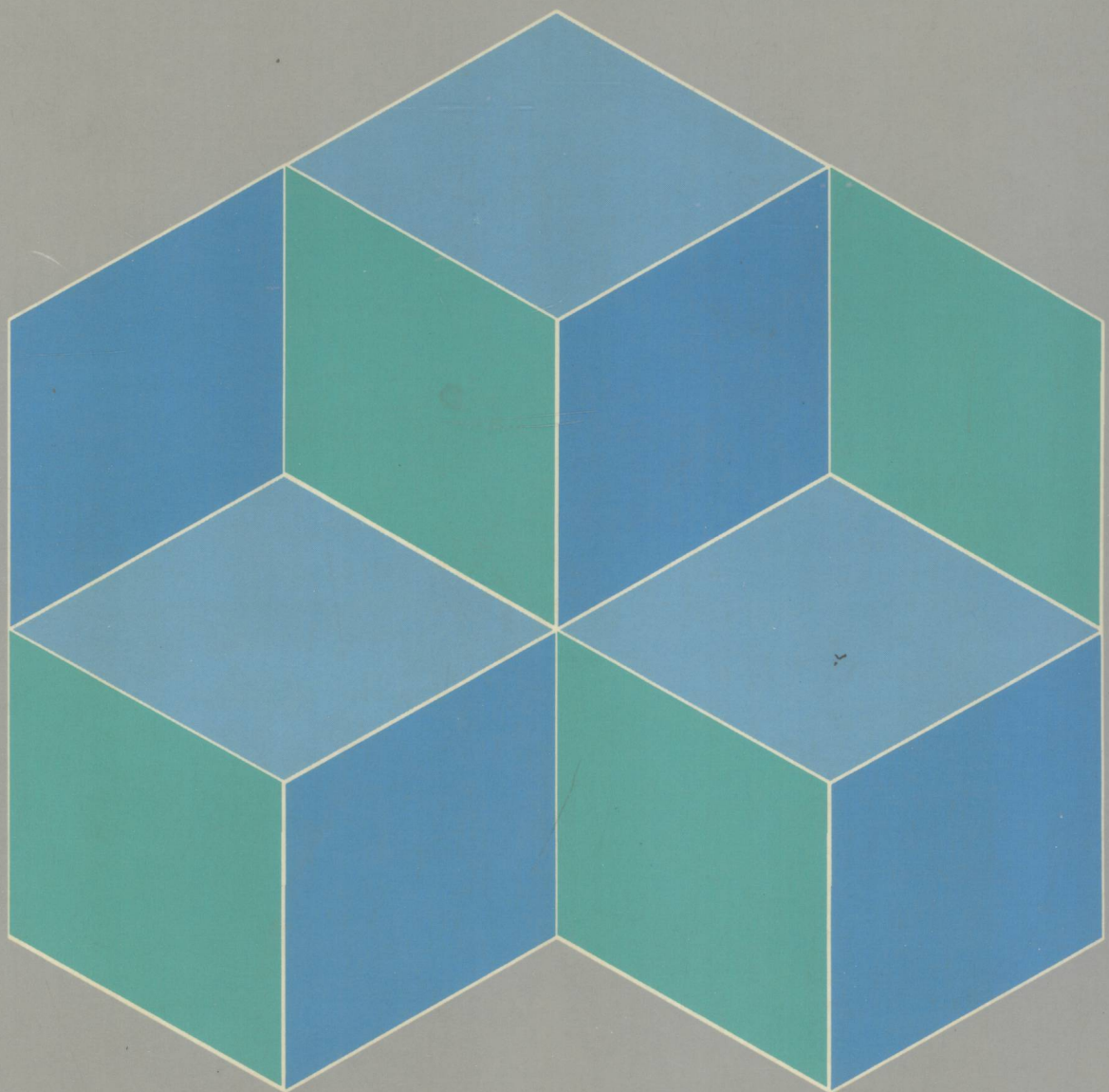
THIRD EDITION

Computers and End-User Software with BASIC



Thomas H. Athey ▪ John C. Day ▪ Robert W. Zmud

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Computers and End-User Software with BASIC

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Preface

Today educators are finding it increasingly easy to convince students they should learn about computers. Indeed, the demand for this knowledge is growing almost as fast as the number of computer products and applications. It is less easy to decide what—or how—to teach these students. Many textbooks focus on the "what"—computers and information systems in and of themselves. We call this the "computer literacy" approach and we feel that it neglects the "why"—the reasons we use computers.

