

The background of the cover is a collage of abstract elements. It features a central yellow rectangular frame containing the title. Outside this frame, there are various geometric shapes: a large blue cylinder on the left, a green pyramid at the bottom left, and a large blue sphere on the right. The background is a vibrant sky with a sunset or sunrise, showing orange, yellow, and blue hues with scattered clouds.

ACCOUNTING INFORMATION SYSTEMS

◆
Seventh Edition

Romney ◆ Steinbart ◆ Cushing

ACCOUNTING INFORMATION SYSTEMS

Seventh Edition

MARSHALL B. ROMNEY
Brigham Young University

PAUL JOHN STEINBART
Saint Louis University

BARRY E. CUSHING
University of Utah

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*To
Our Wives and Families
for
Their Support and Encouragement*

Preface

The seventh edition of *Accounting Information Systems* has been revised extensively to provide students with the knowledge and skills they need to pursue successful careers in accounting. The text reflects how information technology (IT) is altering the nature of accounting. Specifically, we discuss how such developments as the Internet, EDI, data bases, and artificial intelligence are fundamentally transforming the way that organizations perform their business activities. We also explain how these IT developments are changing the way that businesses account for the results of those activities.

In addition to technology-driven changes, companies are responding to the increasingly competitive business environment by reexamining every internal activity in an effort to reap the most value at the least cost. As a result, accountants are being asked to do more than just report the results of past activities. As such, they must take a more proactive role in both providing and interpreting financial and nonfinancial information about the organization's activities. Therefore, throughout this text we discuss how accountants can improve the design and functioning of the accounting information system so that it truly adds value to the organization. For example, each cycle chapter uses data modeling to illustrate how accounting information systems can effectively integrate internally generated financial and nonfinancial data about organizational activities with other, externally generated data (e.g., customer credit ratings and satisfaction).

In summary, every chapter in this seventh edition has been rewritten to help students better understand the following key concepts:

- The business activities performed in the five major business cycles
- The collection and processing of data about those business activities
- The use of the latest IT developments to improve the efficiency and effectiveness of business activities
- The development, implementation, and maintenance of accounting information systems (AIS)
- Internal control objectives and the effects of IT on these objectives
- Fundamental concepts of data base technology and its effect on AIS
- The design of an AIS to provide the information needed to make key decisions in each business cycle

MAJOR CHANGES IN THE SEVENTH EDITION

A new co-author, Paul John Steinbart, Ernst & Young Distinguished Professor of Accounting at Saint Louis University, has been added to the seventh edition of this book. Every chapter has been extensively rewritten, and students will find the text easier to read. The whole text has been reexamined with a view to tightening the exposition and presenting every concept in as clear and straightforward a manner as possible. As a result, this edition is leaner and shorter than the previous edition. Many new real-world examples using familiar companies such as Levi Strauss, Harley-Davidson, and JC Penney have been added to each chapter to stimulate student interest. As with previous revisions, numerous changes have been made to reflect recent developments in the practice and teaching of accounting information systems. At the same time, successful features introduced in previous editions, such as the focus boxes, have been retained.

New Features

Two new chapters have been added to the seventh edition. Chapter 2 presents an overview of AIS topics, illustrated in the context of a simple manual system. This coverage is especially useful if the curriculum has been changed so that the AIS course is now the first class accounting majors take after Principles. Chapter 6 discusses data modeling and the design of data base AIS. This chapter illustrates how data base technology (covered in Chapter 5) can be used to design an AIS that more fully meets the information needs of managers.

Nine other chapters have been substantially revised. Chapter 5, which covers data base technology, now includes detailed coverage of how to use query languages to extract financial information from a data base AIS. The material on the systems development process, which was previously spread out over four chapters, has been reorganized into three chapters that group related topics together. Chapter 10 introduces the systems development life cycle and discusses systems analysis and business process reengineering. Chapter 11 covers the remaining steps in the systems development life cycle, assuming that any new programs will be developed in-house. Chapter 12 then discusses alternatives to in-house development of software. The five cycle chapters (17–21) have been completely rewritten to include a discussion of the effects of data bases on the design and functioning of AIS.

