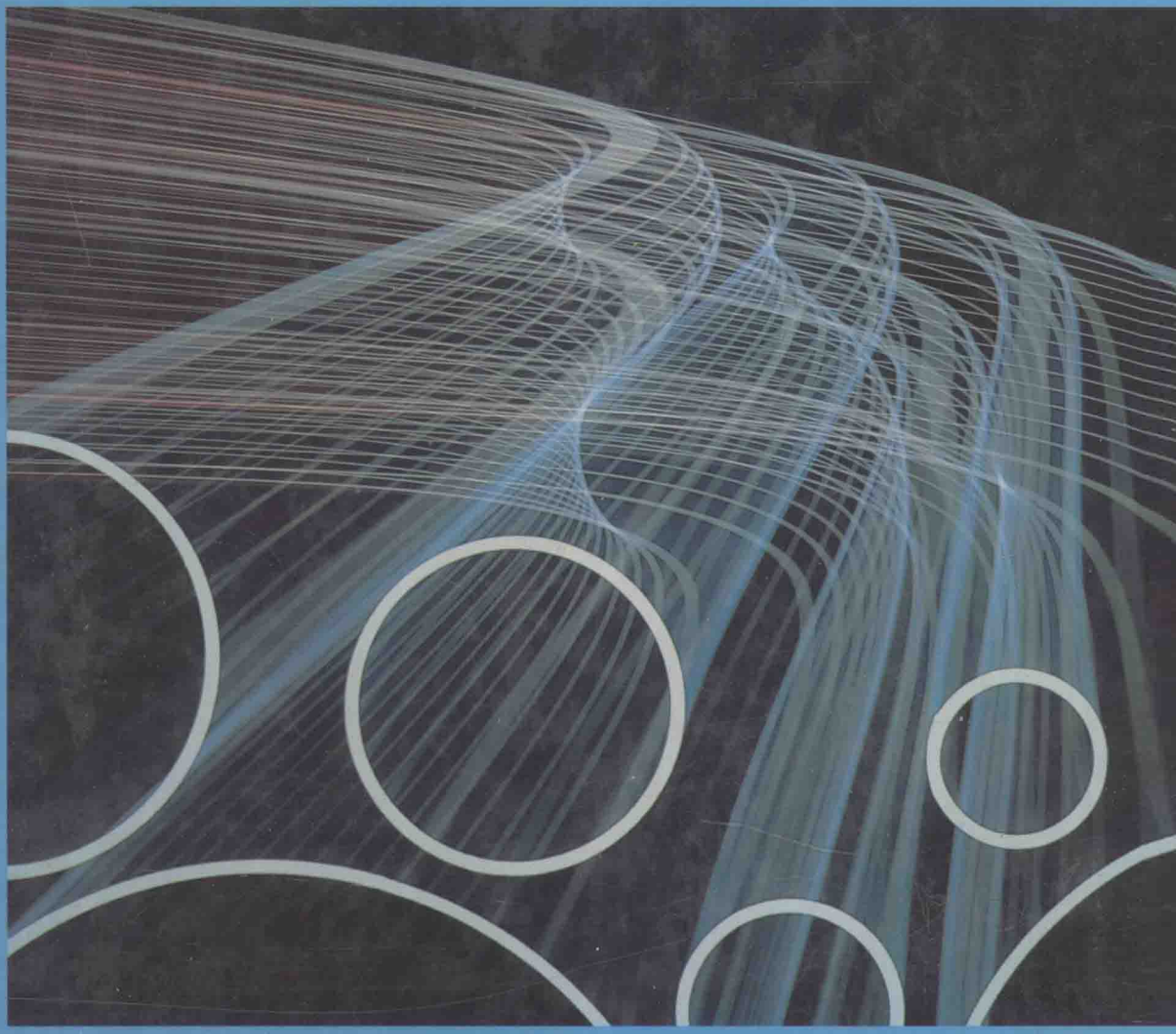
JOSEPH W. WILKINSON

ACCOUNTING INFORMATION SYSTEMS: ESSENTIAL CONCEPTS AND APPLICATIONS



ACCOUNTING INFORMATION SYSTEMS: ESSENTIAL CONCEPTS AND APPLICATIONS

Joseph W. Wilkinson

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ACCOUNTING

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ACCOUNTING TEXTBOOKS FROM WILEY

Arpan and Radebaugh: **International Accounting and Multinational Enterprises, 2nd**
Burch and Grudnitski: **Information Systems: Theory and Practice, 5th**
Cloud, Cook, and Waters: **College Accounting Procedures, 2nd, Chapters 1–12, 1–16, 1–24**
DeCoster, Schafer, and Ziebell: **Management Accounting: A Decision Emphasis, 4th**
Defliese, Jaenicke, Sullivan, and Gnospelius: **Montgomery's Auditing, Revised College Version**
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To Mark, Tod, and Eric

Preface

This textbook is primarily intended for undergraduate students who are majoring in accounting. Its purpose is to provide, in as concise and straightforward a manner as possible, the essentials of accounting information systems. Although its coverage spans essentially all the topics specified by recent authoritative bodies (e.g., the 1986 American Accounting Association Committee on Contemporary Approaches to Teaching Accounting Information Systems), this textbook is sufficiently brief to allow adequate time for "hands-on" computer assignments and systems design projects.

Several themes are emphasized throughout, notably the following.

