The VENetIan Virtual Archive Project: Cultural Heritage and On-line Publishing

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Abstract

The ever-changing and growing reality of on-line communications and of the World-Wide Web has posed the need for a general re-thinking of the tasks of all the subjects involved in the process of creating and using a "cultural product". Publishers and all those institutions involved in the dissemination and preservation of cultural heritage can not ignore the risk of being left behind and gradually replaced by different subjects who, since they own the new information technology, can become the new and only vehicles for its dissemination. But the challenge that publishing houses and primary source repositories such as libraries and historical archives have to face nowadays is not only that of safeguarding their experience and know-how and bring it into the new information technology world. The change of roles has to be compounded by the act of singling out new kinds of "cultural products" and value-added services that properly exploit all the potentialities of the new technology.

In this paper, we will describe the experience of a publishing house which has moved into the non-traditional sector of on-line publishing. Specifically, we will relate about its close collaboration with European libraries and historical archives on the one hand, and software houses and technical universities on the other, in order to develop innovative editorial services to be available on the World-Wide Web.

1. Introduction: the VENetIan Virtual Archive Project

The VENetIan Virtual Archive project (VEN.I.V.A., ESPRIT Project n. 20638, http://www.tin.it/veniva/veniva.html) is a two-year long initiative inserted in the Research and Development programme of the European Commission. Several cultural institutions from Austria, Italy and Greece together with multimedia and traditional publishers, technical universities and a software house participate to the development of a pilot application that enables remote and on-site access to selected primary documents preserved in distributed databases and which strictly relate to Venetian history. Through the Internet, users will hypertextually navigate in a virtual archive, where documents have not only been catalogued but digitised, too. At the same time, users will also have the possibility of reading the critical works in which the materials preserved in the virtual archive have been analysed or simply mentioned as primary sources.

In the following chapters we will briefly describe the pilot application and its functionalities as are currently under development, then we will illustrate some of the initiatives that have been realised so far, and that prelude to the creation of a fully functional virtual archive on Venetian history.

2. The pilot application's functionalities

The pilot application offers the remote as well as the on-site user the possibility of hypertextually navigating, searching and retrieving information from several distributed databases. From the reading-room of the institution or from home, users will access a database containing selected documents from the Marciana National Library of Venice, the Venice State Archive, the Oesterreichisches Staatsarchiv of Vienna and the Greek national archives[1]. It has been decided to concentrate on cartography, and therefore geographical maps, sketches and drawings have been catalogued, digitised and inserted in the databases. However, in order to offer a more flexible application, the system has been so structured as to allow the cataloguing and inclusion of several typologies of documents.

The innovative feature of the system is that it does not only allow the user to hypertextually navigate through distributed databases of libraries and archives located in various European countries - and thus, thanks to the ISAD(G) and the ISBD standards of cataloguing[2], move beyond geographical boundaries -, but it also gives the researcher the possibility of consulting archival and bibliographic repositories in a unified modality - and thus to overcome the traditional cultural separation between these two kinds of conservation institutions.

In this way the VENIVA virtual archive adopts standards of document description and cataloguing that do not create any incompatibility with the single national standards that have been adopted so far in each European country. At the same time, the VENIVA virtual archive has developed the "common view modality" which, starting from the archival and bibliographic standards above mentioned, combines them so that to enable the user to accomplish a search for documents in the database independently from the conservation institute that owns them. This becomes particularly useful for all those scholars that are interested in a particular research topic, but it could also turn out to be an interesting experience for archives and libraries themselves that wish to start a similar collaboration.

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[1] The documents that have been selected and inserted in the databases so far come from the Oesterreichisches Staatsarchiv (120 military maps of the 19th century, portraying the land around Venice), the Marciana National Library (72 documents and transcriptions from a manuscript of the 17th century by Raffaello Monanni, *Descrizione topografica della città di Candia* and three documents from the manuscript Ms. It. VII, 200 (=10050) entitled *Carte topografiche, piante di città e fortezze, disegni di battaglie della guerra di Candia*), the Venice State Archive (38 documents from the Atlante Mormori and from the series Provveditori Terra Mare and the fond Provveditori alle fortezze).