The remaining 10 chapters have also been rewritten and updated to reflect current developments in information technology and accounting applications. For example, Chapter 9 on data communication systems has been updated to include coverage of the Internet and the World Wide Web. Numerous real-world examples, featuring both large and small companies in a variety of industries, have been added to each chapter to highlight and reinforce key concepts. In addition, questions have been added to each focus box so that these real-world applications can also be used as in-class discussion cases. Each chapter now also includes a short multiple-choice quiz, with corresponding answers provided at the end of the chapter. Students can use the quiz to test their understanding of the main topics in the chapter.

A fifth comprehensive case has been added to the appendix. As in the previous edition, each case contains a list of requirements that correspond to specific chapters. This organization allows the instructor to tailor the case requirements to his or her choice of course objectives and topical coverage.

Continuing Features

Each chapter begins with an integrative case, based on one of three fictional companies, that introduces the chapter's key concepts and topics. This case is integrated throughout the chapter, and a description of how the issues are resolved is provided in the summary and case conclusion.

We continue to include one to three focus boxes in each chapter. The focus boxes are summaries of articles describing how specific companies are using the latest IT developments to improve their AIS.

Each chapter continues to have at least two end-of-chapter cases. One is a stand-alone case. The other is the AnyCompany case, which provides students with the opportunity to apply their knowledge to the specific problems and challenges faced by a business in their local area. The AnyCompany case also gives students the chance to practice their written and oral communication skills in a realistic setting. The requirements for each AnyCompany case are tailored to the topics covered in each particular chapter. These suggested requirements are too extensive to permit assignment of multiple AnyCompany cases in one semester. Instead, we encourage instructors to select the case(s) with requirements that most closely match their course objectives. Alternatively, instructors can choose selected requirements from several chapters to create a customized term project that reflects the topics they stress in their course.

The end-of-chapter material is designed to help students develop and test their knowledge. It includes both new and revised discussion questions, problems, and cases that integrate material from various parts of the chapter. Many problems were developed from reports in current periodicals and reflect the challenges faced by actual companies. In addition, we continue to include a number of problems selected from the various professional examinations, including the CPA, CMA, CIA, and SMAC exams.

The text contains hundreds of figures, diagrams, flowcharts, tables, and photographs that are new or have been revised specifically for this edition. At the end of the book is an extensive bibliography, organized by chapter. This list contains references to the real-world examples used in each chapter and provides students with a starting point for further research on topics of interest. Finally, the comprehensive glossary at the back of the book has been extensively revised.

AN OVERVIEW OF THE SEVENTH EDITION

The Introductory Chapters

Part One, "Conceptual Foundations of Accounting Information Systems," consists of six chapters that present the underlying concepts fundamental to an understanding of AIS. Chapter 1 introduces basic terminology and discusses how AIS can add value to an organization. Chapter 2 provides an overview of AIS in a manual setting. This information helps students to understand what an accounting information system does; as they read the remainder of the book, they see how advances in information technology affect the manner in which those functions are performed. Chapter 3 covers systems development and documentation techniques, focusing primarily on data flow diagrams and flowcharts. Chapter 4 discusses transaction processing in automated systems, presenting basic information processing and data storage concepts. Chapter 5 introduces students to data bases, with a particular emphasis on the relational

data model and query languages. Chapter 6 is new, covering data modeling and demonstrating how traditional financial statements and managerial reports can be derived from a data base AIS.

Information Technology

The objective of Part Two, “The Technology of Accounting Information Systems,” is to provide students with the knowledge they need to understand and appreciate how changes in IT affect the design and operation of AIS. The three chapters in this section focus on the technology used to design and operate computer-based AIS. Chapter 7 reviews hardware and software. Chapter 8 covers personal computers from an end-user focus. Chapter 9 discusses the role of telecommunications in AIS. All of these chapters reflect the latest developments in IT. The multitude of real-world examples in this section will help students see how IT affects the design and operation of an AIS.

