COMPUTERS AND INFORMATION SYSTEMS: AN INTRODUCTION

William S. Davis

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PREFACE

As the title implies, *Computers and Information Systems: An Introduction* is designed to support an introductory course in information systems. It assumes no prior computer experience and no mathematics beyond high school algebra.

FLEXIBILITY

Like most introductory texts, this book covers all the crucial concepts, but what makes it unique is its flexibility. The material is divided into three sections:

Part I: Introduction	A one-chapter overview of basic computer components.
Part II: Components	Chapters 2 through 10. Each chapter focuses on a single component.
Part III: Systems	Chapters 11 through 16. Each chapter shows how two or more components are combined to form a system.

After the student completes Chapter 1, the Part II chapters can be read in any order; they are written to be independent. Relevant material from Part II (clearly identified at the beginning of each chapter) should be read before the related topics in Part III, but a student need not *complete* Part II before beginning Part III. Except for the link to Part II, the chapters in Part III are independent; they too can be read in any order.

The book also contains five brief (six- to ten-page) *Spotlights* on:

- The Internet, following Chapter 1
- Internet Software Tools, following Chapter 7
- Computers and Privacy, following Chapter 9
- Internet Technology, following Chapter 14
- Computer Crime and System Security, following Chapter 15

Like the chapters, the *Spotlights* are independent and can be read in any order. Separating these topics from the chapter narratives allows the instructor to cover Internet concepts and social issues at any time.

THE INTERNET

Given the Internet's increasing importance, many instructors have added Internet activities to the information systems course. The *Spotlight* following Chapter 1 provides a brief introduction to the Internet. Placing this material with Chapter 1 allows the instructor to overview local Internet access procedures early in the term and assign Internet projects throughout the course.

At the end of each chapter is a set of *Internet Projects* keyed to the chapter material. The projects fall into three categories:

- *News and Notes* — References to product announcements and relevant issues.
- *Topic Searches* — A list of relevant key terms and qualifiers that support Internet searches.
- *Links to Other Sites* — A list of relevant World Wide Web sites and USENET newsgroups.

Once students learn the basics of their local search and navigation tools, they should have little difficulty following these pointers to find interesting information. For example, the *Internet Projects* at the end of Chapter 2 tell the student where to find information on computer-related job opportunities.

One problem with Internet-based projects is currency; simply put, technology (particularly the Internet) changes so quickly that today's state-of-the-art is tomorrow's old news. Consequently, West Educational Publishing maintains a World Wide Web home page. Students and instructors are welcome to access this book's entry on the home page, where more current versions of the Internet projects are listed.

Finally, spread throughout the book are numerous in-chapter entries that link various topics to the Internet. Many of these references appear in the primary narrative; for example, see the Information Superhighway in Chapter 1 and Client/Server Computing in Chapter 14. Other references are presented in feature boxes; for example, see the discussions about Java (Chapter 8), the National Information Infrastructure (Chapter 14), and telecommuting (Chapter 16). Also, Appendix B contains a list of interesting USENET and World Wide Web addresses, a convenient starting point for student browsing.

FEATURES

Looking beyond content and organization, *Computers and Information Systems: An Introduction* contains several features designed to make learning easier:

- *Before you start.* Except for Chapter 1, each chapter begins with a list of key concepts the student should understand before he or she starts reading. These references help to ensure that the student has the necessary background.
- *After you finish.* Each chapter begins with a list of learning objectives designed to help the student focus on the key ideas.
- *Advanced Topics.* These boxes are designed to provide a bit more technical depth on selected topics. Examples include pipelining (Chapter 4), the FAT chain (Chapter 6), inheritance (Chapter 8), and bus standards (Chapter 11).
- *Feature boxes.* Spread throughout each chapter are feature boxes that supplement or illustrate specific chapter topics. There are four types of boxes:
  - *Issues.* The social and ethical implications of computers and information systems. These boxes expose the student to less technical

