Book Review

Information Architecture
for the World Wide Web (Second Edition)

by Louis Rosenfeld & Peter Morville

Catriona Cornett
IST 413
April 16, 2007
Information Architecture for the World Wide Web by Peter Morville and Louis Rosenfeld (O’Reilly Media, Inc. 2002) serves as an overview of the importance and techniques of information architecture (IA). The topics in this book range from a basic definition and rationale for IA, to basic principles of IA including organization, labeling, navigation, search, and vocabularies. Additionally, Morville and Rosenfeld discuss strategies for implementing these techniques and how to use IA in practice. Information Architecture for the World Wide Web argues that by using information obtained in this book, you’ll be able to build scalable and maintainable web sites that are both easier to navigate and more appealing to users than before. In trying to build usable web sites that accomplish both user goals and business goals, it is critical to use proper IA techniques so that information is organized and easy to find.

Peter Morville is currently the president and founder of a leading information architecture and strategy consultancy firm, Semantic Studios. Morville is often recognized as the “father of information architecture” due to his critical role in developing practical techniques and applications to structure information. In addition to his work on Information Architecture for the World Wide Web, Morville is also known for his book Ambient Findability.

Louis Rosenfeld is an independent information architecture consultant. Similar to Morville, Rosenfeld has been an instrumental force in the establishment of information architecture and user experience. Both Rosenfeld and Morville are leaders for the Information Architecture Institute, which is the sole professional organization of information architects.

In choosing a book to review, I chose Information Architecture for the World Wide Web for its value to the field of usability as well as for background knowledge that will be useful in starting my career in user experience design. Morville and Rosenfeld have combined their expertise in Information Architecture for the World Wide Web to produce a book that is extremely valuable and is a standard for information architecture practitioners. This book sells for $39.95 on Amazon.com.

Audience

In the book’s preface, Morville and Rosenfeld state that the audience for the book is “anyone who’s interested in information architecture, and maybe a few who aren’t.” Morville and Rosenfeld assume that the majority of their readers are already practitioners of information architecture and want to improve their skills and catch up on the latest techniques. However, the audience of the book can also be described as anyone who is curious as to how to improve their websites to make the site’s information more organized. The book is understandable both to newcomers to design of websites as well as experienced professionals.

Additionally, while most of the book is centered around techniques and practice, the business case portions of the book may also be of interest to IT managers who want to know how information architecture can improve their bottom line. However, most of this information is captured at the end of the book, and may be easily overlooked by managers just looking for a “how does information architecture improve the value of my website” summary.

Chapter by Chapter Summary

Part I. Introducing Information Architecture

Chapter 1: Defining Information Architecture

Information architecture is a difficult field to define. However, there are several components to IA. These include the idea of information as opposed to data and knowledge management, the structuring,
Chapter 2: Practicing Information Architecture

IA specialists can come from many different disciplines, including information science, marketing, and computer science. One of the book’s most famous aspects is its depiction of information architecture as the connection between content, context, and users. Content refers to document/data types, content objects, volume, and existing structure. Context refers to business goals, resources, constraints, etc. Users refer to your audience, tasks, needs, and experience.

Chapter 3: User Needs and Behaviors

It’s easy to have a “too simple” view of users: they ask questions, something magically happens, and they receive an answer. In reality, users don’t always know what they want, they get frustrated, context needs to be considered, and finding information is not straightforward. Users have different types of information needs, including wanting to know everything, only a few good things, or just one “right” thing. These needs carry with them different information seeking behaviors.

Part II. Basic Principles of Information Architecture

Chapter 4: The Anatomy of Information Architecture

Information architecture provides the context for the content that tell us what we can do while we’re at a website. This includes use of visible browsing aids (global and local navigation, site maps and indexes, wizards, guides, and categories), search aids (search interface, queries, search algorithms and results), and content and tasks (headings, links, metadata, chunks, lists, and identifiers). Also, invisible aspects such as vocabularies, thesauri, and rule sets impact the architecture.

Chapter 5: Organization Systems

Organization schemes are used to divide information into well defined section (either alphabetical, chronological, or geographical), or into categories (task, audience, metaphor, or hybrids). Organization structures can either be hierarchies (also known as “taxonomies) or databases. Hierarchal categories need to balance exclusivity and inclusivity as well as breadth as depth to make sense to the user. Databases must make use of metadata that links IA to the database schema, as well as hypertext to link information together.

