

Editorial: Museums and the Web

The World Wide Web has offered a previously unknown potential to museums, as it enables the relatively easy combination of text, sounds and still and moving images in multimedia documents and their delivery over the Internet. From the first formal paper that I remember on an exhibition-like application of HTML – presented at the EVA 94 conference by Christie Stephenson then of the University of Virginia¹ – museums have moved rapidly to adopt Web-technologies to meet their communications needs.

In March of 1997 approximately 400 museum professionals came together in Los Angeles for the first annual Museums and the Web Conference. This international group reflected both the excitement Web-based technologies have generated in the cultural heritage community, and the immature state of our understanding of how best to use, deploy and develop networked communications tools in the interpretation of cultural heritage.

This issue of *Archives and Museum Informatics* presents a few of the over fifty papers presented at the conference.² It can by no means be considered fully representative of the conference, for among other things, many of the best uses of the Web don't translate well to print. So the Singapore Artist Lin Hsin Hsin's "Ultimate Art Museum" <www.lhham.com.sg> isn't here.³ Nor is Slavko Milekic's delightful demonstration of KiddyFace, his interface environment designed to make digital resources more accessible to young children <hamp.hampshire.edu/~smCCS/kiddyface.htm>. And we are without the vision of a room-full of serious museum professionals all wearing 3D glasses to look at the Digital Darwin's QTVR and VRML 3-D rotating artifacts <digitaldarwins.sarc.msstate.edu>.

Nonetheless this issue includes a series of papers that look seriously at the Web, what it means for museums, and the issues that it raises. From a programmatic

¹ Christie Stephenson, "Publishing Electronic Exhibition Catalogs on the World Wide Web", *EVA 94, Electronic Imaging and the Visual Arts*, Conference Proceedings, 1994. The exhibition discussed was mounted in early 1993 and included fourteen objects.

² *Museums and the Web, 1997: Selected Papers* is being published by Archives & Museum Informatics, Pittsburgh, PA. See www.archimuse.com.

³ There is much that museums can learn from the irreverent digital model of an art museum, including the relative sense of importance assigned to the various spaces, from the Paper Work shop, Oil on Canvas Gallery and Oil on Paper Gallery to the Cafeteria, Bus, Telephone, Toilet, Shoppe, Guest Book and Information counter.

perspective the Web offers a tool to engage new audiences and serve old ones better, but how do we attract and keep our new network audiences? As a means to deliver more relevant and interesting information, the Web opens up the vast storehouses of accumulated knowledge in museums, but how do we deliver all of this information in a meaningful manner? As a cost-effective way to make images and multimedia available, the Web has few rivals, but how do we create economic systems to support this mode of information delivery? What are the information structures and systems – both organizational and technological – needed to use the Web effectively?

The initiative to use the Web within a museum has most often come from a single individual, who caught the HTML bug and then went on to show how it could be done. With an initial sense of excitement they ran up the Web learning curve, and became Web-evangelists, ready to explore, exploit and emote about the possibilities of reaching out on the Internet.⁴ Within the museum, the impetus to get on the Web may have come from any number of places; Communications, Collections Management/Registration, Exhibitions, Education, the Library, or Curatorial Departments all see the value of the Web, and their sense of what a museum Web site could be was colored by their professional prism. So we have Web sites from Collections Managers that put databases on-line; we have sites from Public Relations offices that make museum calendars and membership information available; we have on-line curriculum materials to support teachers and education programs; we have on-line versions of exhibitions. Occasionally museum Web sites contain scholarly writing in the form of exhibition catalogue essays or papers. In more fully developed Web sites, these specific functional areas are placed within an overall institutional context, that relates them to the mission of the museum.

In most cases, museum Web sites still mirror traditional perceptions of what museums are and model familiar approaches to how people encounter them. Maps of physical spaces orient 'visitors' to galleries. Tours of exhibitions highlight themes. Resource centers enable searching for artifacts or works of art in a database. Some exceptional sites, such as the Exploratorium in San Francisco <www.exploratorium.org> offer interactive opportunities to explore ideas and issues in depth. On the Web, museums now offer more access to their collections than has previously possible. But what does it all add up to? Are museums using the Web to its fullest advantage?