The Systems Development Process

The material in Part Three, “The Systems Development Process,” has been reorganized into three chapters. Chapter 10 introduces the systems development life cycle and discusses the introductory steps of this process (feasibility analysis and planning, systems analysis, and business process reengineering). Particular emphasis is placed on the behavioral ramifications of change. Chapter 11 covers the remaining stages of the systems development life cycle (design, implementation, and operation) and emphasizes the interrelationships among each phase. Chapter 12 discusses alternative approaches (e.g., prototyping, outsourcing, and purchasing software) to developing new AIS. Many new real-world examples are included in all three of these chapters to enable students to understand the accountant’s role in the systems development process.

Control and Audit of Accounting Information Systems

Part Four, “Control and Audit of Accounting Information Systems,” consists of four chapters. Chapter 13 provides a conceptual overview of controls and control theory. The material has been rewritten to reflect the terminology used in the COSO report. Chapter 14 discusses specific computer controls. Chapter 15 focuses on fraud, explaining how and why fraud occurs and the methods for preventing and detecting it. Chapter 16 reviews principles and techniques for audit evaluation of internal control in computer-based AIS and introduces the topic of computer-assisted auditing.

Accounting Information Systems Applications

Part Five, “Accounting Information Systems Applications,” consists of five chapters that integrate the material presented in the first four parts of the book. Each of the five chapters focuses on one business cycle. Some material previously presented in separate chapters in the sixth edition has been consolidated in one chapter so that students can more clearly see the interrelationships between various business activities. Chapter 17 covers the revenue cycle, including sales, billing, accounts receivable, and cash receipts (thus combining material that was presented in Chapters 16 and 20 in the sixth edition). Chapter 18 covers the expenditure cycle, including purchases, receiving, accounts payable, and cash disbursements (thus combining material that had been presented in Chapters 17 and 20 in the sixth edition). Chapter 19 covers the production cycle, with a special focus on the implications of recent cost

accounting developments, such as activity-based costing, for the design of the production cycle information system. Chapter 20 discusses the human resources management (HRM)/payroll cycle and explores the ways in which these two systems can be integrated. Chapter 21 focuses on the general ledger and reporting cycle.

All five chapters have been rewritten to reflect the three basic functions performed by the AIS: (1) efficient transaction processing, (2) provision of adequate internal controls to safeguard assets (including data), and (3) preparation of information useful for effective decision making. Both batch and on-line processing systems are presented. In addition, a data model for each cycle is described. As in the sixth edition, the role of information technology in providing a competitive advantage is stressed and numerous real-world examples are incorporated throughout these five chapters.

INSTRUCTIONAL SUPPLEMENTS

Our objective in preparing this textbook has been to simplify the teaching of AIS by enabling instructors to concentrate on classroom presentation and discussion, rather than on locating, assembling, and distributing teaching materials. As further support, a number of supplementary materials are also available free of charge to adopters of the text.

An *Instructor's Manual/Test Bank/Transparency Masters* is available to instructors who adopt this textbook. The first of its four sections presents sample syllabi that represent various approaches to teaching AIS as either a one-semester or a one-quarter course. The second section consists of outlines and lecture notes for each of the 21 text chapters. There is a one-page outline of each chapter, suitable for reproduction as a transparency. The teaching notes include references that link key figures and problems to chapter topics and, where appropriate, suggestions for alternative lecture topics and readings. The third section consists of a test bank (also available on a 3.5-inch diskette in IBM format) containing approximately 1500 objective questions, along with suggested answers. The final section of the *Instructor's Manual* contains more than 100 transparency masters of key tables and figures that appear in the textbook.

