Preface

OVERVIEW

Ever since the Internet inspired the creation of Web-based, accessible materials, many organizations and institutions have made progress in developing a Web presence for their employees, members, or service populations to access information and relevant documents. New, emerging technologies continue to create more effective ways for managing, searching, retrieving, storing, and preserving information, data, records, and important documents. Educational, medical, corporate, legal, government, science, and research entities are all confronted with moving to completely online, digital environments with appropriate technologies to manage, access, and preserve their electronic records and resources to remain competitive. Many have struggled with formulating policies for digitizing original print formats and with finding an effective solution for housing digitized records along with their born digital documents. Therefore, examples of effective implementation of resource and records management systems across organizations and disciplines would benefit all concerned.

Objective of the Book

The main goal of the publication is to bring together real-life examples of how electronic records and resource management have been implemented across disciplines. While records and resource management has been addressed frequently in relation to academic libraries, an across discipline approach has not been evident. The manifestation of implementation in various organizations and institutions can add to the body of literature on effective electronic records and resource management principles and practices. System utilization and effectiveness could point the way to joint efforts on standardization of programs and corresponding technologies.
Target Audience

The target audience is varied. The major group is composed of professionals involved in the education of library and information science students. Incorporation of the content into the curriculum dealing with the organization of information, library technologies, digital libraries, continuing publications, and electronic resources can demonstrate to students fresh ideas and solutions and the applicability of skills to diverse settings. Another targeted group concerns those training individuals responsible for electronic records management for different purposes and in various disciplines and organizations. They can benefit from the real-life implementation instances, the concerns and issues currently associated with implementation, and the effective solutions for attaining similar goals.

CASES

The following describes the arrangement of the cases presented in this book. The content is divided into three sections emphasizing the major disciplines addressed in the case examples. Case topics elaborate on selection procedures, various stages of implementation, legal and ethical implications of electronic records, effective policies and guidelines, hardware and software requirements, open source solutions, user perspectives on digital collections, and access.

Section 1: Education and Libraries

Historically, libraries have always used record representation to build catalog displays of library materials and holdings. As more and more materials moved from traditional mediums, such as print and analog formats, libraries continue to find ways to effectively manage expanding records and digital versions of journals, indexes, films, and statistical data. Library systems are becoming more integrated with content and electronic resource management systems to include more material, control licenses, address developing issues with record maintenance, and streamline user access to resources. This section includes various examples of how libraries work with electronic records and resources. Methods and processes for creating cultural and historical digital collections for student use and public access, for building repositories to share scholarly information, and to organize internal documents are also shared.
Chapters

The first chapter demonstrates the value of libraries adding next-generation characteristics to their integrated library systems. Using e-books and electronic resources as an example, the author shows the effectiveness of enhancements offered by third-party discovery layers when searching public access catalogs. Proprietary and open source library catalogs and discovery layers are analyzed according to next-generation characteristics evident in the literature. Findings suggest that libraries using an additional proprietary discovery layer with the catalog offered a more effective searching experience for their users.

Chapter two highlights the challenges of adding vendor-supplied bibliographic records for online materials from subscription databases into the library catalog. The advantages and disadvantages of incorporating vendor records into the catalog are weighed against the need to optimize user access of electronic resources. A discussion of various policies, processes, and methods required to implement the batch loading of large record sets is helpful for those contemplating the same action. Issues specific to vendor products, including those associated with the integrated library system, are presented. Various tools, strategies, and recommendations for successful implementation are stressed.

Many universities are now requiring digital master’s theses and doctoral dissertations as one way of solving physical storage difficulties while simultaneously establishing wider access to these scholarly materials. Chapter three explains the special considerations associated with cataloging electronic theses and dissertations with accompanying materials, especially those in music now using streaming audio files. Important issues addressed include access, re-use, preservation, storage, retrieval, integration with other systems, copyrights, and authorized permissions. The authors conclude that successful management depends on efforts applied across the entire lifecycle of electronic theses or dissertations.

Since digital collections can offer a wealth of information to many users who are geographically dispersed, access is important for them to be used effectively. Chapter four focuses on the building of a searchable database for thematic collections of cultural value. The author examines the theories and processes behind database construction and weighs the benefits of using established subject classification schemes against the need for developing a local classification scheme for the desired database. The topic is explored in relation to established principles of metadata construction.
Small local history and genealogical collections are important to the local community. Chapter five focuses on the building of a local digital collection and how to provide access to the local community. Insight into the decision-making process engaged in by the local historical society in order to select the appropriate content management system to house, organize, and categorize the collection for access is shared. The advantages and disadvantages of the different products are explored in relation to the access needs of the local community.

