these sites. Next, Susan Hazan looks at the kinds of developments in digital libraries on the web that are pulling users away from traditional libraries. Hazan points out that online libraries like Project Gutenberg, the World Digital Library, and the Internet Archive are adding new content to the web, and sites like Google Books, Flickr, and Facebook are changing the way users interact with that content. Because of the proliferation of these libraries, digital repositories, and social media tools, Hazan suggests that traditional cultural institutions like libraries must get involved in these spaces or risk becoming irrelevant.

The third seesion addresses how institutions can respond to changes in the digital environment. The first two papers focus on national movements to foster digital library collaboration. In the opening paper, Zhu Qiang, executive member of the Library Society of China, discusses initiatives established by Chinese national organizations to foster collaboration on policy and technical issues that are stalling progress on digital libraries. Next, Rossela Caffo describes projects used to centralize online catalogs, interlibrary loan practices, and access to digital content conducted throughout Italy. The final two papers in the session concentrate on making digital libraries better for users. John Van Oudenaeren compiles a list of conditions in today's virtual environment, ranging from user reliance on electronic media to search engine dominance and increased user demand for multimedia content, and he demonstrates how the World Digital Library is taking steps to meet these conditions. In the final presentation, former chair of Elsevier Science and current International Publishers Association president, Herman P. Spruijt, encourages libraries to collaborate with publishers. Rather than seeing publishers as the enemy, Spruijt believes that publishers can compete with digital powerhouses like Google if libraries

share knowledge with them about their users.

This small volume provides a thorough, overarching view of current international digital library research and practice. Although the book focuses primarily on developments in Europe, the issues discussed are applicable to any digital library. While not every paper presented at the conference will be useful for every reader, the papers are written concisely, titled informatively, and contain abstracts, which make it easy for readers to find what is most relevant for their needs. The book provides a useful springboard for anyone interested in online user assessment and digital libraries. —*Brian Norberg (Brian_Norberg@ ncsu.edu), North Carolina State University, Raleigh*

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Building a Digital Repository Program with Limited Resources. By Abby Clobridge. Oxford, England: Chandos, 2010. 272p. $80 paperback (ISBN 978-1-8433-4-596-1).

Abby Clobridge provides a clear and practical guide for midsize to large academic institutions wishing to initiate a digital repository program. Clobridge presents a thorough discussion of the importance of digital repository programs and their potential benefits for faculty, researchers, students, and in some cases, the community at large. Topics are well organized and appropriate; they include strategic planning, technical and staffing requirements, metadata, project proposals, planning, implementation, content recruitment, marketing, open access, sustainability, assessment, and

Web 2.0. A table of contents and index are included. Bibliographies of appropriate resources appear at the end of each chapter and in aggregated form at the end of the work. The book comprises eleven chapters and two appendixes, and it features case studies that are beneficial to project planners.

In the book's foreword, David Del Testa effectively summarizes how libraries now face a massive conversion of information to digital form, and he attests to how critical it is that libraries adapt. Del Testa sees Clobridge's book as evidence that librarians should become leaders in the implementation of innovative, updated digital information systems that will benefit the entire scholarly community.

Clobridge, writing from the viewpoint of a repository manager at an academic institution, prefaces her book by asserting that her purpose is to guide new librarians and technologists who are novices in digital repository work as well as those who already have a measure of experience. She considers her text a handbook not exclusively for librarians but also for other institutional leaders, such as administrators and information technologists, who have responsibilities for strategic planning, staff development, and collaborative projects. The author seeks to document best practices and offer sound advice for institutions of all sizes in their development of digital repository programs. Clobridge also intends to illuminate each phase of working with digital repositories, from planning, to launch, to assessment, and beyond.

The book is divided into two parts: part 1 serves as an introduction and is geared for those new to digital repository projects; part 2 focuses on building on, maintaining, and sustaining established programs. This two-part division gives the book a disjointed and repetitive feel, and prevents the chapters from flowing together smoothly. A better organization for the book would have featured chapters on creating and hosting a digital repository

program presented chronologically from beginning to end. Despite these structural issues, the advice offered in each chapter is relevant. The author's discussion of strategic planning, for instance, addresses issues such as user needs assessment, internal resource audits, mission statements, and vision documents. It also provides example documents, such as a user needs worksheet, internal needs audit worksheet, and sample mission statement, which are helpful to the project planner. These examples illustrate key points in the text, support and elucidate the author's objectives, and are consistent throughout the book.