We wanted to write a book that was different. All of us feel a strong conviction that today's students need *computing literacy*, the ability to use the computer as a tool to enrich their personal and professional lives. As computers become more common, the likelihood increases that students will need to understand and use computers in their careers, even if they do not become computer professionals. Like many employees, they may someday find themselves on a steering committee charged with developing or evaluating a computer application.

Our goal in this book is to help students become informed consumers of computer technology and information systems. This goal is expressed in four major ways:

- *Emphasis on end-user computing*. Recent technological advances in producing high-powered, but inexpensive, microcomputers have combined with increased availability of low-cost, but powerful, software packages to usher in the era of end-user computing. The *end-user*, usually a business professional, interacts directly with the computer through the use of commercial software packages to develop his or her own computerized applications. In Part IV, "End-User Software," we examine word processing, electronic spreadsheets, database management systems, graphics, and data communication packages. Our emphasis is not on the keystrokes required for specific packages, but rather on giving the student an understanding of the important features of each type of software. We illustrate these points by using practical examples and showing screens from popular software packages. Additionally, there is a separate chapter that provides students with a framework for understanding the importance of decision support and expert systems in today's business.
- *Role of end-users in CIS development*. It is important for students to understand that as business professionals they will also need to work with CIS professionals in developing important business applications that affect many functional areas. In Part III, "Computer Information System Development," we discuss the complementary roles of end-user computing and what we call *CIS computing*. The traditional topics of systems development, file and database systems, and program development and languages are discussed from the perspective of what the end-user needs to know to be an effective project team member.

- *Integration of technology and its applications.* We also made a commitment to focus on applications and to explain how technology affects our use of computers. Thus, every major discussion of technology is illustrated by an application. This deliberate integration can be seen in "Special Feature: A Systems Approach to Selecting a Microcomputer," which shows students how to apply systems development techniques to their own computer-selection decisions.
- *Understandable depth.* Each topic is approached with the goal of giving students the information they need to be able to understand the ways computers and information systems can be used to improve our lives. This does not mean, however, that we avoid technical detail or ignore recent advances. As required by today's computing environment, we explain the workings of the most recent technological advances. We are also careful to show students what these technologies mean to the users of computers and information systems.

We also developed some recurring features to help us meet our goal:

- *A "Computers at Work" feature* at the close of each chapter excerpts an article from a business or computer magazine that shows the varied, real-world uses of computers or presents an advanced issue related to the content of the chapter.
- *Full-color illustrations* explain and clarify both technical processes and business procedures. Color photographs of computer applications are most useful when integrated within the text rather than grouped in isolated collages. Thus, the text features a functional, as well as attractive, illustration program interwoven with the text.

In addition, we have provided a number of study aids to reinforce important text concepts, including chapter outlines, bold-faced key terms, detailed chapter summaries with key terms reviewed in context, expanded end-of-chapter review questions with both multiple choice and true-false questions. Our text is also offered in two versions: one with appendices introducing popular software packages, and one without these appendices.

The Third Edition

In a field that is changing as rapidly as computer information systems, keeping abreast of current developments is critically important. Thus, discussions of technology are completely updated in the second edition. New "Computers at Work" articles are included and exhibits have been updated. Coverage in Part IV, "End-User Software," has been expanded to include discussions of the Macintosh computer and related software. The special feature "Careers in Computing" includes the latest information on the types of careers available to CIS professionals or business professionals in the computing field.

Although 30 to 40 percent of the book has been updated or changed, it maintains the technical accuracy, clarity of explanation and the helpfulness of exhibits that was so well received in the first two editions. Further, the level of discussion has been simplified somewhat, without sacrificing the quality of the discussion.

