Initial thoughts for setting up a virtual exhibition

Cèsar Carreras Monfort (*)

(*) Department of Humanities, Universitat Oberta de Catalunya (UOC), Barcelona, Spain
E-mail: ccarreras@campus.uoc.es

ABSTRACT
In the last two years, the research **group Òliba**[1] has been collaborating with different Museums and institutions in Catalonia and the Balearic Islands (Spain) in order to introduce new technologies in Cultural Heritage Management. Most Spanish Cultural institutions have not introduced yet those technologies in their everyday life due to the lack of public funding as well as their scant experience in this field. Therefore our collaboration as University research group meant to these institutions a way to test computer applications in Heritage environment without investing a lot of economic and human resources.

KEYWORDS: exhibitions, computers, complement

INTRODUCTION
Museum collections offer on-line need to be digitalised in order both to preserve original documents and cultural objects as well as to make them accessible to a wide public as well as to specialists. The research of group **Òliba** therefore pays special attention to the long-term preservation of digital documents (image, video, and audio), through the development and implementation of standard formats. An on-line museum should be far from being simply a catalogue. New ways of presenting the information in the distributed collections will be approached, having in mind a versatile simulated physical lay-out. The research group **Òliba**, word which means "owl"[2] in English, was with the aims to evaluate the potential of new technologies for the dissemination and documentation of Museums cultural heritage. Our initial proposal was simply to test how virtual exhibitions could enhance the potential of "real" exhibitions in terms of more information access, public awareness and visits to the Museums.

From the academic point of view, the experience allows us to evaluate the potentials of Internet in the dissemination and documentation of

---

[1] The Group Òliba is directed by Glòria Munilla and Cèsar Carreras, both lecturers in Heritage management and Computer applications and Archaeology respectively in the Department of Humanities at the Universitat Oberta de Catalunya. Besides, the group includes to Multimedia specialists such as Piero Berni and José Maria Jansana.

---

[2] The owl was the pet of Atenea, the goddess of Arts and Culture in the ancient Greece, so we thought it was an appropriate name for our research group with few classical specialists. Olive-grooves that surrendered the Parthenon kept some owls in the late times, and the bird became an Athenian symbol struck in their famous coins, tetradrachmae.

Cultural Heritage, testing new technical tools (3D VRML, XML, Java EAI) and the people reaction towards this idea. Compared to other European countries, Spain still have a low percentage of Internet users amongst its population (around 10,5%)[3], so the development of new network applications will take some time to build up. Our first goal was to evaluate how virtual exhibitions may improve the diffusion of real exhibitions as well as their potential museography. This simple aim not only required a change of custom for the public, but also teaching Museum's staff the advantages of this new media and working together with them.

The present paper attempts to discuss all the problems we faced in the design of our last four virtual exhibitions and how our experience may help others not to make the same mistakes again.

Our present research project covers four stages, beginning with an analysis of the theories behind web Museums, leading on to methodological and practical analysis of previous experiences of digitalisation in Museums in Europe and States. The third and more original part involves developing pilot

---

3 The most recent report (December 1998 – April 2000) on uses of Internet by Catalan citizens (http://www.gencat.es/csi/cat/documents/est adistiques/documents/estadistiques_2000.ht m) shows that there are usually only 23,7 % of population taking advantage of it, though at least 32,2 % have been connected at least once. This percentage is similar to a country such as United Kingdom, however Spain as a whole only reaches a 10,5% of users (http://www.c-i-a.com/199911iu.htm). Most people become users due to professional or educational reasons, only few as part of their entertainment.

experiences of virtual exhibitions together with local and regional Museums from Barcelona and Catalonia. The fourth and final stage pretends to evaluate the experience in order to define standards for Museum webs, as a complementary platform for Museum didactics and dissemination, how people interact with different elements (3-D reconstructions, quizzes...), technical advantages and potential for the real Museums.