Chapter six demonstrates how the Library of Congress made The American Memory Project available to the public. This chapter, written from the user’s perspective, explores the background and origin of the collection and provides insight into the technological challenges that are associated with effective implementation of a large digital archival collection for public access. Organization, presentation, and access to the wide array of materials that comprise the collection are discussed in relation to the original, intended use of the project as an educational resource. Recommendations for improved user access to the collection, along with future challenges of maintaining the collection, are presented.

Continuing with the educational theme, chapter seven highlights the efforts of the Merrill-Cazier Library at Utah State University to digitize an important segment of United States history. The author discusses the background, origin, and purpose of the Topaz digitization project and outlines the processes used by the library to achieve full implementation. Important aspects stressed include required technology components, technology issues surrounding the content management system adopted for the project, and how collaboration aided its timely completion for the students. Ongoing challenges and recommendations for improvement are also presented.

Chapter eight draws attention to the inequities of international access to scholarly communication and publishing due to the high cost of journals, especially for the sciences. Since open access initiatives have developed as an alternative to the traditional platforms of using publisher-owned journals for the dissemination of scholarly communication, universities have established repositories to provide access to faculty manuscripts and institutional research. This chapter highlights one university’s efforts to manifest its mission through the development of an institutional repository. Analysis of the implementation process revealed the strengths and weaknesses of the repository and areas for continued growth.
Accreditation of academic programs, particularly at universities, is a daunting, time-consuming process that demands a high volume of documentation. The maintenance and management of the documentation over a seven- or ten-year accreditation period requires attention to detail, organization skills, and a dedicated place to house all materials. Chapter nine shows how course management systems have built-in capabilities that can ease the demands of accreditation. This chapter highlights the advantages and disadvantages of content management systems when compared to course management systems used for the delivery of online courses. The author demonstrates how one graduate program structured a university’s course management system to address the data gathering and document demands of accreditation.

Even though vendors offer a variety of electronic resource management systems for libraries, managing electronic resources is an ongoing challenge. Academic libraries, especially, are confronted with an array of items to handle due to the high volume of electronic resource subscriptions and licenses. The authors of chapter ten describe the processes undertaken when considering viable solutions to streamlining their non-integrated approach to managing these resources. Advantages and disadvantages of using proprietary and open source solutions are discussed and solutions for different library settings are explored.

Since not all libraries benefit from the same resources, the selection of the appropriate electronic resource management system for an academic library is a difficult decision. Chapter 11 recounts the efforts of a small academic library when locating the system that would work best for its particular situation. The author explains how the selection of an open source system to replace an existing system did not exactly meet all the library’s needs. Different solutions are proposed to overcome the disadvantages of the selected system.

Section 2: Medicine

Electronic records and resources also permeate the field of medicine. Patient medical records are now moving from print to digital to facilitate access between medical practices and their various locations and between medical practices and hospitals. Legal and ethical implications for implementing electronic patient medical records or hospital records are extremely significant and warrant close scrutiny for implementation. Electronic resources for medical research also are in demand. Therefore, this section presents examples of patient medical record implementation and how one healthcare organization managed to go completely online with regard to research materials required by practicing physicians and medical staff. Research implications for international materials are also discussed.
Chapters

Chapter twelve outlines the important significant legal and ethical considerations encompassing the transition to electronic medical records for patients. Patient privacy issues from key legislation in the United States are discussed with regard to the implementation, handling, and appropriate access to electronic medical records. Relevant points from the adoption and use of electronic medical records in other countries are also presented. Technological solutions for security and appropriate access are given.

The use of electronic patient medical records is on the rise in all types of medical practices. Chapter thirteen outlines processes and demonstrates best practices used by a primary care practice at one medical center for implementation. Issues, such as vendor selection, technology demands, ongoing hardware and software concerns, and training, are discussed. Challenges caused by practice growth, in personnel, location, and facilities, are examined in relation to effective solutions.

The move from print to online-only materials, especially journals, is no small task for any library. The authors of chapter fourteen, who are from a private healthcare organization library, discuss the challenges they faced when the decision was made to move to completely online resources in a short timeframe. Implementation occurred in stages in order to deal with patron needs, patron and staff training, access issues, and development of a stronger Web presence for the library. Ongoing challenges involve marketing of services and emerging technologies for patron access.

Bibliographic access to book and journal information available in electronic resources can challenge the most sophisticated user-seeking materials in English. The process can become even more taxing if source materials were originally written using languages other than English. Using health information as an example, chapter fifteen presents the issues surrounding the use of transliteration and machine translation for access to information in various databases, catalogs, and search engines. Possible solutions for improved access of international materials are presented.

