



PROJECT MUSE®

Information Representation and Retrieval in the Digital Age
(review)

Anatoliy Gruzd

Canadian Journal of Information and Library Science, Volume 34,
Number 4, December / décembre 2010, pp. 475-477 (Review)

Published by University of Toronto Press

DOI: <https://doi.org/10.1353/ils.2010.0009>



➔ *For additional information about this article*

<https://muse.jhu.edu/article/404858>

Reviews

Comptes rendus

Heting Chu. *Information Representation and Retrieval in the Digital Age*. 2nd ed. Medford, NJ: Information Today, 2010. ISBN 978-1-57387-393-2. US\$28.98.

This book is a comprehensive introduction to Information Retrieval (IR). The author, Heting Chu, is a professor at the Palmer School of Library and Information Science at Long Island University; she received her MLIS from McGill University in Canada and her PhD from Drexel University in the United States, and she is an active researcher and educator in this field. Her work was published in high-impact journals such as the *Journal of the American Society for Information Science and Technology*, the *Journal of Academic Librarianship*, and *Scientometrics*.

Dr. Chu has also co-authored three other books in the field of IR. This book covers a wide range of topics, such as fundamental retrieval techniques and models, evaluation frameworks, and a discussion of multilingual and multimedia retrieval. It was originally published in 2001, and this second edition has been updated to include many contemporary IR topics such as social tagging, digital object identifiers, and the semantic web. This edition has also added an important section on user-centred IR models (chapter 10) and removed an outdated section on CD-ROM systems evaluation.

The book is organized into 12 chapters. Chapter 1 gives an overview of the field and introduces the main concepts and components of IR systems. Chapters 2 and 3 introduce fundamental approaches to information representation, covering topics such as metadata, indexing, categorization, and summarization. Chapter 4 focuses on the use of language in information representation and retrieval and includes topics such as controlled vocabulary, taxonomies, and folksonomies. Chapters 5 through 7 review basic retrieval techniques, approaches, and system-oriented models such as Boolean logic, vector space, and probability models. Chapter 7 provides a very helpful discussion of information strategies and how they may be supported by different IR models. Chapter 8 describes IR systems such as CD-ROM-based systems, computerized

library catalogues and Internet retrieval systems. Chapter 9 deals with multilingual, multimedia, and hypertext retrieval. Chapter 10 covers the main cognitive models in IR and user-system interaction. Chapter 11 gives a detailed overview of evaluation techniques and measures as well as major evaluation projects such as the Cranfield experiments and TREC. Finally, chapter 12 describes the use of artificial intelligence in IR and briefly covers topics such as natural language processing and the semantic web.

What sets this book apart from other books on this topic (e.g., Grossman and Frieder 2004; Manning, Raghavan, and Schütze 2008) is its purposeful use of less technical English, which makes the material more accessible to a wider audience. Another especially useful feature is the concise review sections at the end of most chapters that summarize the topics discussed within each chapter. In addition, and in keeping with the title, the author devoted a significant part of the book to discussing information representation in chapters 2–4 as a separate topic in its own right; other publications on this topic often touch only briefly on this topic and present it as an internal part of information retrieval. The book also includes a discussion of Web 2.0 techniques and technologies, such as social tagging and the semantic web, and describes their significant influence on the way users organize and search for information on the Internet. Finally, the book is written with the users of information retrieval systems in mind; this approach is especially evident in chapter 10, which covers cognitive models and user–system interaction.

In conclusion, this edition could be improved in a number of ways. First, social tagging and folksonomies are discussed in two separate sections of the book, once in chapter 2 and again in chapter 4; it would be more efficient to cover this topic in one chapter. Second, in chapter 8, the discussion on trends in IR systems would greatly benefit from a brief overview of recent advances in clustering and visual Web-based IR systems such as Carrot² (<http://search.carrot2.org>), eyePlorer (<http://eyeplore.com>), Quintura (<http://www.quintura.com>), and Viewzi (<http://www.viewzi.com>). Finally, there is very little discussion of task-based or context-based IR systems and models; this topic is discussed only briefly in chapter 10 in a section on ‘other user-centered models.’ Considering the growing importance of these models, a fuller discussion of this topic might be necessary in a future revision.

References

- Grossman, D.A., and O. Frieder. 2004. *Information retrieval: Algorithms and heuristics*. Dordrecht: Springer.
- Manning, C.D., P. Raghavan, and H. Schütze. 2008. *Introduction to information retrieval*. New York: Cambridge University Press.
- Anatoliy Gruzd, assistant professor, School of Information Management, Dalhousie University.