A separate *Solutions Manual* is also available to those instructors who adopt this book. It provides suggested solutions to the discussion questions, problems, and cases that appear at the end of each chapter. These guidelines facilitate the process of choosing which end-of-chapter exercises to assign as homework. Suggested solutions to the five cases that appear in the text appendix are also presented.

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Marshall B. Romney
Provo, Utah

Paul John Steinbart
St. Louis, Missouri

Barry E. Cushing
Salt Lake City, Utah

Contents

Preface

PART ONE CONCEPTUAL FOUNDATIONS OF ACCOUNTING INFORMATION SYSTEMS

Chapter 1 ACCOUNTING INFORMATION SYSTEMS: AN OVERVIEW 1

LEARNING OBJECTIVES 1

INTEGRATIVE CASE: S&S, INC. 1

Introduction 2

What Is an AIS? 2

Why Study Accounting Information Systems? 4

The AIS Is a Fundamental Part of Your Accounting Education 4

AIS Skills Are Important to Your Career Success 4

An AIS Will Be a Key Component in Your Decision Making 6

An AIS Will Meet Your Information Needs 6

You Will Be Affected by the Information Technology Revolution 8

How an AIS Adds Value to Businesses 9

The Value Chain 9

Using an AIS to Add Value to Businesses 11

FOCUS 1.1 Wal-Mart's Successful Use of IT 12

What Is Information? 13

Value of Information 14

Information Overload and Information Literacy 15

What Is an Information System? 16

FOCUS 1.2 So Where Has All the Money Gone? 17

Components of an Information System 18

Types of Information Systems 20

The Future Role of the AIS 21

Summary and Case Conclusion	22	Key Terms	23
Chapter Quiz	24	Discussion Questions	25
Problems	25		
Case 1.1: AnyCompany, Inc.—An Ongoing Comprehensive Case	27		
Case 1.2: The Use and Misuse of Information	28		
Case 1.3: PanCanadian Petroleum	28		
Case 1.4: Ackoff's Management Misinformation Systems	29		
Answers to Chapter Quiz	33		

Chapter 2 ELEMENTS AND PROCEDURES OF ACCOUNTING INFORMATION SYSTEMS 34

LEARNING OBJECTIVES 34

INTEGRATIVE CASE: S&S, INC. 34

Introduction 35

Business Activities and Information Needs 36

Transaction Processing: Documents and Procedures 39

Capture Transaction Data on Source Documents 39

Record Transaction Data in Journals 40

Post Transactions to Ledgers 41

Providing Information for Decision Making 47

Financial Statements 47

Managerial Reports 47

FOCUS 2.1 What *Does* a Small Business Controller Do? 48

Internal Control Considerations 51

Adequate Documentation 51

FOCUS 2.2 Avoiding Dysfunctional Budgeting Behavior 52

Segregation of Duties 53

FOCUS 2.3 Stealing the Entire Company 54

Summary and Case Conclusion 55

Key Terms 57

Chapter Quiz 57

Discussion Questions 57

Problems 58

Case 2.1: AnyCompany, Inc.—An Ongoing Comprehensive Case 62

Case 2.2: S&S, Inc. 62

Answers to Chapter Quiz 63

Chapter 3 SYSTEMS DEVELOPMENT AND DOCUMENTATION TECHNIQUES 64

LEARNING OBJECTIVES 64

INTEGRATIVE CASE: S&S, INC. 64

Introduction 65

Data Flow Diagrams 66

Elements in a Data Flow Diagram 66

FOCUS 3.1 Guidelines for Drawing a DFD 67*Subdividing the DFD* 70

Flowcharts 72

Flowchart Symbols 72*Document Flowcharts* 73*Computer System Flowcharts* 75**FOCUS 3.2** General Guidelines for Preparing Flowcharts 76*Program Flowcharts* 79*Computer Configuration Chart* 83*Differences Between DFDs and Flowcharts* 83