It remains to be seen if museums can take advantage of the integrating possibilities of the Web, to build virtual collections that mend the logical rifts inherent in physical collections. Where a work of art or artifact ended up, physically, is often the result of historical accident. With the Web, we have the possibility of putting dispersed logical collections of works back together in a virtual work space. It

⁴ The excitement about face-to-face conversation at the conference brought home to me how much of this work is still done in isolation, and how slowly we've begun to build up personal networks to support our use of these new media. The cold hard reality of support and maintenance is just now being understood.

is possible to see the sketches and preparatory studies for a painting alongside the work itself, even though some drawings are in the Uffizi, some in the British Museum and the painting itself is in the National Gallery of Art in Washington DC, or to compare a number of finds from archaeological digs in the same Central American region even though they are stored in museum collections around the world.

However, this remains an unrealised potential. Locating relevant information on the Web is increasingly difficult – networked information discovery is a problem that has attracted the attention of the broader networked information community.⁵ As Jonathan Bowen's conference presentation surveying the development of the Virtual Library Museum Pages highlighted, just keeping up with the number of new cultural heritage sites is a challenge. In full appreciation for his heroic individual effort, we need to move beyond manually constructed lists of sites that require such an investment to maintain. Common metadata for describing information resources is one step, but this may only allow us to find 'sites' themselves, not contents of collections.

For the full potential of the Web as a tool for integrating dispersed artifacts to be realized, we have to change our conception of what a museum Web site is. Museums have to become more than simply destinations at the end of a haphazard trail of links that are browsed or explored. Rather than conceive of museums individually on the Web, we need to develop a shared conception of a cultural heritage knowledge base, collectively maintained and widely accessible and manipulable. The emphasis shifts from the information to the relations between it, from the sites to the links.

We also have to move beyond a metaphor of browsing to allow for *use* of museum information. Tools need to be created that enable access to the full content of collections across museums. At its simplest, this would enable a researcher to make one query on his topic and receive results that report on the contents of multiple collections. At its most complex, mappings between the knowledge representation schemas of a many different research fields will enable the interdisciplinary use and re-use of networked digital information. Our interest needs to shift from the noun – information – to the verb – use.

Realizing this potential has implications both in the short and the longer term for museum information collection and distribution standards and practices. As a basis for any network discovery and information use tools, we need to develop and implement encoding schemes that identify the content of Web resources as well as their structure, i.e. we need more meaning in our markup than is possible with simple HTML tags.⁶

We also need to explore the development of metadata to support more than the *discovery* of information. The cultural heritage community needs to develop

⁵ See <http://purl.org/metadata/dublin_core>.

⁶ The work of the Consortium for the Computer Interchange of Museum Information (CIMI) on the development of an SGML DTD for museum exhibition catalogues is a significant first step in this direction. See www.cimi.org.

equivalecies between disciplinary standards and intellectual schemas to enable the meaningful merging and manipulation of information from multiple collections. And we need to implement information delivery architectures that enable information to move from a 'browsing' environment to a 'doing' environment.

Successful delivery of information from multiple museum collections will depend upon a sophisticated understanding of both the perspectives that users bring to their queries of cultural heritage resources, and the disciplinary schemas and document genres in which cultural information is stored. We have the potential in existing vocabulary tools, such as the *Art and Architecture Thesaurus*, to enable the mapping of different terms to common concepts, and to perform some automated translation, or term expansion to improve the recall of queries. But we have yet to master the linkage of facts and terms to the issues and concepts that are primarily the subject of user queries. We lack a macro sense of how these terms fit into broader knowledge representation structures. Making information created for one purpose useful for another is dependent upon such a common mental map.

One of the beauties of the Web is that it can be many different things to different people. So too can museum Web sites. As Peter Walsh points out, the Web can offer alternatives to the "Unassailable Voice" of the public television or Acoustiguide narrator. The key challenge for museums is to use structures and tools that enable conflicting views of the past to be juxtaposed and assessed, while allowing users to weave a new narrative that is personally meaningful – and enjoyable.

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