

Uncertainty Management in Information Systems: From Needs to Solutions, edited by Amihai Motro and Philippe Smets (Kluwer Academic Publishers, 1997).

Reviewer: Kathleen L. Henebry, Associate Professor, Department of Finance, Banking and Law, University of Nebraska at Omaha.

This book, *Uncertainty Management in Information Systems: From Needs to Solutions*, was not quite what I expected from the title. I had anticipated a book dealing with uncertainty and computer information systems on a broad scale. In fact, the book deals with database systems and uncertainty addressing data integrity and reliability. The book is a compilation of chapters written by many experts in database systems from around the world. The authors include researchers from both the academic and practical business arenas.

The book is divided into fifteen chapters, most of which deal with a specific uncertainty topic. The book contains chapters specific to several types of databases including: relational databases, intelligent databases, scientific and statistical databases, information retrieval systems and approximate reasoning systems. Other chapters discuss issues such as the treatment of flexible queries and uncertain or imprecise databases, models for belief representation, imperfect information, knowledge discovery and acquisition and representations of uncertainty in information systems.

The first two chapters layout the scope and structure of the book and introduce readers to the vocabulary and definitions of uncertainty, imprecision and inconsistency. Both of these chapters are readily understandable to someone with very little or no background in database creation and usage. However, a basic high school level understanding of sets and set notation and simple probability theory are needed even in these introductory chapters.

Chapter two, "Sources of Uncertainty, Imprecision, and Inconsistency in Information Systems," is useful for anyone who sets up or uses a database to help them understand where errors can creep in and what types of errors they could be. We should all be aware of this information when interpreting and using results of database searches and analysis of the data contained in databases in our teaching and research activities.

Readers familiar with the notation and vocabulary of sets and uncertainty may choose chapters in any order. Each is self-contained and deals with a topic in depth. Those unfamiliar with the notation and language should read the first two chapters as a preface. However, thereafter, the chapters need not be read in any specific sequence.

Although this book is one that requires a high comfort level with mathematical set notation and logic notation and language, it is still possible for readers less familiar to glean some useful information from reading at least some parts of the book. I admit, I have forgotten a great deal about logic and set notation, but still, I found much of the book interesting and useful. I now know more about the pitfalls of blind reliance on the contents of databases than when I started reading. I am also much more aware of how errors can be prevented and how the impact of errors can be minimized. The liberal number of clear examples throughout the book give even novices a good idea of the types of imperfections that can occur and what the

effects are likely to be for the end user of the database. There are some very good lessons here for designers of relational databases - something more and more people create and use every day, often without any understanding of how databases work or are structured.

Some of the chapter authors are less than generous with definitions of special terms. For example, chapter four contains many specialized terms, but does not define them. This makes for a very tough read for the non-expert. Also, one general irritant throughout the book is the presence of many grammatical errors that indicate a lack of attention to detail on the part of the editors and publishers. In a book dealing with the need to control errors in databases, I find this ironic. For what is this book but a collection of information, i.e., a database of sorts?

The final chapter in the book is a bibliography of works on managing uncertainty in information systems. It is divided into topical sections that make it easier to find articles in specific areas. The bibliography contains 436 entries and should be a valuable resource to readers seeking further information in this field. The bibliography chapter does not, however, include all the sources cited in the bibliographies at the end of each chapter. Thus, it avoids repetition.

Some of the sources cited in individual chapters are not, strictly speaking, articles dealing only, or even mainly, with information systems. Many of those sources deal with much broader theories and applications of uncertainty, probability and set theory. There are nearly 200 of these additional citations contained in the bibliographies of chapters two through fourteen. The book itself is also indexed to allow readers to quickly locate information on specifics.

In summary, although I am by no means expert in the fields of uncertainty, probability and information system creation and management, I found much of this book interesting and useful. It succeeds quite well as a reference source in its area. I recommend at least Chapter Two for anyone who will be creating, using or managing a database. Such readers may save themselves a bottle of aspirin or two by thinking about the issues discussed there.

The Risk Manager's Desk Reference, Second Edition, edited by Barbara J. Youngberg (Aspen Publishers, 1998).

Reviewer: Beverly J. Frickel, University of Central Oklahoma.

While this reference book's generic title implies it is a guide for general risk management activities, the focus is actually centered on the health care industry. More and different health care delivery methods and the seemingly conflicting concerns about quality of care and cost control efforts has created numerous managerial challenges for health care providers. As the book's introduction notes, risk management in this setting has evolved from an organizational-clinical model to a network-business, finance, and clinical model. This book sets out to be a comprehensive source of information about the application of risk management concepts in the health care industry within the context of an ever-changing environment.

The more than 500-page reference book incorporates the work of forty authors. The contributing authors represent a variety of functions within the health