[2] ISAD(G) General International Standard Archival Description. The work of the Commission on Descriptive Standard of the International Council on Archives had its origin in a meeting held in Ottawa in 1988. In 1992 this Commission met in Madrid and the result was the *Statement of Principles Regarding Archival Description*.
In Madrid, a draft of a *General International Standard Archival Description* based on these principles was also adopted. The aim of archival description is to identify and explain the context and content of archival material in order to promote its accessibility. ISAD(G) rules present a structure for any given description incorporating elements governed by the rules. Within this structure the elements are grouped into six information areas: 1. Identity Statement Area; 2. Context Area; 3. Content Area; 4. Condition of Access and Use Area; 5. Allied Material Area; 6. Note Area.
ISBD. International Standard Bibliographic Description. In the bibliographic field an International Standard adopted in the whole world exists which is called ISBD and that provides the cataloguing rules for all of the material typologies preserved in the library (modern and ancient printed book, serial publication, cartographic material, printed music, audiovisual, etc.)

When finalised, the pilot application of the VENIVA virtual archive will be endowed with a series of tools that will help the user to navigate - i.e. full-text search and retrieval of documents, the automatic generation of indexes and a thesaurus of terms related to places, people and topics as they appear in the digitised documents of the virtual archive.

3. On-line editorial services for libraries and historical archives

The publishing house for which our group is working has a consolidated experience in highly specialised publishing services at national level. For instance, Marsilio has managed and organised the creation of the photographic archive of primary sources of the Napoleonic cadastre: photographic reproductions at original size have been taken of ancient documents, including cartographic material. At the moment, when the Venice state archive's users ask to view the documents they are interested in, they will view these reproductions and, only exceptionally, the original items.

Nowadays thanks to the new technology and in particular to the World-Wide Web, it has become possible to make a step forward by providing a digitised copy of the bibliographic and archival documents. A higher number of users can be reached and their requests be satisfied. Hopefully, it will also be possible to increase the interest in that part of cultural heritage owned by historical archives that, for several reasons[3], has previously been neglected.

Of course, new problems arise - the duration of the phase of digitisation of a huge number of documents (for instance, the Venice State Archive owns over 90 km of shelves of ancient documents related to the Republic of Venice), the fast-evolving nature of the technological tools and supports, the scanning quality, the digital space that images require, etc. -, but it is also important to recognise that a virtual archive is not the digital copy of a real entity, although this might be the final goal[4]. Rather, it is important to start a reflection so that to devise and define intermediate steps. And it is from this perspective that in the following chapters we will introduce a series of added-value services marketed on the World-Wide Web and that strictly relate to the documentary collections of the cultural institutions involved in the VENIVA Project. We will describe the subjects involved in the process of management and the relationships intertwined between them and the end-user. Finally, we will also illustrate two editorial experiences developed

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[3]Among the reasons why the collections owned by historical archives are less known than the museums' collection is certainly that of the different institutional roles that archives and museums play. In very general terms, one can say that while museums show to the public their ownings, archives preserve them so that to represent the certainty of law. The main question therefore is that of enhancing the visibility of the archival collections without jeopardizing their institutional role. As for libraries, the terms of the problem are different because preservation and at the same time exploitation of their ownings is not a conflictual relationship from the institutional role's point of view.

[4]In its guidelines, the G7 commission has clearly stressed the need for the digitisation of the European primary sources. Several initiatives have been started to set the rules and achieve this goal: the Multi-Media Access to Cultural Heritage group, promoted by the European Commission, has prepared a memorandum of understanding that hundreds of cultural institutions from all over Europe have already signed, thus committing themselves to working towards open access, by the public, to the resources of cultural institutions through multi-media communications systems by the year 2000. Among the goals described in the memorandum, there appears "50% or 1,000,000 objects from public collections and resources in participating [institutions] to be accessible over electronic networks by 2000".

within the project: a virtual exhibition and a limited version of the Venetian Virtual Archive, both available on the Internet.

