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世界工商管理名典系列（影印版）

Management Information Systems

New Approaches to Organization and Technology

Fifth Edition

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组织和技术的新途径

（第五版）

Kenneth C. Laudon
Jane P. Laudon

清华大学出版社
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出版说明

为了适应我国社会主义市场经济的建设和发展，满足国内广大读者了解、学习和借鉴国外先进的管理经验和掌握经济理论的前沿动态，清华大学出版社与 Prentice Hall 国际出版公司合作影印出版一系列英文版经济管理方面的图书。我们所选择的图书，基本上是已再版多次、在国外深受欢迎、并被广泛采用的优秀教材，绝大部分是该领域中较具权威性的经典之作。在选书的过程中，我们得到了很多专家、学者的支持、帮助与鼓励，在此深表谢意！本书由清华大学经济管理学院毛波先生推荐并审阅，在此一并致谢！

由于原作者所处国家的政治、经济和文化背景等与我国不同，对书中所持观点，敬请广大读者在阅读过程中注意加以分析和鉴别。

我们期望这套影印书的出版对我国经济科学的发展能有所帮助，对我国经济管理专业的教学能有所促进。

欢迎广大读者给我们提出宝贵的意见和建议；同时也欢迎有关的专业人士向我们推荐您所接触到的国外优秀图书。

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About the Authors

Kenneth C. Laudon is a Professor of Information Systems at New York University's Stern School of Business. He holds a B.A. in Economics from Stanford and a Ph.D. from Columbia University. He has authored eleven books dealing with information systems, organizations, and society. Professor Laudon has also written over forty articles concerned with the social, organizational, and management impacts of information systems, privacy, ethics, and multimedia technology.

Professor Laudon's current research is on the planning and management of large-scale information systems for the 1990s and multimedia information technology. He has received grants from the National Science Foundation to study the evolution of national information systems at the Social Security Administration, the IRS, and the FBI. A part of this research is concerned with computer-related organizational and occupational changes in large organizations, changes in management ideology, changes in public policy, and understanding productivity change in the knowledge sector.

Ken Laudon has testified as an expert before the United States Congress. He has been a researcher and consultant to the Office of Technology Assessment (United States Congress) and to the Office of the President, several executive branch agencies, and Congressional Committees. Professor Laudon also acts as a consultant on systems planning and strategy to several Fortune 500 firms.

Ken Laudon's hobby is sailing.

Jane Price Laudon is a management consultant in the information systems area and the author of seven books. Her special interests include systems analysis, data management, MIS auditing, software evaluation, and teaching business professionals how to design and use information systems.

Jane received her Ph.D. from Columbia University, her M.A. from Harvard University, and her B.A. from Barnard College. She has taught at Columbia University and the New York University Graduate School of Business. She maintains a lifelong interest in Oriental languages and civilizations.

The Laudons have two daughters, Erica and Elisabeth.

Management Information Systems: Organization and Technology reflects a deep understanding of MIS research and teaching as well as practical experience designing and building real world systems.

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PREFACE

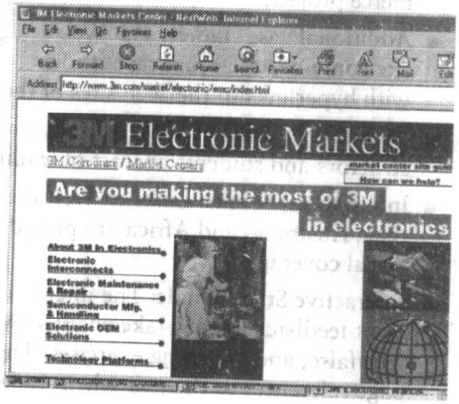
Management Information Systems: New Approaches to Organization and Technology (Fifth Edition) is based on the premise that it is difficult—if not impossible—to manage a modern organization without at least some knowledge of information systems—what information systems are, how they affect the organization and its employees, and how they can make businesses more competitive and efficient. Information systems have become essential for creating competitive firms, managing global corporations, and providing useful products and services to customers. This book provides an introduction to management information systems that undergraduate and MBA students will find vital to their professional success.