Decision Tables 86

Summary and Case Conclusion 88 Key Terms 89 Chapter Quiz 89

Discussion Questions 90 Problems 91

Case 3.1: AnyCompany, Inc.—An Ongoing Comprehensive Case 96

Case 3.2: DUB 5 96

Answers to Chapter Quiz 98

Chapter 4 THE DATA PROCESSING CYCLE 99

LEARNING OBJECTIVES 99

INTEGRATIVE CASE: S&S, INC. 99

Introduction 100

Data Input 100

FOCUS 4.1 Information Systems Can Reduce
Health Care Costs 101**FOCUS 4.2** Insurance Company Is Eliminating Paperwork 102

Data Storage 103

Fundamental Data Storage Concepts and Definitions 103*Types of Files* 104*Data Bases* 105*Logical and Physical View of Data* 106**FOCUS 4.3** Data Warehousing: The Dynamics of Data Flow 107*Advantages of Data Base Systems* 108*How Businesses Use Data Base Technology* 109

Data Processing 110

Primary and Secondary Keys 111*File Organization and Access* 112*Sequential File Processing* 113*Direct-Access File Processing* 114*Batch Processing* 118*On-Line Processing* 118

Information Output	120
<i>Forms of Information Output</i>	120
<i>Goal of the Information</i>	121
Summary and Case Conclusion	121
Key Terms	122
Chapter Quiz	123
Discussion Questions	123
Problems	125
Case 4.1: AnyCompany, Inc.—An Ongoing Comprehensive Case	127
Case 4.2: S&S, Inc.	128
Case 4.3: Wekender Corporation	128
Answers to Chapter Quiz	129

Chapter 5 DATA BASE SYSTEMS 130

LEARNING OBJECTIVES	130
INTEGRATIVE CASE: S&S, INC.	130
Introduction	130
Data Base Management Systems	131
<i>Schemas</i>	132
<i>The Data Dictionary</i>	133
<i>DBMS Languages</i>	135
<i>DBMS Functions and Users</i>	136
Relational DBMS	138
<i>Basic Requirements of the Relational Data Model</i>	138
<i>Case Study: Designing a Relational Data Base for S&S, Inc.</i>	139
Querying a Relational Data Base	143
<i>Structured Query Language: A Text-Based Query Language</i>	143
<i>Query by Example: A Graphical Query Language</i>	150
<i>Advantages and Limitations of Relational DBMS</i>	152
FOCUS 5.1 Using Relational Data Bases to	
Market Credit Cards	153
Object-Oriented Data Bases	153
<i>Advantages and Criticisms of Object-Oriented DBMS</i>	154
<i>The Future of Relational and Object-Oriented Data Bases</i>	155
<i>The Effect of Data Base Systems on the Future of Accounting</i>	156
FOCUS 5.2 Data Bases or Financial Statements?	157
Summary and Case Conclusion	158
Key Terms	159
Chapter Quiz	159
Discussion Questions	160
Problems	160
Case 5.1: AnyCompany, Inc.—An Ongoing	
Comprehensive Case	164
Case 5.2: Research Projects	164
Answers to Chapter Quiz	164

