible tool, which art historians and humanists can model according to their specific needs. Thus, several projects have been developed – some of them still ongoing – as “personalized” research projects by researchers or small teams: each of them, without any special knowledge in computer science, have been able to build their own database, by specifying the fields and the relations among them, and creating their own search forms.

Venetian collections in the age of Pietro Edwards: processes data from inventories and estimates of Venetian art collections at the end of the 18th century, and retrieves information about artists, collectors, art schools, subjects, iconography, etc.;

History of Preservation of Cultural Heritage in Friuli Venezia Giulia (1866-1923): virtual collection of 19th century documents, now dispersed in various Italian archives and libraries, in order to re-construct, as far as possible, the original archive which was destroyed during WW1;

Digital Library of Friuli: 18th and 19th century books and pamphlets on local antiquities and local history.

3 A project for cultural tourism

Relying on these experiences and the skill so acquired, we built in 2007 a pilot project entitled *Computer Science and Web Technologies for the Cultural Heritage: Innovative Portable and 3D Services for Cultural Tourism*, which was financed by the Region Friuli-Venezia Giulia for the years 2008-2011.

InfoBC [4] includes a 3D-experimentation and the interaction with Web 2.0, aiming at integrating the databases of the Cultural Heritage of the Region – i.e., ARISTOS, SICAR, and SIRPAC which catalogue the historical buildings and works of art of the Region. Integration is a very important issue, because the recent years have featured a proliferation of initiatives in the field of electronic resources and today we face a fragmentary situation of systems and criteria. We built a Web service which allows to query simultaneously different art-related databases, and retrieve data in an ordered and easily consultable manner, both at home and while travelling via mobile phones.

The customer either creates his/her own route according to individual interests, or chooses among sets of information organized by experts, who use the scientific database contents and materials from other sources - such as historical and literary texts; images (engravings, historical photos, maps, architectural plans...); audio and video documents. These itineraries aim at enhancing the knowledge of sites and monuments, and the appreciation of their historical and artistic meaning on the part of the public at large. They cover a wide range of historical, literary and art issues and topics. Among the latter, two itineraries have been devoted to Aquileia, one of which focussed on the social life in the roman Aquileia, and the other one on the Christian period.

As one walks receives information about the route to follow. When one reaches the “point of interest”, he/she receives specific information about the site, privileging the use of visual material such as plans, maps, old photos, engravings and so on, in order to avoid long descriptions.

On the following figures, we show how the “points of interest” are visualized on a map on a mobile phone.

InfoBC is supervised by P.Coppola, Dept. of Mathematics and Computer Science and myself, coordinated by M. Mozzo and M.Visentin (LIDA). The project has been developed by A. Dal Bianco, P.Omero, M.Valotto of InfoFactory, a spinoff of the university of Udine. The section of the mobile guides has been developed by the Context-Aware and Mobile Systems Lab of the univ. of Udine: L.Castenetto, M.Menazzi, D.Mischis, P.Zuliani. Scholars and PhD students of the same university have been entrusted of this task, thus completing their academic curriculum: E.Bertaglia, E.Braidotti, I.Collavizza, M.de Sabbata, D.Flaim, D.Gnesi, G.Rubino. E.Bertaglia and M.Mozzo have been entrusted of the supervision. The itineraries have been prepared by E.Braidotti and supervised by E.Siotto.



Our aim in preparing these guides is helping visitors to “read” the today’s aspect of an area and consider it as the result of a long and complex historical process, thus offering them not mere pieces of information, but enhancing in them the sense of their cultural value.

4 Conclusions

The final results of the project InfoBC will be illustrated in a conclusive seminar to be held at the end of September 2011. Our aim has been to develop a multifaceted tool which we hope will be used by local Government and Institutions to preserve and promote the cultural heritage of the territory.

References

1. The Web site of the LIDA Laboratory: <http://www.uniud.it/lida>
2. The ARISTOS project: <http://aristos.mbigroup.it/>
3. The SICAR project: <http://sicar.mbigroup.it/>
4. The InfoBC project: <http://infobc.uniud.it/>
5. Baracchini, C.: Uno strumento informatico per la gestione della storia della tutela, in: *Il corpo dello stile. Cultura e lettura del restauro nelle esperienze contemporanee; studi in ricordo di Michele Cordaro*, Ed. M.Dalai Emiliani, I. Sgarbozza and C. Piva, Roma, De Luca, 2005, pp. 339-341
6. Baracchini, C.: SICaR: un sistema per la documentazione georeferenziata in rete, in: *Sulle pitture murali. Riflessioni, conoscenze, interventi*, Proc. of Meeting Bressanone 12-15 July 2005, Ed. G.Biscontin and G.Driussi, Marghera-Venezia, Arcadia Ricerche Ed., 2005, pp. 735-747
7. Baracchini, C., Boscaino, I., Levi, D., Maffei, A.: AR.I.S.T.O.S.: archivio informatico per la storia della tutela delle opere storico-artistiche, in "Bollettino d'informazioni del Centro Ricerche Informatiche per i beni culturali", XII, 2, 2002 [2004], pp. 57-81
8. Mozzo, M., Visentin, M.: ARISTOS: una banca dati online per la storia della tutela; le funzioni di ricerca e i progetti a cura delle Soprintendenze del Veneto e del Friuli Venezia Giulia, in *Conservazione e tutela dei beni culturali in una terra di frontiera. Il Friuli Venezia Giulia fra Regno d'Italia e Impero Asburgico (1850 - 1918)*, Proc. of Meeting, univ. Udine, nov.30, 2006, Ed. G.Perusini and R.Fabiani, Vicenza, Terra Ferma, 2008, pp. 127-147
9. Picone, M.: ARISTOS: un archivio informatico online per la storia della tutela, recupero e informatizzazione del materiale storico e documentario della Soprintendenza, in "Bollettino della Soprintendenza per i BAPPSAE di Salerno e Avellino", 2007, pp. 139-149.