

Chapter XVIII

The Development of Science Museum Web Sites: Case Studies

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Abstract

Science museums have embraced the technology of the Web to present their resources online. The nature of the technology naturally fits with the ethos of science. This chapter surveys the history, development and features of a number of contrasting pioneering museum Web sites in the field of science that have been early adopters of the technology. This includes case studies of Web sites associated with the Natural History Museum of Los Angeles, the Museum of the History of Science in Oxford, the Science Museum in London and the completely virtual Alan Turing Home Page. The purpose is to demonstrate a diverse set of successful scientifically-oriented Web sites related to science museums and the history of science, giving an insight into Web developments in this area over the past decade.

Introduction

The idea of using computers for education is not new. Seymour Papert (www.papert.com), an Artificial Intelligence pioneer with Marvin Minski at the Massachusetts Institute of Technology (MIT), first mooted the idea of using computers for learning in the 1960s. For example, he held a symposium at MIT in 1970 entitled “Teaching Children Thinking,” proposing that children could learn by teaching computers, developing the Logo programming language to help in this quest (Papert, 1993, 1999). Of course it then took some years for computers to become widespread and cheap enough to make such ideas a reality in everyday life. Papert has continued his interest in learning in the context of the Web. In 1996 he conducted a tour including locations such as the Smithsonian in Washington, D.C. and the Boston Computer Museum to promote a book (Papert, 1996). He has also helped in the development of *MaMaMedia*, a Web site with over 4.5 million registered users that provides free activities for children to learn through the playful use of technology (www.mamamedia.com). This is the type of well-funded e-learning resource with which museums are now in competition for their offerings on the Web.

Science museums should, by their nature, be aware of technological developments and use these appropriately in a timely fashion. As an example, the Science Museum in London held two exhibitions on the *Challenge of the Chip* (Maynall, 1980) on microprocessors and *This is IT* on information technology in the early 1980s. In these exhibitions, the technology being presented was used to present itself. For example, the *Challenge of the Chip* included a PET microcomputer that illustrated the manufacture and workings of Field Effect Transistors (FET). This was among the earliest examples of using computers in museum displays, employing the animated computer screen in an educational context to augment the more traditional static displays. The use of a computer display meant that the operation of an FET could be illustrated in a dynamic and apt manner. The PET computer was itself also an appropriate exhibit in the context of the subject matter being presented. Nowadays, of course, such use of computers in museum galleries is commonplace, even expected, and is certainly far more sophisticated. In addition to in-gallery use, computers can now readily be connected via networks; access through the Internet, normally using the World Wide Web, is an expected mechanism for disseminating information resources available from museums in general, and perhaps especially so for science museums (Díaz & del Egido, 1999).

In this chapter we survey science museum Web sites in the context of e-learning. In particular, we give several personal accounts of specific Web sites and their development by people who have been involved directly. Finally, some general conclusions are drawn.

Survey of Web Sites

The annual *Best of the Web* competition at the *Museums and the Web* conference, established since 1997, includes an explicit section on the “*Best Museum Web Site Supporting Educational Use*,” providing a snapshot of the state-of-the-art each year.

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