

Iris Xie: Interactive information retrieval in digital environments

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As the title indicates, Iris Xie's book approaches Interactive Information Retrieval (IIR) from a wide range of currently relevant digital application environments. The author links these environments with a new IIR meta model.

The book can be divided into two parts:

The first part, chap. 1 through chap. 7, provides a very thorough review of the relevant literature. Here, the reader's attention is directed toward user-oriented IR in general, OPAC environments, online databases, web search, digital libraries, TREC, as well as a very comprehensive review of existing IIR models.

The second part introduces, verifies, and discusses a new model for IIR in the chapters 8 to 10; and chap. 11 summarizes the model and outlines a possible research agenda for the future of IIR. Chapters are often self-contained with very occasional references to similar points made earlier.

Chapters 8, 9 and 10 represent the core of the book, introducing Xie's work, the Planned-Situational IIR model. The model originates in her doctoral work and attempts to integrate it with a large number of existing models and theories. The discussion is additionally strengthened with results from numerous user studies. The work is thus interesting and relevant, since IR needs a stronger theoretical base and more integrative work, especially in its more recent user-oriented direction, including a better understanding of user interaction.

Chapter 7 reviews existing IIR models as an historical extension of chap. 1 and in preparation for introducing the Planned-Situational IIR model in chap. 8. The author divides all reviewed models into two groups: macro-level and micro-level. For the more general macro-level models, Xie focuses on Ingwersen's Cognitive Model, Belkin's Episode Model and Saracevic's Stratified Interaction Model, based on their influence in the research community. In addition, the author presents an array of micro-level models that illustrate selective aspects of user interaction. Chapter 7 is a valuable chapter for new researchers in the field, providing a structured overview to the subject that offers a wide

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range of relevant topics for further reading. In chap. 8, Xie introduces her Planned-Situational IIR Model that integrates key concepts from previous models and incorporates findings from a wide range of reviewed literature, including her own. In particular, she clarifies the relationship between goals and tasks, describes their levels and dimensions, defines types of information seeking strategies, describes dimensions of plans and situations, and identifies the types of shifts in current search goals and strategies, including the factors that affect such shifts. Chapter 9 presents a pilot study conducted by the author that attempts to validate the model. Unfortunately, a promising study with a much larger scale is only mentioned in the summary, though it would have been a very useful addition to the chapter. One hopes this study will be included in the next edition of the book. Chapter 10 summarizes the model more directly and offers theoretical and practical implications for the reader and a number of concrete suggestions for the practitioner. Every chapter concludes with a short summary that offers the main points and a table that lists all reviewed research studies. The latter is a very useful feature that enables the reader to access quickly the most relevant work; like a map for a complex research landscape.

The book is very structured and offers an impressive amount of depth and detail. However, occasionally the wealth of detail impedes the flow of the argument and interferes with readability. For example, Xie carefully explains small differences of the model at various stages of its development (p. 233) where the average reader would benefit more from a description of the model in its fully developed form. On p. 269, an entire section is dedicated to quote participants' utterances during an experiment. In my opinion, this is interesting but unnecessary; such a detailed account would have been more appropriate for a research paper.

From the research perspective, the Planned-Situational IIR model is the most important part of the book, and Fig. 8.1, in overviewing the model, is the most important diagram in chap. 8 and perhaps the book. Unfortunately, the author's presentation downplays the diagram's significance. Future editions of the book should therefore present this part of the chapter with more emphasis on its potential importance for the field.

The book incorporates many tables that impair understanding and readability. For example, in chap. 8, I found myself merging tables that appeared on several pages. The profusion of detail might be perceived as a disadvantage by readers, exemplifying the maxim that less is sometimes more. Sometimes, the author chooses tables to illustrate one-dimensional definitions (e.g. Table 8.10) or provide only a single row of information (e.g. Tables 9.1, 9.3 and 9.4) that could have been better presented as text or diagrammatically. The figure on p. 250, attempting to explain the factors leading to strategic shifts, unfortunately drowns the reader in a sea of arrows. Often, the text does a lot better than the diagrams.

The book is a valuable reference, based on its large body of covered literature. The topical comprehensiveness and the self-contained chapters qualify it as a text book for a course in IIR. The book is also valuable as a guide for researchers who want to review the many facets of IIR and develop an understanding of the important issues worth researching. Designers and practitioners, however, contrary to what is stated in the preface, might find it hard to relate the research presented (included Xie's model) to specific decisions they may have to make with respect to own projects, products and services. Although chap. 10 attempts to verify the model, this part is clearly not the focus of the book. Future editions would benefit from more examples that highlight the applicability of the model and demonstrate the vast potential it brings to the field.

Other than that, the book is dense and very rich in valuable information. It is no book to be read in the bath tub, but it is an excellent addition for your bookshelf if you are a researcher interested in interactive IR and what the discipline has to offer, now and in the future.