

Book review

Building Digital Libraries: a how-to-do-it manual (Number 153)



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In the digital age, libraries need to preserve and provide access to digital resources, but traditional library procedures and tools from the brick-and-mortar type library are often not suited to this task. Physical libraries and their access mechanisms rely upon a publishing model that slowly evolved over several years. In this model, each resource (book, globe, audiotape) consists of an object or objects in a single format, and each object remains static over a period of time. Methods of building and cataloguing physical library collections depend on these constants.

A digital library exists within a very different framework. A single resource (for example, a portal), yet each of these objects is a resource in its own right. These objects may be updated frequently, and their original formats may become obsolete as technological developments lead to new types of information resources. Due to these differences, creating a digital library requires a new set of skills. This book is a unique tool kit for the new world of digital libraries. It demystifies the challenges of designing, constructing, and maintaining a digital repository. This book covers both the fundamentals of digital library theory and the

details of how to implement a digital collection. No specific technical knowledge is required. Each chapter discusses the capabilities and limitations of specific technology and reflects important developments of the last few years, with a focus on tools that are applicable and appropriate to a variety of environments. Each chapter in *Building Digital Libraries* focuses on a step in the process, addressing both how to execute that step and how to combat challenges encountered along the way.

Chapter 1, 'Planning a Digital Repository,' provides the reader with an understanding as to how the integrity of information can be protected over a period of time, how to safeguard a repository against natural and man-made disasters, and how to accommodate the problem of constantly changing formats.

Chapter 2, 'Acquiring, Processing, Classifying, and Describing Digital Content', discusses specialized access mechanisms, processing and acquisitions, and maintenance; it also emphasizes the critical importance of good workflow.

Chapter 3, 'Choosing a Repository Architecture' describes several frameworks for

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digital libraries and outlines the strengths and limitations of various hardware and software architecture. Choosing an appropriate hardware and software platform is critical to the success of a repository, so it is important to understand how the choice of platform influence the information to be stored and retrieved, systems collection to interact with, and how functionality can be enhanced in the future.

Chapter 4, 'General Purpose Technologies Useful for Digital Repositories,' introduces metadata, particularly the group of technologies associated with eXtensible Markup Language (XML).

Chapter 5, 'Metadata Formats,' explores in greater detail generic technologies and critical standards, such as MARC, Dublin Core, Metadata Object Description Schema (MODS). And Metadata Encoding and Transmission Standard (METS), providing examples that help the reader understand how these standards can be leveraged to provide services with relatively little effort.

As the number of information providers continue to grow, a repository cannot simply be a silo on the Internet. Chapter 6 'Sharing Data: Metadata Harvesting and Distribution' looks at the role individual repositories play in a shared environment, how they can be normalized and shared for use by diverse systems, and how to make repositories searchable as part of federated collections and make their resources visible to search engines.

Chapter 7, 'Federated Searching of Repositories,' investigates a wide array of protocols and technologies used for searching materials located in a vendor database or scattered across web pages. From Z39-50 the original metasearch protocol for libraries – to the latest methods, readers will learn how to

layer different search technologies to provide seamless access to diverse resources stored in different systems.

Chapter 8, 'Access Management' examines digital rights, protection of intellectual property rights, and monitoring of repository use in long-term repositories. Control mechanisms such as LDAP (Lightweight Directory Access Protocol) Shibboleth OpenID, and Athens are also discussed.

Maintaining a repository is an ongoing endeavour, Chapter 9, 'Planning for the future,' is devoted to managing a living repository and anticipating future needs, as well as issue of updating as technologies and patron needs change.

Chapter 10, 'Conclusions' offers a clear outline of the process from start to finish and highlights the global importance of points touched upon in previous chapters.

It is not just the information itself, but the organization, structure, and presentation of that information, that give a repository its value. Digital libraries enhance the value of information resources by allowing users to locate information in contexts that suit their needs. We believe that these benefits of digitization have potential for a wide range of different types of collections and institutions. In *Building Digital Libraries*, we presume nothing except the desire to learn how to help bring libraries in to the future.

After reading the book, one have sufficient knowledge to identify and implement the technical components necessary to construct a digital repository from scratch. Our aim is to explain and clarify both the technical and conceptual aspects of digital repositories so that the readers can thoroughly understand how to create such a valuable resource for your library.