Virtual exhibitions should be understood in this context as **complements** of the real exhibitions, offering only a small part of what people can enjoy visiting the real physical Museum. The virtual platforms will show a taste of what people may see there, and on the contrary the virtual exhibitions will focus on displaying objects, information and images, which cannot be accessed in the Museum. Virtual exhibitions, as we understand them, should never compete with the real Museums but collaborate with them hand to hand.

CO-OPERATION WITH MUSEUM CURATORS: PEDAGOGIC ASPECTS

The experience of this two years has been rewarding since we have detected some pitfalls in the way Museum's staff approach to new technologies. In general, they believed Internet was only an alternative of paper publication, so they understood virtual exhibition as either Museum brochures or digital catalogues. Personally, we think a virtual exhibition may be an ideal complement to a "real exhibition".

How this ideal can be achieved? Well, we should foresee from the beginning that an exhibition must have to complementary parts: a real and a virtual. None of them should be the

same as the other, but they may contain common sections that will give a feeling of continuum between the two parts. Besides, the virtual exhibition should be addressing a wider variety of people than the real as well as an initial step before going to the Museum. The real exhibition ought to be design for the local people, who will visit it, and it will be central part of the whole exhibition. Once, people have visited the display they may come back to the virtual part in order to complement their information and experience.

Collaborating with Heritage institutions meant to explain in detail our approach to the Museum's curators in order to get their fully involvement in the project. However, it must be said that this was not the common case. On the contrary, most Museum staff does not understand why they should create a virtual exhibition, and the reasons they argued are the following ones:

- Virtual exhibitions get visitors away from real exhibitions, so they can be a **threat** for the own institution
- If visitors wish to remember an exhibition, they can always buy the catalogue, therefore some people identifies virtual displays as **catalogues on-line**
- The virtual exhibition can be only useful when the **real display is dismantled**[4], because they do not compete with each other
- The Museum's should focus only on **local visitors**, therefore there is no need to translate contents on-line for a global public

---

[4] Exhibition of Palau i Fabre l'Alquimista by Lletra (*http://www.uoc.es/web/cat*).

- Internet is only seen as media of dissemination of Museum's activities, in other words an **electronic booklet**

As you may imagine, one of our most important tasks was simply to convince them of the real advantages of the virtual world. Most our efforts, when we arranged to design a virtual exhibition, involved persuading curators and Museum staff that Internet could help in their curatorship task, since they were normally afraid of it. They were willing to use technology inside the Museum building, but they were scare of having an open resource outside in the net.

Of course, Museum curators were afraid of something new that could change their jobs and an environment, with which they were not used. Our pedagogical task was a key issue in the project development. The group Òliba initial aims when designing a virtual display were:

- Create virtual exhibitions that **complement** real ones, therefore the material and information included in each one should not be exactly the same, despite having some common traits (exhibition discourse, common objects...)
- Virtual displays should in fact **encourage people to visit** the real exhibition
- Virtual displays should provide **resources unavailable** of more difficult in the real world (interactive virtual reality environments, other objects and features not in the real display)
- Virtual exhibitions should be addressed to a **wider variety of**

public with diverse itineraries (from specialists to occasional visitors)

- Virtual displays should be a previous contact with the exhibition, so it will give **basic background information** about the exhibition topic to potential users in order to fully enjoy the visit
- Virtual exhibitions should be **an after visit resource** to consult any questions arisen in the tour through the Museum

Once, all these initial objectives were proposed to curators, they agreed with the initiative and lost their early fears. However, this ambitious approach involved an extra effort in setting up an exhibition, for instance which materials and texts will appear in the real or virtual display. Notwithstanding the acceptance of our principles, most Museum curators did not supply all the information required to fulfil these aims since it represented a new work that was not planned at the exhibition start.

FIRST EXPERIENCES: THREE EXHIBITIONS

This year 2000, the group Òliba created three virtual exhibitions in collaboration with different local institutions (the fourth one – "TREASURES OF NATURE" (*http://www.uoc.es/humfil/natura*) has not been analyzed in depth. Notwithstanding the fact that is too early for a full evaluation of these experiences, an initial account is described below.