Chapter 6: Labeling Systems

Correct labeling is important in order to minimize the disconnect between the authors’ and users’ language. Some problems with labels include not being representative of content, a lack of differentiation, and the use of jargon language. Labels include contextual links, headings, navigation, and index terms. Icons instead of text are undesirable as they can be highly ambiguous. Labels can be determined from competitors, your other sites, content analysis, subject matter experts, or users.

Chapter 7: Navigation Systems

There are several types of navigation systems. Embedded navigation systems are wrapped around content of the site, provide context and flexibility, and help users understand where they are and where they can go. It is important to not let navigation drown out your content or be too limited. Supplemental navigation systems such as sitemaps (similar to a table of contents), a site index (alphabetical listings), or guides (introductory walkthroughs) may be used to complement a site’s main navigation. Advanced navigation techniques include personalization and customization as well as social navigation such as recommendation systems.
Chapter 8: Search Systems
Search systems are a large part of the information architecture of a website. However, some sites may not require a search system if they do not have a lot of content, are meant for browsing, or if the developers do not have the resources to optimize the search engine. Different types of algorithms may be used to find information such as pattern matching and query builders. It is important to present results in a meaningful way that make sense for the content that you wish to display. Designing a good search interface and backend takes a significant amount of time and expertise to optimize for your users.

Chapter 9: Thesauri, Controlled Vocabularies, and Metadata
Well designed metadata, thesauri, and controlled vocabularies hold a system together and create a consistency throughout the system that provides a satisfying user experience. Metadata describes content objects to improve navigation and retrieval. Controlled vocabularies are lists of equivalent terms or preferred terms that combine to create a hierarchal arrangement of preferred terms. A thesaurus, in the information architecture context, refers to a controlled vocabulary that takes into consideration equivalence, hierarchical, and relationships to improve information retrieval.

Part III. Process and Methodology
Chapter 10: Research
Research for IA design includes reviewing background materials, understanding the business context and existing structure/content/audience, and getting buy-in for a project. Content should be analyzed with a heuristic evaluation that tests a site against guidelines, along with a content analysis that reviews documents and objects that exist. Benchmarking helps create a point of reference in order to make accurate measurements. User behavior can be studied by analyzing statistics and search logs, creating surveys, and completing field studies, among other techniques. Ultimately, testing and research helps build consensus on the direction and scope of the site’s structure and organization.

Chapter 11: Strategy
Information architecture strategy bridges research and design. It provides high level recommendations regarding IA administration, technology integration, labeling systems, document type identification, metadata field definition, and navigation design. One develops an IA strategy in a four step process: think, articulate, communicate, and test (TACT). Thinking involves converting research into ideas, articulation is the development of diagrams/scenarios/wireframes, communication presents ideas, and testing involves testing various prototype designs.

Chapter 12: Design and Documentation
There are several types of IA documentation. Blueprints show the relationships between pages and content components. Wireframes depict how an individual page should look from an architectural perspective. Content maps break content into “chunks” and determine where each chunk goes on the site. Content modeling involves specifying what chunks you’re using, how they’re related to each other, and the metadata that describes them. Design sketches followed by web-based prototypes help mockup the design. Final documentation steps include creating architecture style guides that explain the organization of the site and maintaining the architecture.

Part IV. Information Architecture in Practice
Chapter 13: Education
This chapter describes various methods of learning about information architecture. This discipline is very new, and few specialized IA education programs exist. An advanced degree is not currently needed to become a successful IA. Experience, apprenticeship, attending seminars, and following IA literature are other effective techniques used to learn about the field.
Chapter 14: Ethics
The book also briefly covers some ethical considerations for information architects. These include intellectual access (providing access to information users didn’t know existed) and the impact that labels may have on people and perceptions. Additionally, categorizing and classifying information must be done in a sensitive manner. Granularity concerns include consequences that might result from “chunking” content. Also, information architects (IAs) must keep in mind accessibility issues.

Chapter 15: Building an Information Architecture Team
This chapter describes the role of IAs within a business context. IAs may be contractors/consultants or may be in-house staff on hand for IA projects. Making these decisions depends on the projects themselves, money and politics, wanting an outsider vs. insider perspective, and the business context. The book describes an IA “dream team” that displays the types of IA specialists a business can hire: strategy architects, thesaurus designers, controlled vocabulary managers, indexing specialists, interaction designers, IA software analysts, IA usability engineers, cartographers, and search analysts.

