Book Review

Hypertext and Hypermedia

JAKOB NIELSEN


Nielsen’s new book, *Hypertext and Hypermedia*, will soon join Conklin’s famous survey as one of those sources that gets cited in every paper on hypertext. Nielsen has filled a significant gap in the hypertext literature by writing a book which is a comprehensive overview of the topic and a valuable sourcebook for researchers.

The first few chapters constitute an introduction to hypertext. Nielsen begins with the basics: nodes, links, and the distinction between hypertext and hypermedia. The first chapter presents these ideas with a number of illustrations and examples. The second chapter is a detailed description of an example hypertext system constructed by the author using HyperCard. Some might question the choice of HyperCard as the basis for an example hypertext system, but Nielsen’s intent is to give the uninformed reader an idea of how nodes and links look and how they behave. HyperCard performs quite well in this capacity, and has the advantage of being widely available. Chapter 2 ends with information on how to get a copy of the example system via electronic mail. Chapter 3 consists of a short history of hypertext. This chapter begins with a detailed description of Bush’s original idea and continues with several other systems, including Augment/NLS, Xanadu, and the Aspen Movie Map. Nielsen describes the Aspen Movie Map as the first hypermedia system. As the title implies, this book is about both hypertext and hypermedia, but Nielsen’s position is that "some people prefer using the term hypermedia, to stress the multimedia aspects of their system. Personally, I would like to keep using the traditional term `hypertext' for all systems since there does not seem to be any reason to reserve a special term for text-only systems".

The number and variety of hypertext applications is growing all the time. Nielsen takes aim at this moving target in Chapter 4. The first part of this chapter describes some serious applications of hypertext in computing, business, knowledge work, and education. In addition, Nielsen has devoted several pages at the end of Chapter 4 to a discussion of more casual uses of hypertext, such as interactive fiction, which have not (until now) received wide exposure.

Chapters 5–11 have more technical content than the preceding chapters. Chapter 5 discusses six major systems currently in use: NoteCards, KMS, Hyperties, Guide, HyperCard and Intermedia. This chapter will be enlightening for readers who will never have an opportunity to use all six of these systems. Chapter 6 introduces the idea of hypertext system architecture, using Campbell and Goodman’s three-level model and the Dexter Reference Model. The software orientation of Chapter 6 complements the discussion of user-interface hardware and storage media, which is the subject of Chapter 7. The ‘Lost in Space’ problem has received considerable attention in the research community, and Chapter 8 is a synopsis of the current state of affairs in this area. This chapter includes detailed descriptions of how several systems keep the user informed of his or her location within a hypertext document.

Nielsen is an active researcher in the field of hypertext user-interface design. Since © 1998 by University of Nottingham.
this is a relatively new field, with many unanswered questions, the hypertext user-interface designer sometimes has to consult the somewhat larger base of knowledge that deals with user-interface design in general. Chapter 9, which covers user-interface design as it applies to hypertext, is the strongest in the book. Chapters 10 and 11 focus on the problems of creating hypertext documents: Chapter 10 discusses the problems of hypertext authorship, and Chapter 11 describes the problems of importing existing texts into a hypertext format. I only wish more was known about these questions, so that these chapters could be longer. In Chapter 12, ‘The Future of Hypertext’, Nielsen gazes deeply into his crystal ball. He predicts, for example, that in the next few years we’ll see the emergence of a mass market for hypertext. Right now, HyperCard is the only hypertext system with a large enough user population to be called a mass market. However, Nielsen expects that some other systems will also achieve this status—but he doesn’t say which systems.

Nielsen includes two useful appendices. Appendix A is a comprehensive list of vendors of hypertext products, including addresses and telephone numbers. Appendix B is an annotated bibliography, including pointers to recent conferences, other bibliographies, relevant periodicals, and a long list of papers and books. Nielsen took extra care in making his bibliography up-to-date, and he is to be commended for this. For many readers, these appendices alone could justify the cost of the book.

I believe that Nielsen had two goals in writing this book: to meet the need for an up-to-date survey of the field of hypertext, and to make some recent research results known to a wider audience. He achieves both of these goals. The first several chapters are accessible to readers with any level of computer literacy, and will be valuable to anybody who wants to know what all the hyper-fuss is about. The book would be a useful supplement to a computer literacy course, especially at a school where hypertext systems are readily available to students. (However, Shneiderman and Kearsley’s book is probably more appropriate for this purpose.) As a text for a course on hypertext or electronic document processing, Nielsen’s book would need to be accompanied by some research papers. The last few chapters and the bibliography will be most valuable to hypertext implementors and researchers, especially to those interested in user-interface design, authorship, or importation.

I have no serious complaints with this book. The technical quality of the book is high, although I did notice one small misprint. Nielsen has a lively writing style which reflects his enthusiasm for his subject and his sense of humor. His own comments and insights are sprinkled liberally throughout the book, but never to excess. His treatment of existing systems is even-handed. I recommend this book.

CHARLES NICHOLAS
University of Maryland Baltimore County
nicholas@cs.umbc.edu