Section 3: Law and Government

Document generation during business operations, legal proceedings, local government operations, and government-sponsored research can be voluminous. Managing paper documents alone can be challenging, but moving from print to digital while integrating born digital materials calls for special systems, guidelines, and processes. This section stresses the importance of establishing and using functional guidelines for implementation projects dealing with court documents, federal and local government materials generated daily, state agency depository items, and valuable information created through federally funded research. Special attention is given to authenticity, long-term preservation, and access.
Chapters

The creation and use of electronic court records into any legal system can create a unique set of requirements for the electronic records management system. Chapter sixteen concerns the development of functional requirements needed for the creation of an efficient electronic court record system. The authors provide their analysis of a number of existing policies and procedures in order to pinpoint those that will lead to best practices in managing, preserving, and retrieving electronic court records. Ideally, the functional requirements are necessary for planning and designing effective systems that can handle the complexity of court records.

The management of legislative materials can require special handling to ensure that original legislation is associated with all revisions, hearings, and special reports to maintain legislative intent. Chapter seventeen explains the migration of traditional print legislative materials produced by the Brazilian Parliament to a digital counterpart. InterPARES 3 Project Guidelines are used to establish a digital model for bills introduced in the Brazilian Parliament. Particular attention is given to establishing mechanisms to guarantee authenticity and long-term preservation.

Chapter eighteen showcases the National Archives and Records Administration (NARA). As the record keeper for the United States of America, it is faced with the enormous responsibility of preserving the essential government records of all varieties. This chapter presents NARA’s efforts in making records available in digital format while managing and preserving born digital documents. The author presents the agency’s efforts to meet the demands of the electronic environment and to process digital content for access. Plans for improved systems and future growth are also discussed.

The complexities and volume of government-produced documents surpass geographic boundaries. Chapter nineteen offers an international perspective as the author explores the processes involved in digitizing a specific internal document signifying decisions made during daily operations in the Province of Forlì-Cesena. Important steps of the digitization process are discussed, especially with regard to authentication, digital signatures, and integration with existing systems and software. The chapter demonstrates the benefits of using an electronic records management system to manage all steps of the workflow.
Chapter twenty offers a quasi-government research example when presenting the various electronic records management initiatives conducted at the Jet Propulsion Laboratory, which is a Federally Funded Research and Development Center managed by California Institute of Technology for the National Aeronautics and Space Administration. The authors explain the efforts taken to add records management capabilities to existing information technology systems. The development of a compliance checklist to measure the ability of information technology systems to handle the submission, retention, and search functions necessary for the management of research records is presented and discussed as one possible solution for determining the capabilities of emerging information technology systems.

E-government has created opportunities for the public to interact with all levels of government more quickly and efficiently than in the past. Chapter twenty-one highlights the need for an effective electronic records management system to organize and preserve the digital records now created during the course of daily business and operations. Registering, certifying, identifying, and preserving all transactions are a high priority for all concerned and call for system components and attributes that permit government business to be conducted as efficiently and authentically as possible.

The Environmental Protection Agency (EPA), as most government agencies, provides digital information to scientists, researchers, and the general public. Chapter twenty-two provides the background and history to the EPA’s digitization efforts, some of which sparked a controversy for long-time users. The author presents the policies and practices used during implementation and summarizes existing challenges facing the agency along with solutions for future practice.

Transitioning from print to digital state publications and materials creates many issues for state library depository systems. Chapter twenty-three presents the efforts of the New Jersey State Library to maintain the depository program as many state agencies moved to digital publications accessible through their own agency Websites. The author explains the different processes used by the state library to create and maintain access to digital publications before ultimately deciding on an open source solution. Strategies for streamlining the process and efforts used to encourage state agencies to comply with the electronic depository program are also presented.
CONCLUSION

The main goal of collocating real-life examples of how electronic records and resources are created, organized, managed, preserved, and accessed in diverse settings is manifested by the collection of individually authored contributions to this publication. Each subdivision of cases, i.e., education and libraries, medicine, and law and government, covers specific instances of how migration from print records to digital operations and enterprises can require challenges unique to each organization while embracing common threads of procedures, guidelines, and system requirements and applications. Each case offers clear insight into the issues surrounding implementation, whether in education, library, law, government, medicine, science, or research environments.

The similar, yet diverse, themes of each chapter can provide library, information, and records management professionals with fresh ideas and solutions to the ongoing challenges faced with converting print records to digital, creating and integrating born digital materials into existing systems, establishing guidelines, guaranteeing authenticity, and preserving records and resources for long-term access. This unified collection of theory-in-practice examples adds to the body of literature specifically because it addresses various organizations and institutions. The experiences of each give direction to joint efforts on program standardization for corresponding technologies and system utilization.

Janice M. Krueger
Clarion University of Pennsylvania, USA