The Information Revolution in Business and Management: New Approaches to Organization and Technology

Globalization of trade, the emergence of information economies and the growth of the Internet and other global communications networks have recast the role of information systems in business and management. Companies can use information technology to design global business organizations linking factories, offices, and mobile sales forces around the clock. The Internet is becoming the foundation for new business models, new business processes, and new ways of distributing knowledge. Accordingly we have changed the title of this text to *Management Information Systems: New Approaches to Organization and Technology* because we believe these changes are creating new approaches to organization and management.

New to the Second Edition

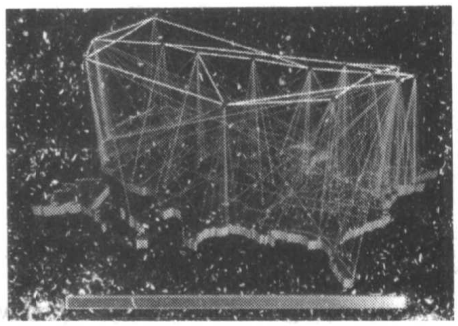
This edition maintains the strengths of earlier editions while showing how the Internet and related technologies are transforming information systems and business organizations. The fifth edition was reworked from start to finish to integrate the issues surrounding the growing use of the Internet more fully into the MIS course. This new direction is reflected in the following changes:



The Internet and Electronic Commerce: The Internet and electronic commerce are introduced in Chapter 1 and integrated throughout the text and the entire learning package. A full chapter on the Internet and enterprise-wide networking (Chapter 10) describes the underlying technology, capabilities, and benefits of the Internet, with expanded

treatment of electronic commerce and Internet business models. The Part II case study is "Electronic Commerce Strategies: A Tale of Two Companies."

Internet Integrated into Every Chapter: Every chapter contains a Window On box, case study, or in-text discussion of how the Internet is changing a particular aspect of information systems. Intranets, extranets, "push" technology, Java software, intelligent agents, Internet-based group collaboration, and Internet security are among the topics given detailed coverage.



Laudon & Laudon Web site [http://www.prenhall.com/laudon] The Laudon & Laudon Web site has been enhanced to provide a wide array of capabilities for interactive learning and management problem-solving. They include:

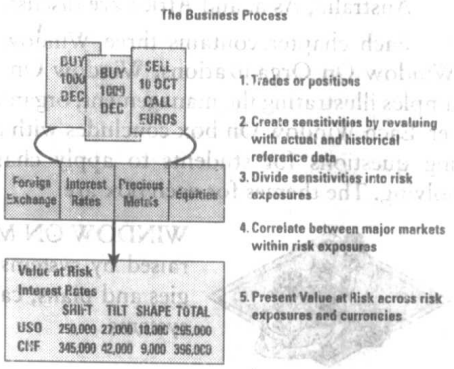
- **The Internet Connection and Interactive Internet Projects.** The Internet Connection can be found in each chapter. The Internet Connection interactively shows students how to use the Internet for research and management problem-solving and helps professors integrate the Internet into the MIS course. The Internet Connection icon in the text directs students to various sites on the World Wide Web of the Internet where they can find interactive projects, additional case studies, or resources related to topics and organizations discussed in the chapter.
- **Interactive Electronic Commerce Projects.** The Web site features six interactive electronic commerce projects covering problems in international marketing, pricing, sales support, sales planning, customer support, logistics planning, and investment portfolio analysis. Students are presented with a problem requiring them to use interactive features of a Web site to develop a solution. They will be able to obtain the information required by the solution by inputting data on-line and using the software at that Web site to perform the required calculations or analysis.
- **A Virtual Tour of Electronic Commerce Sites:** Students are presented with a tour of electronic commerce sites where they can explore various Internet business models and electronic commerce capabilities. Students can use what they have learned on the tour to complete a more comprehensive electronic commerce project.