1. The key roles of accountants with respect to accounting information systems (i.e., as users, evaluators, and designers).
2. The typical transaction processing systems and cycles employed by an enterprise that culminate in the general ledger, financial statements, and managerial reports.
3. The importance of accounting controls within the accounting information system and its transaction cycles.
4. The step-by-step procedure for analyzing, designing, and implementing a computer-based accounting information system, including numerous and specific design rules and principles.

Certain concepts and facts are reviewed within the various chapters concerning the accounting cycle and computer hardware/software fundamentals. However, such reviews are quite brief, in order to limit the overall size of the textbook. Therefore, a basic presumption is that students using this textbook will have completed courses in (1) elementary financial and managerial accounting, and (2) fundamentals of computer hardware, software, and data processing.

The book is organized in five parts. Part I introduces the basic concepts pertaining to

accounting information systems and their environments. It contrasts manual and computer-based systems and surveys the varied internal accounting controls needed in both types of systems. In addition, this introductory part illustrates several forms of documentation that are useful with respect to transaction processing.

Part II examines basic transaction processing systems that are incorporated within the general ledger and financial reporting, revenue, expenditure, and resource management cycles.

Part III describes the data management and information functions of an accounting information system. It also introduces decision support and other user-focused systems, computer networks, and system management issues. It concludes with a survey of computer-based auditing processes.

Part IV traces the phases composing the systems development life cycle, including planning, analysis, design, selection, and implementation.

Part V provides several cases that are suitable for assignment as student system design term projects.

Each chapter contains these learning aids.

1. A brief introductory statement of objectives and a concluding summary.
2. A variety of figures and diagrams that clarify the concepts and techniques.
3. Review questions, assignment problems, and references.
4. A review problem, which is intended to (a) clarify important points in the chapter, and (b) guide students in the preparation of assigned problems. Through several of the chapters the review problems are based on a continuing case (the Campus Bookstore).

Several other features are worth noting.

1. Certain problems scattered throughout the chapters may be assigned for solving on microcomputers.
2. Many of the concepts and techniques are illustrated by means of examples drawn from the real world.
3. A glossary of terms appears at the end of the text.
4. An instructor's manual is available. It contains suggested solutions to all problems, including listings and printouts for those problems suitable for solution on microcomputers. It also contains chapter outlines and an extensive test bank.

A personal note is in order. As you might be aware, I have also written a comprehensive textbook entitled *Accounting and Information Systems,* which is in its second edition. Most of the concepts and techniques covered by the comprehensive version also appear in this essentials textbook, although in more condensed form. However, the overall emphasis has been modified. Thus, in this version I stress the *cycles* approach to transaction processing and analysis. I agree with many other educators that this approach is most relevant to courses in account-

ing information systems. My coverage of the basic cycles is not new, since several currently available textbooks do likewise. Nevertheless, I present a chain of cycles that appears to be at least as logically consistent as any other presented to date. In addition, I have attempted to provide a reasonably thorough collection of diagrams, flowcharts, documents, reports, and other pictorial aids so that students can easily follow the progression of transactions through both manual and computer-based accounting information systems.

I wish to acknowledge the extremely constructive suggestions of several reviewers: Sue A. Block of the University of California at Santa Barbara, Ronald R. Bottin of the University of Wisconsin at La Crosse, Judith Cassidy of Louisiana State University, Michael Davis and James Hall of Lehigh University, Avi Rushinek of the University of Miami, Arjan T. Sadhwani of the University of Akron, Robert W. Vanasse of California State University at Long Beach, and Christopher Wolfe of Texas A&M University. In addition, Severin Grabski of Michigan State University proposed certain structural changes that have had a profound impact on the entire textbook. Numerous students have responded helpfully during the class testing of the new problems in this version. Finally, I appreciate the continuing support of my Wiley editors, David Anthony, Karen Hawkins, and Lucille Sutton.

Four professional accounting groups have graciously permitted the use of problem materials from past professional examinations: the American Institute of Certified Public Accountants, the Institute of Management Accounting of the National Association of Accountants, the Institute of Internal Auditors, and the Society of Management Accountants of Canada. To all these individuals and organizations, and to others not mentioned (including my family) go my gratitude. It hardly goes without saying that they do not bear responsibility for errors and omissions that may appear within these covers.

Joseph W. Wilkinson
Tempe, Arizona

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PART I

INTRODUCTION

1

Overview of Accounting Information Systems

THIS CHAPTER'S OBJECTIVES ARE TO ENABLE YOU TO:

Understand the meanings, purposes, and benefits of an accounting information system.

Describe the major activities performed by an accounting information system.

Identify various examples of accounting information systems and their outputs.

Distinguish among the roles of accountants with respect to accounting information systems.

INTRODUCTION

What is an accounting information system? Why should accounting students study accounting information systems? Who uses the information provided by accounting information systems? How do accountants interact with accounting information systems? What are the key activities that take place within an accounting information system? Questions of this nature may have come to mind when you saw the title of this textbook. Answers to such questions are important to all accountants and prospective accountants. Initial answers are provided in this chapter, and more extensive answers are developed in following chapters.

WHAT IS AN ACCOUNTING INFORMATION SYSTEM?

Before proposing a comprehensive definition of the accounting information system (AIS), we might consider the meanings of each word individually, as well as the relationships between the AIS and other information systems within a business organization or enterprise.

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