In the "Technical Overview" chapter, Clobridge addresses the critical area of budgeting. She addresses ways to curtail costs, such as using open source software, sharing and purchasing refurbished equipment, outsourcing, and batch processing. Staffing is another significant financial consideration in building and maintaining a digital repository program. Clobridge emphasizes the importance of interdepartmental teamwork across the institution. She is correct in her assessment regarding the critical need for committed personnel, not just librarians, library support staff, and student workers, but also library administrators, faculty, and information technologists. Her text stresses the substantial time commitment required institution-wide for digital repository programs to succeed. Therefore, although the author's intent is to write a guide for all academic institutions of all sizes, it is not as useful for small libraries with few personnel. For medium-to-large colleges and universities with adequate staff resources, this handbook functions as an appropriate and excellent guide.

Clobridge's account of metadata in chapter 5 offers a concise overview of the different types. She briefly describes Dublin Core (DC) and the Visual Resources Association (VRA) Core, which are highly respected and pervasively used standards. DC is flexible and works for different types of collections, while VRA Core is used with art collections. She briefly lists others, including Text Encoding Initiative (TEI), Content Standard for Digital Geospatial Metadata (CSDGM), and Encoded Archival Description (EAD). The author provides an overarching description and gives references to specific instructions for each standard. She offers advice on selecting the appropriate markup language, ways to streamline production, metadata cleanup, and enhancements. She advocates progress over perfection, and harvesting metadata when possible. In this chapter, the author focuses more on the process of applying metadata than to its technical details. Definitions pertaining to metadata work are presented and are helpful to those new to markup languages.

Another technical discussion appropriately included in the handbook is the sustainability of digital data. Librarians must be concerned with digital preservation as more information is converted to or born digital. Clobridge speaks to these issues with good advice about preservation planning, data backup, addressing obsolescence, disaster planning, managing electronic records, licensing and legal issues, and supporting collections financially over the long term.

Clobridge's work serves as an effective starting point for planning, preparing, implementing, and maintaining digital collections in an institutional repository program. The book imparts the necessary knowledge to plan and begin such projects, and it directs readers to useful sources for detailed manuals and instructions. —*Shannon Fox (sfox@austincollege .edu), Austin College, Sherman, Texas*

Introduction to Modern Information Retrieval. 3rd ed. By G. G. Chowdhury. London: Facet, 2010. 508p. $73 softbound (ISBN 978-1-8560-4694-7).

Information retrieval is a large and evolving topic. G. G. Chowdhury's *Introduction to Modern Information Retrieval* was first published in 1999 and now enters its third edition. The author approaches the topic from a library perspective, but endeavors to place library practice in the context of broader concerns in information retrieval and resource discovery generally. The book covers topics such as metadata formats, subject analysis and vocabulary control, abstracting and indexing, database technology, file organization, user requirements and interface design, natural language processing, digital libraries, web search engines and search engine optimization, evaluation of retrieval effectiveness, and experimental research.

One hardly need point out that many changes in information retrieval have taken place since the first edition of this book was published. This new edition includes new or expanded sections on developments in metadata standards, such as the Functional Requirements of Bibliographic Records (FRBR), automatic indexing, information retrieval on the web, XML markup and retrieval, and citation analysis.

The book draws heavily on the published literature. Each chapter has an introduction followed by an outline of important ideas in the area under discussion, often including summaries of significant published works. Each chapter concludes with a discussion and a lengthy list of references. This structure sometimes gives the book the feeling of an extended literature review rather than an independently argued viewpoint, but readers using this publication as a textbook will appreciate key contributions in the field being brought together and having both their significance and content succinctly explained. The discussion sections, seldom consisting of more than a single paragraph, summarize main themes covered in the chapter. The volume is furnished with a subject index.

The book's wide scope is its greatest strength. The author treats