- **Additional case studies:** The Web site contains additional case studies with hyperlinks to the Web sites of the organizations they discuss.
- **Technology Updates:** The Web site provides technology updates to keep instructors and students abreast of leading-edge technology changes.
- **International Links:** Links to Web sites in Canada, Europe, Latin America, Asia, Australia, and Africa are provided for professors wishing more international coverage.
- **Interactive Study Guide:** The interactive study guide provides students with instant feedback as they take chapter by chapter quizzes of multiple choice, true/false, and matching exercises. The feedback includes hints and relevant page references to the text when students miss questions.

New leading-edge topics. The text includes up-to-date coverage of topics such as:

- Intranets and extranets
- Internet business models
- Network computers
- Java and the software revolution
- "Push" technology
- Internet security, firewalls, and electronic payment systems
- Internet privacy issues
- Supply chain management
- Systems for knowledge management
- Virtual organizations
- On-line analytical processing (OLAP) and multidimensional data analysis
- Intelligent agents
- Data mining and knowledge discovery

Expanded treatment of business processes, business models, and their relationship to information technology. Business processes and business models receive new emphasis throughout the text. Chapter 11 presents an expanded discussion of business process redesign and reengineering. The text concludes with a Business Process Redesign Project. Throughout the text are examples of how the Internet has helped organizations redesign their business processes and create new business models.

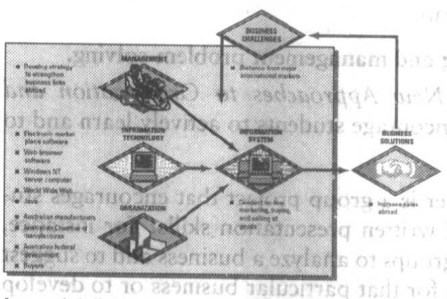


Management Wrap-Up sections at the end of each chapter summarize key issues using the authors' management, organization, and technology framework for analyzing and describing information systems.

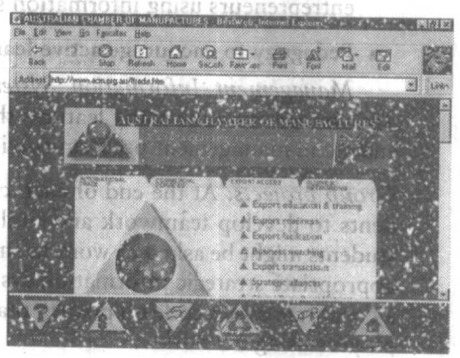
Unique Features of This Text

Management Information Systems: New Approaches to Organization and Technology (Fifth Edition) has many unique features designed to create an active, dynamic learning environment.

- **Integrating Technology with Content:** The textbook is the only MIS textbook that provides a full array of interactive support tools for integrating technology into the MIS course. The text is accompanied by a CD-ROM and the Laudon Web site, providing an integrated learning system for the student. Highlights



A special diagram accompanying each chapter-opening vignette graphically illustrates how management, organization, and technology elements work together to create an information system solution to the business challenges discussed in the vignette. The diagram can be used as a starting point to analyze any information system problem.



Each chapter opens with a vignette illustrating the themes of the chapter by showing how a real-world organization meets a business challenge using information systems.

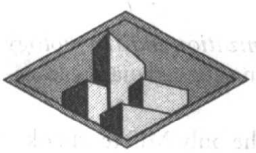
include audio/video overviews explaining key concepts in the text, simulations, interactive Web exercises hyperlinked from the CD to the Web site, an interactive study guide for students supporting the chapter objectives, technology updates, additional cases, and more.