3.1 The Search on Demand and Document Supply services

3.1.1 The services (http://www.tin.it/veniva/services/welcome.html)

For all those users that cannot physically visit the institute in which they would like to perform their searches (either for personal, editorial, commercial or administrative use) or are not able to because they do not know the structure of the institute, its rules and collections very well, the internal service provider[5] can offer a series of articulated services that on the one hand attempt at easing access and consultation in archives and libraries and, on the other, would like to help the personnel of these institutes to manage requests they cannot otherwise answer to.

It is often the case that libraries' and archives' personnel receive requests they can only give general advice to. Complex searches, e.g. retrieving all materials related to the Fondaco dei Tedeschi palace in Venice, or similar open questions, can not be performed by the archives' personnel because they do not strictly serve administrative purposes. Similarly in libraries it is not possible for the personnel to spend a long time in performing searches commissioned by remote users: general advice is given and the user will be invited to come to the institute to personally peruse the available material.

The search on demand service seems not to have been formalised yet. Professional archivists or librarians are paid (most often on a time basis) to perform specific searches that companies or individuals have directly commissioned them. In Great Britain this service exists in some specialised libraries and it will be the personnel of the library to perform it. In Italy, there is no such service available now. In the United States, each institute follows its own regulations, but it seems that there is no specific professional figure that only accomplishes this task, even among the reader service staff.

We have designed two different typologies of search on demand service: the guided search and the complex search. In the first case we intend to answer precise requests from users that already know the material they are looking for, i.e. they can tell with precision all the specifications necessary for the retrieval and consultation of the materials. In the second case, we would like to answer those requests that are hardly managed by the institutes, i.e. open investigations of which the user specifies the topic, its chronological and geographical terms and in which site he would like to have this search performed (the possibility of a combined search in archives and libraries is here included). In the latter case, the search can be commissioned in two separate modalities: the user can ask for an evaluation of the material available, so that to know the percentage of success of the

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[5]The internal service provider is a term defining a figure that undertakes the role of providing added-value or free electronic services for the library's or archive's end-user (either remote or on-site). This role can be played by a multimedia publisher, for instance.

commissioned search; otherwise, if he already knows that the search will be successful, then he can ask for a full search directly.

The search on demand service is thus structured and is also accompanied by a series of other services which can be complementary to it or independent. In particular, users can ask for the transcription of the documents retrieved, a translation and/or abstract of the contents, they can also ask for reproductions and to have all the materials delivered to their own location.

The support for the delivery and the payment operations as well as the submission of requests can be diversified. The Internet is the preferred support for the submission of the forms requesting the different services, as well as for the information exchange and update. As for the delivery and payment options, users decide the method they prefer, but again, the Internet is also considered and evaluated.

3.1.2 The subjects

The internal service provider entrusts some information specialists to work for them: these experts are professionals with a long-run experience in archival and bibliographic studies as well as palaeography and very well know the institutes where to perform the searches. They take care of each request, while the internal service provider works as intermediary subject between the user, the expert and the institution.

The internal service provider's task is that of signing agreements with the cultural institutions in order to improve the service: so special facilities guarantee the quality of the service and consequently attract a larger number of customers. These facilities mostly regard the reproduction service, considering that the digitisation and distribution of digitised copies of archival and bibliographic materials is one of the main goals of the VENIVA Project. At the same time the internal service provider takes care of the update of the services offered in the web pages.

The institutions involved in the project constitute the experimental basis for the service, but users can also ask for searches to be performed outside these institutes and arrange all details with the information specialist.

3.2 High-quality reproduction service

3.2.1 The service

The high-quality reproduction service is part of the more general service of document supply. Users can request different types of reproductions of the materials preserved in the institutes that collaborate with the VENIVA project, following the usual procedures of the institutes. However, the internal service provider behaves as intermediary between the institute and the end-user when the user's request is related to high-quality reproductions, either in digital or in print format. Usually, these requests are submitted whenever the publication of these reproductions is desired, therefore the digitised document, most probably cartographic material, has such a quality as to be

published on a book; the print copy is similarly used by publishers for their publications, but also requested by users for other reasons (poster-size reproductions can be used as decorations, too).