Chapter 16: Tools and Software
Tools that information architects use will always undergo continuous change. The book describes current products that fit under the following categories: automated categorization, automated taxonomy generation, search engines, thesaurus management tools, collaborative filtering tools, portal solutions, content management software, analytics, database management software, and diagramming software.

Part V. Information Architecture in the Organization

Chapter 17: Making the Case for Information Architecture
The business value of IA is often hard to quantify. In terms of hard numbers, it is almost always impossible to calculate true ROI for an information architecture. A rough ROI can be calculated, but IA should be treated as a valuable but not quantifiable field. The book discusses an IA “value checklist” that includes reducing cost, providing a competitive advantage, increasing product awareness, and solidifying business strategy, among others.

Chapter 18: Business Strategy
Business strategy drives information architecture and IA design exposes gaps and inconsistencies in business strategy. This chapter defines business strategy and how to align IA activities with this strategy. The book argues that even though IA at its core is invisible, as users only see the visual interface, it is still crucial to build a solid information framework in order to support larger business objectives.

Chapter 19: Information Architecture for the Enterprise
The ultimate goal of enterprise IA is to create a centralized, enterprise-wide information architecture that cuts across political and other boundaries to provide better ways of accessing an organizations’ content. Centralization reduces costs, increases revenues, allows for clearer communication, among other benefits. However, efforts often fail due to scheduling, the challenge of meeting everyone’s needs, and insufficient support from management. In this chapter, the book provides a framework for centralization as well as suggestions for rollout to help simplify this complicated challenge.

Part VI. Case Studies
This section of the book describes case studies from MSWeb (an enterprise intranet) and evolt.org (an online community) that summarize the techniques and strategies from the book in the context of larger examples.
Most Important Points

The basis of Information Architecture for the World Wide Web is that effective information architecture design is dependent on understanding the “information ecology” composed of users, content, and context. The core part of this book introduces specific information architecture principles and relates them back to the information ecology. Some key takeaways include that there is no single information architecture technique that will apply to all businesses or organizations. However, investing in designing an effective information architecture will have enormous benefits to a website. If users cannot find the information they are looking for, all other design and usability considerations are worthless.

All of the principles are presented with the understanding that you must focus on how all of them connect to each other. A website cannot be strong in a specific IA principle and expect that that makes up for other IA faults that may be present. Additionally, it is also important to recognize that IA principles are evolving and new tools and techniques are constantly being developed to meet the needs of emerging technologies. Therefore, continual learning is an important part of being a successful information architect.

Strengths and Weaknesses

The second edition of Information Architecture for the World Wide Web, published in 2002, is effective at presenting the basic fundamentals of information architecture. Additionally, the book is good at explaining how to plan the architecture of a website as well as the different tools and techniques one can use to implement the principles. While it could be expanded and updated upon, the sections on IA’s impact on business are beneficial additions to demonstrate the importance of focusing on information architecture.

However, the book also contains some out-of-date content. For instance, this edition does not address many emerging technologies that are changing the way that we think about information architecture. Technologies such as wikis, user centered social networks, and tagging, among others, are not discussed in this book. Web 2.0 has given us many new methods of organizing and accessing information, which goes beyond the basics presented in the second edition of this book.

Additionally, many of the sections describing principles of IA lack clear and detailed examples that demonstrate both good and poor information architecture design. Instead, some broad descriptions are given that are sometimes unclear. In particular, the chapter on thesauri, controlled vocabularies, and metadata, could use examples that demonstrate each type of thesauri/vocabulary/metadata instead of just stating when they should be used. Each concept is simply introduced without always being applied, though some additional detail is provided in the case studies at the end of the book. Also, sometimes the book’s wording seems geared towards experienced IA professionals as opposed to beginners. The book tries to cover both audiences, but may lose beginners with the relative lack of examples it provides.

Overall, the book is presented as a powerful IA reference book as opposed to a book meant to be read cover-to-cover. However, it is also structured in a way so that each section flows into the next, allowing one to understand how each principle relates to another and what its benefit is to the organization as a whole.

Final Recommendation

Despite some out-of-date information, Information Architecture for the World Wide Web is a valuable book for people entering or currently in a design related field. I recommend it, though it would be most beneficial to look into the most recent edition of the book. A third edition was published in November, 2006, and contains some more up-to-date information. The second edition, however, does meet what it set out to do by describing many aspects of information architecture and providing tools and techniques that can be implemented in practice.