"ALWAYS EIVISSA AND FORMENTERA" (*http://www.uoc.es/humfil/eivifor*)

This itinerant exhibition funded by La Caixa Sa Nostra began on the 9th

December 1999 and travelled for all the Balearic islands (Mallorca, Menorca, Eivissa and Formentera) as well as a short stay in Barcelona. The exhibition aimed to display the way Balearic people wish to preserve their signs of identity, maintaining some traditions and natural landscape without renouncing the economic development, which is mainly based in tourism. The virtual platform was ordered only one month before the real exhibition, so it was quite difficult to implement the web page in such a short span of time. Nevertheless, the final virtual exhibition fulfilled the aims of the organizers, who wished a complete dissemination of the exhibition contents to other Spanish people and foreigners.

With regards to design, the virtual exhibition reproduces exactly the real one, except from a major number of illustrations as well as a new virtual reality section. In this case, the virtual exhibition is not really complementary to the real one, therefore it does not represent our desirable model. The navigation structure was kept as simple as possible, allowing a direct access to any section from any point in the site. However, some minor problems were detected due to the hierarchical structure of the exhibition (i.e. architecture, natural environment), which deny this expected direct entry.

According to comments by the own users, the virtual exhibition was welcome as alternative to people who could not visit the real one as well as after visit resource. There were positive opinions in general, and also some suggestions for improvement.

For instance, clearer icons were desired to mark every single section, and also they complaint about the secondary

level where the virtual reality was located. One of the problems we did not expect was font configurations depending on visitors, something easily solved with dynamic HTML (.css files). The virtual reality has an aesthetic effect on users, but it failed in this didactic potential, which was attempted in other projects. Besides, more animations were expected to make some screens more attractive. Visitors did not answer very often to our virtual questionnaires, at least we expected more participation than it really was.

With reference to the content, no extra information was created apart from the virtual reality. Perhaps, a series of transversal sections may have fostered the hypertext potential, making available alternative navigation through the diverse pages. Interactive sections such as Archduke and Casa Schmela, which combine clickcable maps, were highly rated by visitors. The virtual reality reproduces how the temporary exhibition may become a definitive collection in one public space such as the known octagonal market of the city of Eivissa.

The dissemination of this exhibition provides quite interesting data. First of all, there has been 1788 accesses to this page until the 15th June, despite the scarce announcement of this web. The virtual exhibition was announced in the local Balearic press, as well as the local Internet gateways such as Terra and Vilaweb. While the new was in the local press, we accounted the major number of visits, afterwards we detected a downshift in the visits.

People complain about how to access to this virtual display, since there are no specific gateways for update on Museums and temporary exhibitions, except the Spanish version of Museums WWW (*http://www.icom.org*). The only way to be aware of this is by the traditional press, the own Museum propaganda, our University home page (*http://www.uoc.es*) or by word of mouth. Hopefully in the future, the matter will be overcome by creating an up-to-date Museum gateway. Most people who visited our web site were, of course, Spanish (more than 60%), though there were users from other countries. Amongst them, United Kingdom stands out with 7%, USA with a 5% and Germany 3%, due to the fact that the site was in three languages (English, Spanish, and Catalan[5]).

The organizers after this year are planning to have a fixed venue in th town of Eivissa to set a permanei display in the future, combined with number of information points in othe location in the Pitïuses islands However, they also wish to keep a updated virtual platform that win coordinate all these interpretations centers. Therefore, we believe the website has fulfilled its initial objectives.

---

[5] The presence of a Catalan version in all the exhibitions is an attempt to preserve our minority language in a global medium such as Internet. The European Community is full aware of the difficulties of the minotarian cultures to survive in the digital age. Therefore it fosters a number of projects aimed to promote their cultural heritage as well as their language. Euromosaic project attempts to disseminate the less-spoken languages in the European Community (*http://campus.uoc.es/eurommosaic*).

