# Interactive Multimedia in American Museums

by

Stephanie Eva Koester

including: A Bibliography on Interactive Multimedia and Museums
compiled by David Bearman and Belinda Wright

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## INTRODUCTION

I remember clearly the day that I became interested in the use of interactive technologies in museums. I was visiting the California Academy of Sciences in San Francisco's Golden Gate Park in 1990 when I came across the *LIFEMap* exhibit, an interactive database of information on the origins of life. I can still recall the sleek, dimly lit area which immediately indicated that I had entered a new exhibit, and that promised me something quite different from the area I had just left. I also remember the floor lights which guided me to the computers against the wall. After my initial fervor to get to a computer was satiated, I began exploring each of the options the program had to offer. At first I was so excited about the technology and by the environment, that I didn't pay much attention to the text I was supposed to be reading. But as I moved from menu to menu, station to station, I began to pay attention to the messages being delivered, and I explored them until the lines started to form behind me.

At the time of that museum visit, I had been researching the interactive television and multimedia industries at the management and technology consulting firm for which I worked. When the time came to decide on a graduate program, I chose to study instructional technology because I felt it would provide me with a set of extremely useful skills to apply in the interactive media field, and would fit well with my business experience and personal interest in informal education environments.

In 1992, I undertook a research project to examine the use of interactive technology in American museum exhibits in satisfaction of a Master's Degree in Instructional Technology. This technical report represents a revised edition of the Master's Report which more thoroughly integrates the secondary and primary research conducted for this study. Chapter I examines the museum historically and socially, and specifically as a learning environment for visitors. Chapter II reviews the findings from interviews with museum and related professionals discussing their experiences with interactive technology in exhibits, and relates these conversations to additional published research and commentary on this subject.

The research project was based on the following objectives:

● To understand the museum's perspective on its role as an educational environment where informal learning can take place.

● To discover significant trends in interactive exhibit design, specifically, whether there seems to be a trend toward increased use of interactive technologies in museum exhibits.

● To identify key limiting factors against using interactive technologies in museums.

● To identify key success factors for interactive technology-based exhibits, including:
- design considerations;
- reasons for incorporating technology in exhibits;
- effectiveness of various user-computer interfaces across museum audiences.

Research began with a review of articles, reports, conference proceedings, books, and videos. Subsequently, over 70 potential interview participants were contacted by mail and by telephone for the primary research segment of this study (See Appendix B for Survey Methodology). Highlights from 45 interviews have been integrated throughout this report, 24 of which were with museum personnel, the remainder with professionals from museum associations, independent interactive exhibit designers, museum and multimedia experts (consultants, authors, etc.), and hardware and software companies (See Exhibit 1 for the interviewee categories, Appendix A for the names of the organizations interviewed, and Appendix C for summaries of the interviewee responses, both those included and not included in the body of this report). The general categories of discussion included the museum's educational philosophy, experience with interactive technology-based exhibits, reasons for including or not including technology in exhibits, and implications for technology-based exhibits in the future.

**Exhibit 1**
**Interviewee Categories**

|  | Attempted | Completed |
|---|---|---|
| **Museums** | **35** | **24** |
| Art Museums | 7 | 5 |
| History & Multidisciplinary Museums | 9 | 5 |
| Children's Museums | 6 | 5 |
| Science & Technology Centers | 10 | 7 |
| Corporate Museums | 1 | 1 |
| Zoos & Aquariums | 2 | 1 |
| **Associations & Experts** | **17** | **8** |
| Associations | 5 | 4 |
| Multimedia or Museum Experts | 12 | 4 |
| **Interactive Media/Exhibit Designers** | **13** | **6** |
| **Educational Media Producers** | **3** | **3** |
| **Hardware and Software Firms** | **5** | **4** |
| Hardware Manufacturers | 2 | 2 |
| Software Manufacturers | 3 | 2 |
| **Totals** | **73** | **45** |

Note: Several interviewees are involved in more than one functional area. For example, some of the experts are also involved in the design of interactive products; some museum professionals were officers of associations. Interviews focused on the dominant classification while attempting to gather all the relevant information from the interviewee's broad experiences.

At the outset, I thought interactive technologies might be a very popular subject among museum exhibit developers and other interactive media designers, and it wasn't long into my research before I discovered I was right. Accordingly, my deepest thanks go to all those who participated in the interviewing segment of this report, thereby giving it unique substance. Beyond them, I would also like to thank all those who have published research on interactive multimedia topics for having inspired me to undertake my own research in this field. This report is dedicated to all those interested in using technology to better ourselves as human beings, and to help us understand and function in the increasingly complex world in which we live.

Stephanie Eva Koester