issues and can serve as springboards for class discussion. Examples include downsizing and outsourcing (Chapter 2), software piracy (Chapter 7), and networks and the copyright law (Chapter 14).
    - *Notes.* Comments and real-world examples, such as how to read the codes on a check (Chapter 3), surge protection (Chapter 4), caring for your diskettes (Chapter 5), and file backup (Chapter 9). These notes help the student relate the chapter material to the real world.
    - *People.* Brief sketches of some of the people who helped to shape modern information technology, including Mauchly and Eckert, the creators of the first electronic digital computer (Chapter 1); Bill Gates and Paul Allen, the founders of Microsoft (Chapter 6); Grace Hopper, the driving force behind the COBOL language (Chapter 8); Steven Jobs and Steve Wozniak, the founders of Apple Corporation (Chapter 11); and computer science pioneer Alan Turing (Chapter 16).
    - *The Future.* Where is information technology going? These boxes are designed to give students a sense of how evolving technology will affect them in the near future. Examples include information haves and have-nots (Chapter 2), the Java programming language (Chapter 8), mobile communication (Chapter 13), and the National Information Infrastructure (Chapter 14).
- *Chapter summaries, key term lists,* and *concepts questions.* These three features are designed to provide the student with a thorough review of the chapter material. Note that the concepts questions parallel the chapter learning objectives.
- *Projects.* Suggestions for hands-on and research-oriented activities. Many of the projects are designed to encourage the student to discover that people really do use the technology described in the chapter.
- *Internet Projects.* A set of projects that invite the student to access the Internet for information that supports or expands upon the chapter material. More current Internet activities can be found by accessing West Educational Publishing's World Wide Web site; see the *Spotlight* on The Internet following Chapter 1 for detailed instructions.

SUPPLEMENTS

Additionally, numerous supplements accompany the book, including:

- An *instructor's manual* written by the textbook author and Patricia Roy of Manatee Community College. Both printed and electronic copies are available.
- A *test bank* prepared by the textbook author and Patricia Roy of Manatee Community College. Both printed and electronic copies are available.
- *WESTEST* test-preparation software.
- *Internet updates* available on the World Wide Web at *http://www.westpub.com/Educate*

- A *student study guide* written by Jonathan Trower of Baylor University. The study guide includes a chapter outline, chapter summary, true/false and multiple-choice questions, vocabulary drills, and essay questions. Many students will find the study guide an invaluable aid when preparing for exams.
- A *set of transparency masters* for the book's figures.
- A *PowerPoint presentation* prepared by Anita Steinbacher of Indiana Vocational Technical College. Instructors will find the PowerPoint slides a useful lecture supplement and an additional source of transparency masters.
- *West's Information Systems for Managers Video Series.* Video #1 features a Business Profile on First Bank System's information systems and ten-minute features on Boeing's computer services and American Greeting's information processing control center. Video #2 features four-minute profiles on thirteen Blue Chip companies. Video #3 contains Business Profiles on the information systems of the Minnesota Twins, PriceCosto, and IBAX.
- *Insights: Readings in Information Systems,* a readings book for instructors who wish to supplement text assignments with readings from such sources as *Business Week, FORBES, FORTUNE, BYTE,* and *The Wall Street Journal.*

Contact your West campus representative for additional details.

MICROCOMPUTER APPLICATIONS

Many schools teach microcomputer skills in the context of the introductory information systems course. West's *Understanding and Using Microcomputers* series includes low-cost application manuals that cover the most popular software and Internet tools. Custom versions are available through West's Microcomputer Custom Editions Program. The program offers instructors the flexibility to choose tutorials (available in up to three different module lengths) for a wide range of packages, including Netscape Navigator 3.0, the Internet, Microsoft Windows 95, Microsoft Office for Windows 95, Microsoft Excel for Windows 95, and WordPerfect for Windows. The selected materials are spiral-bound to create an easy-to-use lab manual. See your West campus representative or check West's World Wide Web home page for additional details.

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