- **An integrated framework for describing and analyzing information systems.** An integrated framework portrays information systems as being composed of management, organization and technology elements. This framework is used throughout the text to describe and analyze information systems and information system problems.
- **Real-World Examples:** Real-world examples drawn from business and public organizations are used throughout to illustrate text concepts. More than 100 companies in the United States and over 100 organizations in Canada, Europe, Australia, Asia, and Africa are discussed.

Each chapter contains three Window On boxes (Window On Management, Window On Organizations, Window On Technology) that present real-world examples illustrating the management, organization, and technology issues in the chapter. Each Window On box concludes with a section called *To Think About* containing questions for students to apply chapter concepts to management problem solving. The themes for each box are:

WINDOW ON MANAGEMENT: Management problems raised by systems and their solution; management strategies and plans; careers and experiences of managers using systems.

WINDOW ON TECHNOLOGY: Hardware, software, telecommunications, data storage, standards, and systems-building methodologies.



WINDOW ON ORGANIZATIONS: Activities of private and public organizations using information systems; experiences of people working with systems.

- **Attention to small businesses and entrepreneurs.** A SMALL BUSINESS icon identifies designated chapter-opening vignettes, Window On boxes, and ending case studies highlighting the experiences and challenges of small businesses and entrepreneurs using information systems

- **Pedagogy to encourage active learning and management problem-solving.**

Management Information Systems: New Approaches to Organization and Technology contains many features that encourage students to actively learn and to engage in management problem-solving.

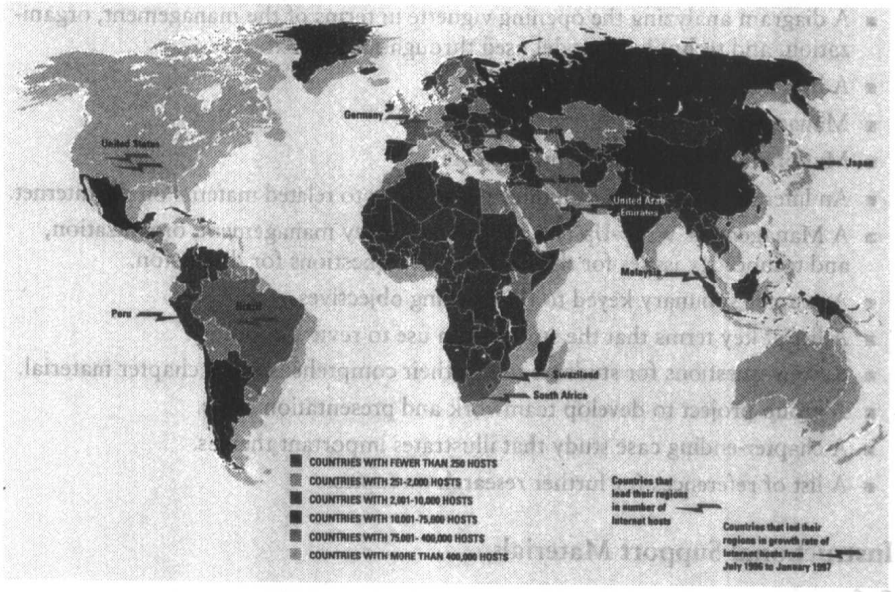
Group projects: At the end of each chapter is a group project that encourages students to develop teamwork and oral and written presentation skills. For instance, students might be asked to work in small groups to analyze a business and to suggest appropriate strategic information systems for that particular business or to develop a corporate ethics code on privacy that considers E-mail privacy and monitoring employees using networks.

Management Challenges Section: Each chapter begins with several challenges relating to the chapter topic that managers are likely to encounter. These challenges are multifaceted and sometimes pose dilemmas. They make excellent springboards for class discussion. Some of these Management Challenges are finding the right Internet

business model, the organizational obstacles to building a database environment, or agreeing on quality standards for information systems.

Case studies: Each chapter concludes with a case study based on a real-world organization. These cases help students synthesize chapter concepts and apply this new knowledge to real-world problems and scenarios. Major part-ending case studies, international case studies, and electronic case studies at the Laudon & Laudon Web site provide additional opportunities for management problem-solving.

