Chapter IX
From Digital Archives to Virtual Exhibitions

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ABSTRACT

Digital archives typically act as stand-alone digital libraries to support search and discovery by users to access its rich set of digitized materials. Additionally, content stored in these archives have been utilized and combined to create different themed online virtual exhibitions (VEs). Such exhibitions are important complimentary counterparts to physical exhibitions, especially in the context of cultural institutions such as museums, archives, and libraries. Well constructed VEs can offer alternative experiences to the “real thing” and open up other opportunities that include education and learning, more content beyond physical exhibits, support for active participation and contribution by visitors through forums and uploads, online shopping, and others. This chapter outlines a number of concepts and design considerations for the development of VEs from digital archives. When supported by the right tools and approaches, creation of VEs can be highly effective and efficient with minimal technological knowledge. By considering the important issues of metadata, system architecture design, and development techniques, it becomes possible to generate a series of VEs to meet the needs of different user groups and at the same time cater to the constraints of the client computers, thereby providing the users the best possible experience in engaging with the VEs.
INTRODUCTION

The Digital Library Federation defines digital libraries (DLs) as “organisations that provide the resources, including the specialised staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily available for use by a defined community or set of communities” (www.diglib.org/about/dldefinition.htm). One of the most important areas of application of digital libraries is in education. Examples of early educational digital libraries that arose out from the U.S.-led DL initiatives are the Alexandria Digital Library which is a distributed digital library with collections of georeferenced materials (www.alexandria.ucsb.edu/), the National Science Digital Library which is an online library for education and research in science, technology, engineering, and mathematics (http://nsdl.org/), and the Digital Library of Information Science and Technology which is an open source searchable archive about information literacy (http://dlist.sir.arizona.edu/; Farmer, 2007). Another important educational digital library development is JSTOR and the like. JSTOR, originally conceived as a project at The Andrew W. Mellon Foundation, is a nonprofit organization with a dual mission to create and maintain a trusted archive of important scholarly journals, and to provide access to these journals as widely as possible. High-resolution scanned images of back journal issues and pages can retrieved for a very large set of titles across many disciplines. It has become a standard offering at most U.S. universities and colleges as well as a growing number of higher education institutions beyond U.S. (Spinella, 2007). In these digital libraries, content can already exist, or more generally, they would be sourced and populated over time.

Across the world, nonprofit cultural heritage organizations that encompass museums, archives, and national libraries, would generally already have accumulated a rich amount of content in the form of artifacts and documents in different forms, medium, and formats that have been acquired, preserved, and conserved for a long time. Many of these would now be increasingly digitized, described, and stored in digital archives. They are subsequently made available directly to the public through the use of digital library technologies, either as stand-alone documents that can be searched and retrieved, or packaged or curated through other means such as virtual online exhibitions.

Beyond the heritage dimension, we also witness the creation of digital archives and digital preservation initiatives in the area of newspapers and other born-digital documents. In the U.S., KODAK Digital Archive Services preserve 75 years of Pittsburgh Steelers history (Reuters, 2007) and a 19th century newspaper digital archive is also been developed by Thomson Gale (http://gale.cengage.com/usnewspapers/index.htm; Bruns, 2007). Similarly, in the UK, 19th century British Library newspaper and old books are being digitized and preserved (Ashling, 2008) by British Library. Additionally, the Library will build a secure national digital archive of 300 terabytes to store all publications born digitally like CD-ROMS and electronic journals. Alongside this development, the National Archives have been tasked with securing Whitehall’s digital legacy by preserving government information that is born digital (Griffin, 2007). Other parts of the world like Australia and Singapore are also embarking upon such initiatives.

These trends are in line with that predicted for a 10 year period commencing in 2006 by the Association of College & Research Libraries (ACRL) Research Committee on 10 assumptions about the future that would have a significant impact on libraries (Mullins, Allen, & Hufford, 2007). At the top of the list of assumptions is that there will be an increased emphasis on digitizing collections, preserving digital archives, and improving methods of data storage and retrieval. Others assumptions suggest that users and con-