

**Museums' Technology Frontier:  
How Treacherous is it?**

by Douglas Worts  
Art Gallery of Ontario  
Toronto, Canada

(published in OAAG newsletter, 1997)

For more than a quarter century, many museum professionals have wondered about the role of technology in their exhibits and other public programming initiatives. Those who were bold enough asked themselves, and each other, whether or not technology could help realize the goals of public engagement and education. Science centres were among the first of the cultural organizations to embrace the notion of technology when they introduced 'interactive' exhibits. Visitors came in droves and spent a lot of time pressing buttons, feeling energized and (seemingly) learning. Meanwhile, many professionals working in history, natural history and art museums looked askance at the science centre phenomenon, suggesting this button-pushing frenzy was just that - a frenzy of non-productive activity. Some suggested that science centres were charged with the responsibility for exploring themes of logical, rational science, and so admitted that technology might be appropriate for such places. Meanwhile, relatively few museum professionals wondered about the potential for technology to support the desired experiences that the softer, social science and humanities-oriented museums aimed to achieve.

Today, North America is witnessing a technological explosion in virtually every type of museum. Homepages on the World Wide Web, CD-ROM's and computer-based interactives form the core of activity in this domain. But who will use this technology? Who will be served by it? How do we as a profession assure ourselves that we are guided in this pursuit by appropriate values regarding our relationship with the public? This paper will attempt to identify some of the critical questions that this writer believes must be confronted with great presence of mind by the museum community.

Technology is here to stay - for both good and bad - and museums will find ways to integrate it into their operations. From this writer's perspective, there is a great deal of potential in applications of technology, most of which have yet to be developed. Already there are applications cropping up throughout the museum world that may point the way towards truly novel and effective modes of communicating with the public - but there are also a large number of applications that are exceedingly boring, and thus miss the opportunity for innovation that

technology presents. The challenge for all of us is to discern how we can ensure that technology serves visitor experiences, and that visitor experiences are not driven by the evolving forms that technology takes.

A recent informal poll that this writer took while delivering a paper at the 1995 conference of the American Association of Museums produced the following results:

- Q. Who here has a computer at home?  
A. *over 80%*
- Q. Who has used multi-media, and feels comfortable with it?  
A. *about 60%*
- Q. Who has a multi-media computer at home?  
A. *about 25%*
- Q. Who has an Internet address (that you actually use)?  
A. *about 50%*
- Q. Who has actually developed interactive technologies for use by the public?  
A. *about 20%*
- Q. Who is working at an organization where there is either a plan or a desire to develop new technology-based mediums for the public?  
A. *almost 100%*

The survey suggests that many people in museums are heading towards developing technology-based programs, but they don't yet have a lot of experience. This is not unusual - everyone who develops such programs must go through this phase. However, to this writer, if professionals within the museum field are to minimize the delerium of technology bandwagons, then a careful stocktaking/articulation of our first principles, and their relationship to the potentials of technology, should become a top priority. The following represent a list of questions that may be useful in this process of stocktaking.

- 1) What is the nature of the current pressure to develop technology-based programs (eg. CDROMs, WWW pages, exhibit interactives, etc.)? Are there priorities that need to be established between the various possible answers - such as a desire to generate revenues, political accountability, and an honest desire to relate to a public more effectively - so that public-oriented museum values drive the way in which technology-based programs evolve?
- 2) What is the relationship between demands for using 'new media' technologies and the reform movements that have been asserting themselves within the museum field through recent years (eg. the AAM's policy document

"Excellence and Equity - Education and the Public Dimension of Museums"; the AAM's program for assessing and developing stronger public programming strategies in museums, called MAP III - Public Dimension; and, newfound educational theories in which personal meanings are increasingly understood to play critical roles in learning)?

- 3) What are the assumptions about the gains available through the use of technology? When technology enthusiasts talk about such benefits as: 'global connectedness/consciousness; greater visitor interaction; greater user control, are we clear about the way and the extent to which these are true? (eg. are CDROMs interactive in a truly meaningful way?)  
Also, do we know how the interactional dynamics between users and technology can be designed to optimally stimulate and support intrinsic, or personal motivation? (eg. is the technology compelling to users?)
- 4) What are the steps needed to move museums into new adventures with visitors/users and technology? Many feel that the primary resources of museums that can be utilized in a technological environment are a) collections (or images of collections), and b) expert information and insight about the collections. These surely are valuable resources, but are they sufficient for facilitating meaningful cultural experiences of a broad public? We perhaps should ask ourselves, "does a close focussing on these resources take us towards a traditional authoritarian paradigm (based on experts providing knowledge to non-experts)?", and is this what is needed as museums struggle to re-invent themselves in a more publicly relevant form? Should we be asking ourselves, "do effective museum applications of technology require a careful balancing between contextual information, expert insight and visitors' personal experiences - a balance that acknowledges that cultural/symbolic experience requires a great deal more than expert authority?" If so, how do program developers achieve such a balance?
- 5) We need to ask ourselves the more general question that lies at the heart of contemporary museum reform, "where is meaning"? Is it in the objects, *or images of objects*? Is it in expert knowledge? Is it in the semi-passive selection of optional paths through a CD-ROM database? Do museums need to develop the wisdom to be able to support meaning-making as a blending of the personal experiences of visitors, with timely contextual information and the insights of others? Do museums need to become more open to understanding the living mystery of cultural objects - a mystery that exists as much in the idiosyncratic and symbolic experiences of individuals as it does in academic research? Similarly, what do museum professionals really know about the varying roles that different sense modalities play in meaning-making? Do meaningful cultural experiences happen through cognition?

affect? imagination? physical interaction? or a blend of these? How does all this relate to technology?

Few professionals within the museum world seem to have adequate answers to these questions. Nonetheless, many museum professionals are enthusiastically leaping onto the technology bandwagon. From this writer's perspective, we are confronting a perplexing mix of disparate, but powerful forces that are insisting that museums change the way they operate. Museological, political, social and economic pressures are simultaneously demanding that museums become more relevant to society, effective in their delivery and accountable for their resources. Meanwhile, our increasingly multicultural society seems more fragmented than ever. It may be that it is exactly at this time in our global history that society needs contact with the symbolic dimensions of the human experience. At least in their rhetoric, museums have always laid claim to being able to facilitate such experiences. With new technologies that have at their heart an ability to enhance communication, perhaps museums can find truly novel ways to achieve goals that will add significantly to our lives.