Any serials manager considering a use study will find this section of Nisonger's book an invaluable aid in planning and implementation.

Fundamental information about serials processing, electronic journals, and serials automation make up the remainder of the book. In the epilogue, Nisonger explores trends that may cause familiar issues of serials management to change even more in the future. He raises the question of the future of libraries in the context of the much broader question—what defines a library?—and then proceeds to question the future of the serial in its traditional format. Nisonger presents thought-provoking issues that deserve consideration by any dedicated serialist.

It is obvious in the vast number of notes and references that this book is based on complete and careful research in the customary sources and also in non-traditional sources, including electronic discussion lists, electronic journals, and the Web. The result is a well-organized source of information about the past, present, and future impact of serials on libraries. But first and foremost, Nisonger provides an in-depth look at current developments and available options in a rapidly changing environment for overall management of serials. This book is a worthy addition to the book shelves of "library practitioners whose professional duties involve serials . . . as well as library and information science teachers and researchers" (xviii).—*Sylvia O. Martin (martin@ library.vanderbilt.edu), Vanderbilt University Library, Nashville, TN*

Visualizing Subject Access for 21st Century Information Resources. Eds. Pauline Atherton Cochrane and Eric H. Johnson. Champaign, IL: Graduate School of Library and Information Science, University of Illinois at Urbana–Champaign, 1998. Clinic on Library Applications of Data Processing; no.34 (1997). 176p. $30 (ISBN 0-87845-103-X).

This collection of conference papers is an excellent resource. Aptly titled "visualizing" subject access, the collection is not an attempt at a final word on the subject, but is instead a set of works in progress, case studies, current experiments, and theoretical analyses of how subject content can be "seen." Included are twelve short papers, three abstracts (two with more complete Web sites), and opening and closing summaries. While this work does not satisfy the unrealistic desire for a single, complete solution to problems of subject access, the individual authors hold out the hope that many provisional solutions and continued creative experimentation will allow us to make significant progress. The authors are both older and younger scholars in the field and a cross section of information theoreticians, computer interface specialists, librarians, library school faculty, and vendors. While it is not possible to achieve in print the synergy of the conference milieu or the range of demonstration formats included in the conference presentations, the editors partly bridge this gap by providing Web addresses that extend some of the presentations, though they fall short of the yet unrealized multimedia electronic book in which real audio and video might work this magic. Here are some highlights from the print version of the conference.

A key paper is "Information Analysis in the Net: The Interspace of the Twenty-First Century," in which Bruce Schatz boldly predicts that within ten years "people will be able to solve real information problems themselves" (111), correlating information and doing analysis rather than merely searching. His vision is a system that draws on smaller and larger repositories, automatic as well as human indexing, interactive vocabulary switching, and "peer-peer not client-server" communications (123). Schatz uses the term "telesophy" to express a vision of the future knowledge community, growing and connected by an integrated conduit where the switching and technology are seamless and invisible to the average user, as in the current telephone system. Drawing on the history of development over the last ten years, his own work, and current experiments in progress, Schatz makes his predictions seem reasonable rather than far-fetched

science fiction. His analysis provides a backdrop for the other papers. In turn, the other authors bolster some of Schatz's speculation.

Elizabeth Liddy provides insight into the theory of natural language processing (NLP) in an extremely interesting paper titled "Natural Language Processing for Information Retrieval and Knowledge Discovery." She articulates six linguistic levels (morphological, lexical, syntactic, semantic, discourse, and pragmatic) that must be analyzed in true NLP. Her exposition of the levels conforms with linguistic theory, and her descriptions of the capabilities of her Dr-Link, CHESS, and Know-it systems—she calls them "knowledge products"—is fascinating, but the implication that these products are capable of automatic analysis at all linguistic levels remains in question. At the conference she admitted some use of human indexers. Other contributions to theory include a paper by Raya Fidel and Michael Crandal on "The Role of Subject Access in Information Filtering." This case study shows that users choose journal articles by a process that involves additional parameters beyond, yet related to, subject. The authors suggest that these additional parameters could be designed into a system. Bryce Allen, in "Visualization and Cognitive Abilities," also makes a key point: any system for visualization of information must be designed in consideration of the variety of cognitive abilities and user preferences.

Several of the authors address vocabulary issues. In "Dimensions of Discriminability: The Role of Controlled Vocabulary in Visualizing Document Associations," David Dubin describes the VIBE system that maps clusters of related concepts to ever-finer sets of documents. Two articles that should be read side by side, "Thesauri in a Full Text World" by Jessica L. Milstead and "Building and Accessing Vocabulary Resources for Networked Resource Discovery and Navigation" by Joseph A. Busch, provide a theoretical look at the future use of thesauri and a

model system used at the Getty Institute for mapping across interrelated vocabulary structures.

Nicholas Belkin provides insight into particular systems for information retrieval and access system design in "An Overview from Rutgers Investigations of Interactive Information Retrieval," with an important discussion of the Text Retrieval Conference programs and their evolution in the 1990s. Another avenue into experimental systems is Gerry McKiernan's "The Big Picture (sm): Virtual Browsing in Web and Non-Web Databases." McKiernan's contribution to this book is not a full paper. Its abstract provides the URL of his more complete list of experimental projects (at http://www.public.iastate.edu/~CYBERSTACKS/DPC97.htm).

A final exceptional highlight of the book is Eric Johnson's brief description of the IODyne interface. This Internet client program provides all of the desirable features of any information retrieval system, including querying multiple databases across language and protocol, common searches in the same form in multiple databases, persistent searches cached for later re-use, drag-and-drop navigation of multiple query spaces, and an information object structure.

In sum, this is an excellent work to consult for current thinking about subject access, about how users approach information, about how best to present information, and about what the resource landscape may look like in the next few years. It compares favorably to the Association for Computing Machinery, Special Interest Group on Information Retrieval conference proceedings (ACM SIGIR), but comes without the technical formulas common in SIGIR publications. Still, there is useful information for the more technically oriented information retrieval specialist. Papers are short, well indexed, and can be easily understood. Throughout the book, the authors use clear language, illustrate with creative diagramming, and provide follow-up references.—*William J. Wheeler (william. wheeler@yale.edu), Yale University Library, New Haven, CT*