"AUREUM OPUS: FIVE CENTURIES OF BOOKS' ILLUSTRATION"
(*http://www.uoc.es/humfil/aureum*)

The exhibition started on the 10th April and closed on the 6th June 2000, but the virtual display is still available on-line. The request of the Museum Frederic Marès provided ideal work conditions since it was ordered 3 months before the opening. Therefore, the group Òliba was able to create a complementary exhibition, which is so far our best model. The exhibition shows a selection of Catalan books of collectionists, some of them very old, with wonderful illustrations, which are not even available in permanent Museums collections.

From the beginning, it was arranged with the Museum staff which material could not be in the real display and then, only available on-line. Moreover, we thought about any potential public, even visitors who did not have any background in illustration techniques. That is why a preliminary section introducing those techniques was developed as a complement to the exhibition. Besides, two other transversal sections were created to provided information on illustrators and other one with recommended Internet links referring to the some subject.

The navigation layout was also kept as simple as possible with two frames for different menu levels. At the first level, the virtual reality was incorporated, which benefited its use; while at the second level, there were the diverse sections of the exhibition as well as the new transversal sections. Furthermore, the iconography used seemed to have pleased users and problems of fonts and screen configuration were overcome.

One of the most useful things in the virtual exhibition was the possibility of digitalising all the books' illustrations, since the displayed books were in close cases showing only one of the illustrations. Finally, it was decided to digitalise all the illustrations of a 10 books sample in two sizes (i.e. small and full screen), and then, one or two images from the remaining books. Therefore, this section plays a complementary role in the exhibition, whose function was appreciated not only for the users but the organizers and curators.

Another complementary and didactic element was the virtual reality, which in this case was a reconstruction of a XIXth century illustration workshop. The reconstruction on-line shows how the diverse machines (i.e. presses) work and was link to the techniques section. After the virtual exhibition came out, a second version of this virtual reality was set up including human beings in order to explain the illustration techniques in more detail (the second version can be accessed through (*http://www.dortoka.com/ang/frameset_culture.htm*).

In spite of the good comments on this virtual exhibition, people demanded more dynamic and interactive elements in the web site. Besides, they expected some animations in some sections of the display.

With reference to the content, the virtual replica is an excellent complement to the real exhibition with new sections, which provide a minimum background previous to the visit as well as a resource for the after visit. The navigation structure allows an easy access to any book illustration, and also

users can jump to other transversal sections. It is believed that this web site took full advantage of the hypertextual format for no-linear access to information.

The exhibition had a wide dissemination thanks to the local press as well as the University, ICUB (*http://www.bcn.es/icub*) and Instituto Cervantes (*http://www.cervantes.es*) gateways. Unfortunately, the international dissemination was scarce since again, the specialized Museum gateways do not seem to attract many visitors. From the 10th April to 20th June, 1202 people had consulted the web site, which means a daily average of 20 people.

M'ESCRIURÀS UNA CARTA? (WILL YOU WRITE ME A LETTER?)
(*http://www.uoc.es/humfil/carta*)

This exhibition organized by the Museum d'Art de Girona is focused on the history of letters, the way people communicates by mail. It started on the 27th May and it will close in October this year. The work conditions of this display were also quite hard, since the textual and image material arrived only two weeks before the opening, which become hindrance for the whole project. Neither the design nor content was fully elaborated, since there was never enough time.

A series of complementary sections were created, which include biographies of characters mentioned in the text as well as some recommended links on the subject. Besides, a few virtual reality clips were defined as introduction to the diverse exhibition sections. In this case, the virtual reality did not have the didactic function, but only a illustration and alternative navigation menu. One

innovative aspect of this web site is the employment of animations (created with Dreamweaver) for the main entrances of the diverse sections even the main page. These dynamic images have been highly valued by the users, though they only fulfill an aesthetic function.

