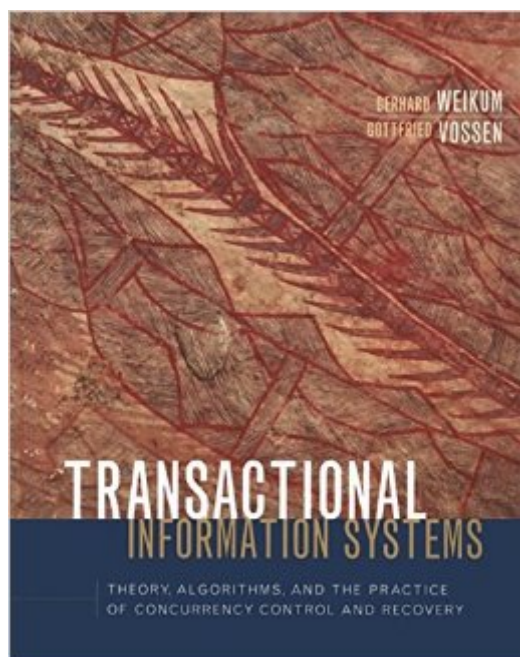# Transactional Information Systems: Theory, Algorithms, And The Practice Of Concurrency Control And Recovery (The Morgan Kaufmann Series In Data Management Systems)

Synopsis

Transactional Information Systems is the long-awaited, comprehensive work from leading scientists in the transaction processing field. Weikum and Vossen begin with a broad look at the role of transactional technology in today's economic and scientific endeavors, then delve into critical issues faced by all practitioners, presenting today's most effective techniques for controlling concurrent access by multiple clients, recovering from system failures, and coordinating distributed transactions.The authors emphasize formal models that are easily applied across fields, that promise to remain valid as current technologies evolve, and that lend themselves to generalization and extension in the development of new classes of network-centric, functionally rich applications. This book's purpose and achievement is the presentation of the foundations of transactional systems as well as the practical aspects of the field what will help you meet today's challenges.* Provides the most advanced coverage of the topic available anywhere--along with the database background required for you to make full use of this material.* Explores transaction processing both generically as a broadly applicable set of information technology practices and specifically as a group of techniques for meeting the goals of your enterprise.* Contains information essential to developers of Web-based e-Commerce functionality--and a wide range of more "traditional" applications.* Details the algorithms underlying core transaction processing functionality.

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Customer Reviews

Database concurrency control and recovery is one of pinnacles of computer science. An amazing collection of models, theoretical results, and implementation techniques enable thousands of users to simultaneously pound on a large database implemented on unreliable disks and networks, with full confidence that their data will be correctly stored. This book tells how this miracle is accomplished.I teach database systems and also do research on databases, including systems-level refinements to concurrency control and recovery algorithms. This book has been invaluable to me in understanding the three major aspects of concurrency control in databases: the beautiful theory, the carefully constructed algorithms, and the specifics of the practice.When this book first came out two years ago, I read most of it over a period of an intense week. That was such an enjoyable experience, because the book is very well structured and written in a smooth yet careful style. The authors ensured that all required concepts were in place before introducing a new concept. And the prose just flows, rendering difficult concepts understandable through well-chosen examples.Since then I have referred to this book often with specific questions that arose in my research. Each time, my question has been answered fully in the book.Each chapter ends with a section entitled "Lessons Learned" which summarizes the key ideas of the chapter and just as importantly, states the practical application of each concept. Some concepts have not yet been realized in practice; the authors are up front about this and explain why.

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