- **A truly international perspective:** In addition to a full chapter on Managing International Information Systems, all chapters of the text are illustrated with real-world examples from over one hundred corporations in Canada, Europe, Asia, Latin America, Africa, Australia, and the Middle East. Each chapter contains at least one Window On box, case study or opening vignette drawn from a non-U.S. firm, and often more. The text concludes with five major international case studies contributed by leading MIS experts in Canada, Europe, Singapore, and Australia—Len Fertuck, University of Toronto (Canada); Helmut Krcmar, Stephen Wilczek and Gerhard Schwabe, University of Hohenheim (Germany); Donald Marchand, Thomas Vollmann, and Kimberly Bechler, International Institute for Management Development (Switzerland); Boon Siong Neo and Christina Soh, Nanyang Technological University (Singapore); and Peter Weill and J.B. Barolsky, University of Melbourne (Australia).



Book Overview

The five parts of the book are designed to be relatively independent of each other. Each instructor may choose to emphasize different parts.

Part One is concerned with the organizational foundations of systems and their emerging strategic role. It provides an extensive introduction to real-world systems, focusing on their relationship to organizations, management, and important ethical and social issues.

Part Two provides the technical foundation for understanding information systems, describing hardware, software, storage, and telecommunications technologies. Part Two concludes by describing how all of the information technologies work together in enterprise-wide networking and internetworking with other organizations through the Internet.

Part Three focuses on the process of redesigning organizations using information systems, including reengineering of critical business processes. We see systems analysis

and design as an exercise in organizational design, one that requires great sensitivity to the right tools and techniques, quality assurance and change management.

Part Four describes the role of information systems in capturing and distributing organizational knowledge and in enhancing management decision-making. It shows how knowledge management, work group collaboration, and individual and group decision making can be supported by the use of knowledge work, artificial intelligence, decision support, and executive support systems.

Part Five concludes the text by examining the special management challenges and opportunities created by the pervasiveness and power of contemporary information systems: ensuring security and control and developing global systems. Throughout the text emphasis is placed on using information technology to redesign the organization's products, services, procedures, jobs and management structures, with numerous examples drawn from multinational systems and global business environments.

Chapter Outline

Each chapter contains the following:

- A detailed outline at the beginning to provide an overview.
- An opening vignette describing a real-world organization to establish the theme and importance of the chapter.
- A diagram analyzing the opening vignette in terms of the management, organization, and technology model used throughout the text.
- A list of learning objectives.
- Management challenges.
- Marginal glosses of key terms in the text.
- An Internet Connection icon directing students to related material on the Internet.
- A Management Wrap-Up tying together the key management, organization, and technology issues for the chapter, with questions for discussion.
- A chapter summary keyed to the learning objectives.
- A list of key terms that the student can use to review concepts.
- Review questions for students to test their comprehension of chapter material.
- A group project to develop teamwork and presentation skills.
- A chapter-ending case study that illustrates important themes.
- A list of references for further research on topics.

Instructional Support Materials

Software

A series of optional management software cases called *Solve it! Management Problem Solving with PC Software* has been developed to support the text. *Solve it!* consists of 10 spreadsheet cases, 10 database cases and 6 Internet projects drawn from real-world businesses, plus a data diskette with the files required by the cases. The cases are graduated in difficulty. The case book contains complete tutorial documentation showing how to use spreadsheet, database, and Web browser software to solve the problems. A new version of *Solve it!* with all new cases is published every year. *Solve it!* must be adopted for an entire class. It can be purchased directly from the supplier, Azimuth Corporation, 124 Penfield Ave., Croton-on-Hudson, New York 10520 (Telephone 914-271-6321).

Instructor's Manual

The Instructor's Manual, written by Dr. Glenn Bottoms of Gardner-Webb University, features an in-depth lecture outline and answers to key terms, review

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and discussion questions, case studies, and group projects, as well as additional Internet Resources.