3.2.2 The subjects and the process

The internal service provider signs special agreements with a cultural institution for the management of the high-quality reproductions. In general, whenever remote users address the internal service provider via the Internet and express their wish to have high-quality reproductions of bibliographic and archival materials, then the internal service provider informs the institute and provides the users with the reproductions in the form they prefer. The internal service provider also takes care of the question of the permission to publish the requested reproductions and guarantees the respect of the copyright law.

3.3 The editorial collection on the World-Wide Web

The VENIVA publishers are working on an editorial collection of essays (and not only essays) concerning the materials preserved in the primary source repositories such as historical archives and libraries. To conceive and realise an editorial collection on the Internet implies a general re-thinking of the publishing process that presents some risks, too. Each authorial work can be structured and organised in its own way - there can be academic articles and multimedia exhibitions, for instance. The editorial team can be composed of different professional figures confronting each other - suppose the author has never created a multimedia work, then somebody helping her/him to draw a navigational map is needed, etc. The distribution and advertising phases of the final product follow untraditional channels, like the Web, which can not be reliable or easily controlled. Moreover, from a commercial point of view, the possibilities of financially exploiting the on-line publication are very scarce[6].

And yet, the challenge that an on-line editorial collection presents is worthwhile taking into consideration for several reasons: it encourages a certain type of electronic products to be written, it improves the quality level of the nowadays available on-line products, and, in our particular case, it proves useful in that it highlights the publications' hypertextual nature. It is not just a question of internal links (links leading from a part of the publication to the other), but instead, a question of links leading users to the virtual archive itself, showing them where the primary sources are preserved, perhaps introducing them to institutions they have never visited.

We have prepared two publications so far - a virtual exhibition and a simulation of the virtual archive. At the moment we are working on a new on-line publication combining historical

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[6]On-line editorial products are nowadays distinguished by a high dynamism: web-pages move from one site to the other, change contents and are often replaced by newer products that can attract new visitors. This aspect of the Internet has led us to believe that, after a few months they have been on the WWW, it is necessary to move the on-line editorial products onto different supports, such as the CD-ROM, also because this will bring the profit that the Internet seems not to offer at this moment.

academic essays and a hypertextual guided tour, leading the users to the virtual archive. In the following chapters we briefly describe these products.

3.3.1 The virtual exhibition (http://www.tin.it/veniva/home.htm)

The aim of this exhibition has been to stress how historical materials preserved in archives, libraries and museums can be primary sources for a deep analysis of an historical situation, in this case the relationship between the Republic of Venice and the Ionian islands from the 16th to the 18th century. In particular, the exhibition presents three main topics - the passage from war- to peace-time, the relationship between colonised and colonisers, the change in the urban fabric due to war and the particular human conditions of the islands - and each topic is presented according to three distinct historical periods.

The structure of the work is simple so that to help the navigation, but at the same time it is very tight and consistent: a homepage that allows users to choose the path they prefer, a series of textual cards accompanied by images in icon format, images in panel format with a description of the bibliographic and archival collection they come from, a series of indexes (an index of images, an index of texts cards), a glossary of terms illustrating the historical context and the bibliography. Several images are copies of cartographic materials whose originals are mostly preserved in Venetian cultural institutions, but some are also preserved in Greece or Austria and France.

3.3.2 The Venetian Virtual Archive (http://www.tin.it/veniva/arch-ve/home.htm)

The archive here presented is a simulation, but it shows some of the functionalities of the pilot application the VENIVA consortium is preparing. It contains documents from the Venice State Archive and from the Marciana National Library of Venice.