Chapter 6 DATA MODELING AND DATA BASE DESIGN 165

LEARNING OBJECTIVES 165

INTEGRATIVE CASE: S&S, INC. 165

Introduction 166

Data Base Design 167

Planning 167

Requirements Definition 167

Logical Design 168

Physical Design 169

Implementation and Operation 169

Role of the Accountant 169

Data Modeling 170

The REA Data Model 170

Entity-Relationship Diagrams 171

Using E-R Diagrams for Data Modeling 174

Organizational Specificity of E-R Diagrams 177

FOCUS 6.1 Why Involve Users in Data Modeling? 178

Implementing a Data Model in a Relational Data Base 179

*Step 1: Create Tables for Each Entity and *: * Relationship* 179

Step 2: Identify Attributes for Each Table 170

Step 3: Implement 1:1 Relationships 183

*Step 4: Implement 1: * Relationships* 183

Producing Accounting Information from the REA Data Model 184

Deriving Accounts Receivable 184

Journals and Ledgers 185

Preparing Financial Statements and Managerial Reports 185

Effect of the REA Data Model on Accounting 189

Internal Control Considerations 189

FOCUS 6.2 The Changing Nature of Accounting at IBM 190

The Relational Data Model and Data Base Accuracy 190

Minimum Cardinalities and Internal Control 191

Other Control Information 193

Summary and Case Conclusion 193 Key Terms 194

Chapter Quiz 194 Discussion Questions 195 Problems 196

Case 6.1: AnyCompany, Inc.—An Ongoing
Comprehensive Case 197

Case 6.2: Practical Data Base Design 198

Answers to Chapter Quiz 198

PART TWO THE TECHNOLOGY OF ACCOUNTING INFORMATION SYSTEMS

Chapter 7 A REVIEW OF COMPUTER HARDWARE AND SOFTWARE 199

LEARNING OBJECTIVES 199

INTEGRATIVE CASE: S&S, INC. 199

Introduction 200

SECTION A: COMPUTER HARDWARE 201

Computer Classifications: From Super Computers to Microcomputers 201

FOCUS 7.1 Future Fashion in Personal Computing Is Intimate “Hardwear” 204

The Microcomputer Revolution 205

The Use of Microcomputers by Accountants 206

Central Processing Unit 207

Storage Measurements 207

Speed Measurements 208

Microcomputer Hardware 209

Secondary Storage Devices and Media 210

Magnetic Tape 210

Magnetic Disks 210

FOCUS 7.2 Massively Parallel Processing (MPP) Computers 211

Diskettes 211

Optical Disks 212

Input Devices 212

Data Preparation Devices 213

On-Line Entry Devices 213

Source Data Automation Devices 214

FOCUS 7.3 “Active Badges” Keep Silent Tabs on Employees’ Whereabouts 216

Computer Output Devices 218

Visual Display 218

Voice Response Units 218

Printers 218

Computer Output Microfilm 219

SECTION B: SOFTWARE 219

Levels of Computer Languages 219

Machine and Symbolic Languages 220

High-Level Languages 220

Fourth-Generation Languages 220

Object-Oriented Languages 222

Systems Software	223
<i>Operating System</i>	223
<i>Utility Programs</i>	224
<i>Communications Software</i>	224
Application Software	224
Summary and Case Conclusion	225
Key Terms	226
Chapter Quiz	227
Discussion Questions	228
Problems	229
Case 7.1: AnyCompany, Inc.—An Ongoing Comprehensive Case	232
Case 7.2: Buying a Computer for S&S	233
Case 7.3: AIS and the Manufacturing Industry	233
Case 7.4: PC Predictions	234
Answers to Chapter Quiz	235
Chapter 7 Appendix: High-Level Languages	236

Chapter 8 PERSONAL INFORMATION SYSTEMS: AN END-USER PERSPECTIVE 237

LEARNING OBJECTIVES	237
INTEGRATIVE CASE: S&S, INC.	237
Introduction	238
End-User Computing	238
<i>Appropriate End-User Development and Use</i>	239
<i>Benefits of End-User Computing</i>	240
<i>Risk of End-User Computing</i>	241
<i>Managing and Controlling End-User Computing</i>	243
End-User Software Tools	243
<i>Accounting Software</i>	243
<i>Income Tax</i>	244
<i>Audit</i>	245
<i>Spreadsheets</i>	246
<i>Word Processing</i>	246
<i>Data Bases</i>	246
<i>Presentation Packages and Graphics Software</i>	246
<i>Personal Information Managers</i>	247
<i>Application Suites</i>	247
<i>Desktop Publishing</i>	248
<i>Image Processing</i>	248
FOCUS 8.1 Signing Electronically Yields Productivity Benefits	252
<i>Project Management</i>	253
<i>Multimedia</i>	253
<i>Decision Support Systems</i>	254
<i>Artificial Intelligence and Neural Networks</i>	256