With regards to dissemination, the web site has a serious handicap since it is only available in Catalan for an expressed desire of the organizers. Therefore, it is chiefly destined to local public. The group Òliba believes that this was a mistake, because Internet allows to access to any public even from a long distance. Now, the unique limits we put to this global access are basically languages and technical obstacles. So far more than 700 people have accessed to the web site, however 95% of them are Catalan.

THINGS WE LEARNED AND "NEW YEAR" GOOD PROPOSALS
The group Òliba still has new on-line exhibitions and projects under way[6], in

---

[6] At the time of writing this paper we are fully involved in developing a couple of virtual exhibitions with local an national institutions. One of them is a virtual tour through Barcelona Botanic Gardens that shows 8 Mediterranean climates all over the world from Chile to California, which is due to be on-line in July 2000. The exhibition complements the presential visit of these amazing gardens. A second project pretends to complement an itinerant exhibition about the Spanish exile after the Civil War (1936-9), focusing on how these children saw the war and the exile and how it affected their lives (it will be on-line in October 2000). Finally, the third project is a gateway more than an exhibition and will show the natural, ethnographic and

which we expect to apply all things that were learned from these previous experiences. First of all, the elaboration of a web site as complement of a presential display is quite complex, so it requires time of preparation and design, at least three months in advance. Simplicity in design and structure facilitates that people may navigate without extra assistance. As a rule of thumb, virtual exhibitions should be kept as simple as possible in terms of navigation structure. Animated images appear always attractive to the users even if they do not have special use, whereas interactive sections are not only appreciated but also quite useful.

Taking full advantage of the hypertextual format of a web site means creating new transversal sections, which complement the real display as well as permit alternative navigation to the resource. Probably, the most rewarding aspects of the virtual exhibitions are those complementary sections that provide a background to the users, increase the exhibition documentation (i.e. text, images, video, audio) overcoming all the problems that real display may have to face and deal in more detail secondary aspects. Those alternative navigations may fulfill the different needs of the myriad of potential users. Sometimes, they supply the contextual information required to fully understand the meaning of the real exhibition, so it is a quite useful background.

---

artistic heritage of a very small Pyrenees valley in Spain called vall de Boi. This valley contains more than 12 well preserved Romanesque churches (XI-XII centuries) with extraordinary frescoes, that is why it has been recently declared World Heritage by the UNESCO.

Finally, we would like to highlight the didactic potential of virtual reality, when the environment is properly chosen. It simplifies the communication between Museum curators and visitors, chiefly if it includes human beings, which make more understandable techniques or how machines work. More emphasis should be put on these virtual reality contexts, which can be of great help to reconstruct lost worlds and environments.

REFERENCES

1. Carreras, C. (2000a) "Nuevas tecnologías en Internet para la difusión del Patrimonio". En *Actas de TecnoArt 2000*, Barcelona.

2. Carreras, C. (2000b) "Virtual exhibitions: extending Museum potential". *Cultivate Interactive* 2 <*http://www.cultivate-int.org/issue2/virtual*>

3. Keene, S. (1998) *Digital collections. Museums and the Information age*. London.

4. Keene, S. (2000) "Museums in the Digital Space". *Cultivate Interactive* 2 <*http://www.cultivate-int.org/issue2/space*>

ABOUT THE AUTHORS

Cèsar Carreras Monfort is Lecturer in Archaeology and Computer applications from the Department of Humanities at the Universitat Oberta de Catalunya (UOC). He is DPh in Archaeology from the Universities of Southampton (UK) and Barcelona (E) and MSc in Computer applications from Southampton University. He is specialist in Roman archaeology (three books and few papers) and Heritage dissemination through Internet (leading group Òliba and other projects).

Dept. of Humanities
Universitat Oberta de Catalunya
Avda. Tibidabo 39-43 08035 Barcelona
(SPAIN)
E-mail: *ccarreras@campus.uoc.es*