The HTML pages simulate a virtual archive, where users can navigate and search in several databases of archival and bibliographic materials, retrieving texts and images on the computer screen. The documents which have been catalogued and digitised (at medium quality resolution) are the colour plates accompanied by descriptive cards and transcriptions of the manuscript Ms. It. VII, 889 (=7798)[7]: and of the manuscript Ms. It. VII, 200 (=10050)[8], as well as the drawings preserved in the archival fonds of old magistracies which managed the maritime dominions of the Republic of Venice. The main topic is the defensive system which Venetians had built in the islands of the Ionian sea (Crete, Corfu and Cephalonia) during their colonisation lasted for centuries against the Turks' threats. In the cartographic materials shown in the virtual archive one can mainly see fortresses, harbours, castles, maritime arsenals, strategic schemes of naval battles, etc.

Users navigating in the virtual archive find two main directions to follow: a model of a library and a model of a historical archive which develop themselves in a parallel way. The model of the library describes the "manuscript" and the "geographical map" entities, whereas in the model of the

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[7] Raffaello Monanni, *Descrizione topografica della città di Candia* (18th cent.), which contains 72 watercolour plates of the city of Candia (today called Crete), its fortresses and castles.

[8] *Carte topografiche, piante di città e fortezze, disegni di battaglie della guerra di Candia (1645-69)*, a manuscript of the 17th century.

archive, which is more complex because it is based on hierarchically concatenated objects, the present entities are: the "owner", the "producing body", the "fond", the "series", the "units" down to the "documents" (that is, the drawings).

Beside the hierarchical navigation, it is also possible for the user to navigate hypertextually both in the library and archive models thanks to a series of indexes, "places, people, topics" which enrich and widen the range of the starting points for new searches.

3.3.3 An on-line publication on cartography and the city of Venice

The VENIVA consortium is now at work on the first title of the editorial collection, an electronic publication on the well-known map of Venice by Jacopo de' Barbari which was printed at the beginning of the 16th century. The work is a good opportunity to envisage and evaluate a methodology for the next titles that will enrich this collection.

The collection of primary sources has been the first phase of the work to which another activity has been attached, i.e. the collection of the secondary sources (journal articles, extracts from other publications) to which the author of this electronic publication refers in his work. The authorisation for the re-publication of these secondary works has met no opposition either on the scholar's and on the publishers' sides who have shown great interest in the initiative and willingness to support it with new publications.

The main problem that scholars have to face whenever they decide to put their works on the Internet is in fact of another nature: the academic associations will not consider these publications legally valid for competitions and thus jeopardise the development of an easy and inexpensive way of spreading academic results in the world. This implies that at the moment a hybrid genre develops, consisting in the simple electronic re-publication of a work already published on paper. Original works tend to have two supports: one in paper, one on the Internet.

The author prepares a sort of guided tour that on the one hand analyses the different critical elaborations and on the other supports one specific authorial thesis as in all traditional publications.

In addition to the author's personal guided tour, the work therefore presents an archive of journal articles that paced the historical analysis developed in the years on that particular subject (in this case, whether Jacopo de' Barbari's map should be considered as a work of art as several cartographic materials of his time or should rather be considered as a first hint of a new more technical mentality that developed in the 16th century) and an archive of primary sources that help the author to support his thesis.

In the guided tour it will be possible to move to both archives of primary and secondary sources and to directly view the object of this interesting debate, i.e. the digitised copy of the map. The map itself will be clickable in all the details that aroused discussions among historians, architecture and art history scholars and cartography experts, thus becoming a visual index.

4. Conclusions

In this paper we have briefly described the experience of a traditional publishing house as it brings its know-how into the less traditional field of on-line publishing. We have illustrated the services that, within the VENIVA project's activities, primary source repositories offer on the Internet through the support of a publisher and finally presented some of our "cultural products" available on the World-Wide Web. In this sense, we have tried to show the importance of diversifying the offered services and at the same time encouraging authors to publish on the Internet. The exploitation of cultural heritage outside the institutions that preserve the objects is in fact a crucial point that publishers together with libraries and historical archives can solve, thus guaranteeing the quality and scientific level of the final product.