The Supplement Program

The introductory computer course in a business program is no longer a theory course. Most schools have microcomputer laboratories in which students can gain hands-on experience through computer exercises that use practical applications. *Computers and End-user Software* is accompanied by a full range of supplements to meet the needs of both instructors and students. These ancillary materials include both innovative software teaching aids and outstanding text-related materials.

Textbook Support Materials

A full complement of traditional supplements accompany this book:

- The *Instructor's Manual* provides an overview and summary of each text chapter, lecture outlines, ideas for lecture and discussion, and answers to in-text review questions.
- The *Test File* contains approximately twenty-five true/false and sixty multiple-choice items for each chapter. These same questions are available through the HarperTest classroom management software.

The HarperTest program is a computerized test generator that allows instructors to create and edit exams flexibly and easily. HarperTest operates on any IBM PC or compatible microcomputer with 512K of memory. It features an extensive Item Bank of test questions keyed to the text. Questions from the Item Bank may be fully edited using the program, or instructors may create their own Item Bank of test questions. Instructors may also assign up to nine criteria to each question in an Item Bank and then select items for their exams by matching any combination of those criteria using the program's search feature. Tests may be saved in ASCII format and may be edited and reformatted using many popular word processing programs. Printing options allow instructors to customize the order of the test questions and the amount of work space for each item. HarperTest is compatible with the HP LaserJet printer and many other popular printers. It is available to adopters free of charge.

- To enhance classroom lectures, a package of full-color, professional prepared *Overhead Transparencies* are provided to adopters.
- The *Study Guide* includes chapter summaries, detailed annotated chapter outlines, drill sections made up of fill-in-the-blank, matching, short-answer, and essay questions, and practice tests.

Software Package Instruction

- *Up & Running with DOS, WordPerfect, Lotus 1-2-3 and dBASE IV*, by Thomas W. Warrner and D. Michael Werner of InfoSource, Inc., is a step-by-step, hands-on guide to these four software packages. It provides the basic commands, functions, and menu procedures to enable students to use the software quickly and with a minimum of frustration. This software guide can be packaged with the text for students who need an overview of these software packages.
- *Using DOS*, by Thomas W. Warrner and D. Michael Werner, features step-by-step command procedures for introductory and advanced users of DOS. This guide can be packaged with the text for students who need an in-depth knowledge of DOS commands and structures. A demonstration diskette is available with the guide.
- *Using Lotus 1-2-3*, by D. Michael Werner and Thomas W. Warrner, contains introductory and advanced material on Lotus 1-2-3. A demonstration diskette that illustrates the key features and functions of the program, as well as prebuilt student work files, is available to users of the guide.
- *Using WordPerfect*, by Thomas W. Warrner and D. Michael Werner, is a detailed guide to this word processing package. This text is also offered with a demonstration diskette and prebuilt student work files, so that the student does not have to master keyboarding before understanding the software.
- *Using dBASE IV*, by D. Michael Werner and Thomas W. Warrner, contains introductory and advanced material on the latest version of this powerful database package. It comes with a demonstration diskette and can be packaged with the textbook.

Software Tutorials and BASIC Programming Instruction

Computers and End-User Software, Third Edition, is available in two versions: one with software tutorials and a BASIC appendix and one without. In the larger version, the four tutorial appendices provide an introduction to DOS 3.3, WordPerfect 5.1, Lotus 2.2, and dBASE IV. Each appendix is designed as a keystroke guide to these specific packages and will help students practice the concepts introduced in the text chapters covering microcomputer operating systems, word processing, electronic spreadsheets, and databases.

At the introductory level, the BASIC appendix provides examples of control structures common to all programming languages through its emphasis on structured programming and design. Its exercises gradually build in difficulty up to the presentation of a complete, short program. This important material has been totally rewritten for this edition by John Day.

Acknowledgments

To Our Publisher and Families

It is a rare experience for authors to work with a team of professionals who are committed to excellence in everything they do. We were privileged to become part of the HarperCollins team. We thank Rick Williamson, acquisitions editor in Computer Information Systems, Trisha Nealon, developmental editor, and Melanie Field, who managed the project through Business Media Resources.

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