Test Item File

New to this edition is a separate expanded Test Item File, written by Dr. Bindiganavale Vijayaraman of the College of Business Administration, University of Akron. This edition includes true/false, multiple choice, fill-ins and essay questions. Each question is section-referenced and rated according to difficulty level.

Video Cases

Video cases based on real-world corporations and organizations are available to adopters. The video cases illustrate the concepts in the text and can be used for class discussion or written projects.

Powerpoint Slides

Over 100 electronic color slides created by Dr. Edward Fisher of Central Michigan University are available to adopters. The slides, which illuminate and build upon key concepts in the text, can be customized to suit class needs.

Transparencies

One hundred full-color transparency acetates are also available to adopters. These transparencies, taken from figures in the text, provide additional visual support to class lectures.

Web Site

Please visit this book's Web site at http://www.prenhall.com/laudon. The site contains the instructor materials cited above, as well as an interactive study guide for students. Also available for students are additional cases not found in the text, links to Web resources for each chapter, interactive electronic commerce projects, and technology updates.

Acknowledgments

The production of any book involves many valued contributions from a number of persons. We would like to thank all of our editors for encouragement, insight, and strong support for many years. We are grateful to our editors, David Alexander and Jo-Ann DeLuca for their energy in guiding the development of this edition and to PJ Boardman and Richard Wohl for supporting the project. We thank Audrey Regan for directing the preparation of ancillary materials and commend Katherine Evancie for overseeing production of this text. We continue to be grateful to Nancy Evans for her outstanding marketing work. Special thanks to Patti Arneson for her focus group and market research work for this edition.

We remain deeply indebted to Marshall R. Kaplan for his invaluable assistance in the preparation of this edition. Special thanks to Dr. Glenn Bottoms of Gardner-Webb University and Dr. Bindiganavale Vijayaraman of the College of Business Administration, University of Akron for their work on supporting materials.

The Stern School of Business at New York University and the Information Systems Department provided a very special learning environment, one in which we and others could rethink the MIS field. Special thanks to Professors Edward Stohr, Jon Turner, Vasant Dhar, Ajit Kambil, and Stephen Slade for providing critical feedback and support where deserved. Professor William H. Starbuck of the Management Department at NYU provided valuable comments and insights.

Professors Al Croker and Michael Palley of Baruch College and NYU, Professor Kenneth Marr of Hofstra University, Professor Gordon Everest of the University of

Minnesota, Professor Sassan Rahmatian of California State University, Fresno, and Dr. Edward Roche provided additional suggestions for improvement.

The late Sara Tykol of Croton-on-Hudson, New York and the late Professor James Clifford of the Stern School made important contributions to the text. Sara helped us with the preparation of boxes, case materials and multimedia content. Jim offered valuable recommendations for improving our discussion of files and databases. Both Sara and Jim were wonderful colleagues and friends and we miss them deeply.

One of our goals was to write a book which was authoritative, synthesized diverse views in the MIS literature, and helped define a common academic field. A large number of leading scholars in the field were contacted and assisted us in this effort. Reviewers and consultants for *Management Information Systems: New Approaches to Organization and Technology* are listed in the back end papers of the book. We thank them for their contributions. Reviewers for the new edition are: Murray Jennex, University of Phoenix; Anthony Hendrickson, Iowa State; Carolyn Jacobson, Marymount University; John Tarjan, California State University at Bakersfield; Christopher Kimble, University of York, United Kingdom; Michel Benarcoh, Syracuse University; Charles Van Der Mast, Delft University of Technology, Netherlands; David Scanlan, California State University at Sacramento; Leah R. Pietron, University of Nebraska; Mats Daniels, Uppsala University. It is our hope that this group endeavor contributes to a shared vision and understanding of the MIS field.

K.C.L.
J.P.L.

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