

教育部高校工商管理类教学指导委员会 双语教学推荐教材

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工商管理经典教材·会计与财务系列

Administration Classics

会计 信息系统

(第10版)

Accounting Information Systems (10th Edition)

马歇尔·B·罗姆尼 (Marshall B. Romney) 著
保罗·约翰·施泰因巴特 (Paul John Steinbart)
张瑞君 徐广成 改编



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总 序

随着我国加入 WTO,越来越多的国内企业参与到国际竞争中来,用国际上通用的语言思考、工作、交流的能力也越来越受到重视。这样一种能力也成为我国各类人才参与竞争的一种有效工具。国家教育机构、各类院校以及一些主要的教材出版单位一直在思考,如何顺应这一发展潮流,推动各层次人员通过学习来获取这种能力。双语教学就是这种背景下的一种尝试。

双语教学在我国主要指汉语和国际通用的英语教学。事实上,双语教学在我国教育界已经不是一个陌生的词汇了,以双语教学为主的科研课题也已列入国家“十五”规划的重点课题。但从另一方面来看,双语教学从其诞生的那天起就被包围在人们的赞成与反对声中。如今,依然是有人赞成有人反对,但不论是赞成居多还是反对占上,双语教学的规模 and 影响都在原有的基础上不断扩大,且呈大发展之势。一些率先进行双语教学的院校在实践中积累了经验,不断加以改进;一些待进入者也在模仿中学习,并静待时机成熟时加入这一行列。由于我国长期缺乏讲第二语言(包括英语)的环境,开展双语教学面临特殊的困难,因此,选用合适的教材就成为双语教学成功与否的一个重要问题。我们认为,双语教学从一开始就应该使用原版的各类学科的教材,而不是由本土教师自编的教材,从而可以避免中国式英语问题,保证语言的原汁原味。各院校除应执行国家颁布的教学大纲和课程标准外,还应根据双语教学的特点和需要,适当调整教学课时的设置,合理选择优秀的、合适的双语教材。

顺应这样一种大的教育发展趋势,中国人民大学出版社同众多国际知名的大出版公司,如麦格劳-希尔出版公司、培生教育出版公司等合作,面向大学本科生层次,遴选了一批国外最优秀的管理类原版教材,涉及专业基础课,人力资源管理、市场营销及国际化管理等专业方向课,并广泛听取有着丰富的双语一线教学经验的教师的建议和意见,对原版教材进行了适当的改编,删减了一些不适合我国国情和不适合教学的内容;另一方面,根据教育部对双语教学教材篇幅合理、定价低的要求,我们更是努力区别于目前市场上形形色色的各类英文版、英文影印版的大部头,将目标受众锁定在大学本科生层次。本套教材尤其突出了以下一些特点:

- 保持英文原版教材的特色。本套双语教材根据国内教学实际需要,对原书进行了一定的改编,主要是删减了一些不适合教学以及不符合我国国情的内容,但在体系结构和内容特色方面都保持了原版教材的风貌。专家们的认真改编和审定,使本套教材既保持了学术上的完整性,又贴近中国实际;既方便教师教学,又方便学生理解和掌握。

- 突出管理类专业教材的实用性。本套教材既强调学术的基础性,又兼顾应用的广泛性;既侧重让学生掌握基本的理论知识、专业术语和专业表达方式,又考虑到教材和管理实践的紧密结合,有助于学生形成专业的思维能力,培养实际的管理技能。

- 体系经过精心组织。本套教材在体系架构上充分考虑到当前我国在本科教育阶段推广双语教学的进度安排,首先针对那些课程内容国际化程度较高的学科进行双语教材开发,在其专业模块内精心选择各专业教材。这种安排既有利于我国教师摸索双语教学的经验,使得双语教学贴近现实教学的需要;也有利于我们收集关于

双语教学教材的建议，更好地推出后续的双语教材及教辅材料。

- 篇幅合理，价格相对较低。为适应国内双语教学内容和课时上的实际需要，本套教材进行了一定的删减和改编，使总体篇幅更为合理；而采取低定价，则充分考虑到了学生实际的购买能力，从而使本套教材得以真正走近广大读者。

- 提供强大的教学支持。依托国际大出版公司的力量，本套教材为教师提供了配套的教辅材料，如教师手册、PowerPoint 讲义、试题库等，并配有内容极为丰富的网络资源，从而使教学更为便利。

本套教材是在双语教学教材出版方面的一种尝试。我们在选书、改编及出版的过程中得到了国内许多高校的专家、教师的支持和指导，在此深表谢意。同时，为使后续推出的教材更适于教学，我们也真诚地期待广大读者提出宝贵的意见和建议。需要说明的是，尽管我们在改编的过程中已加以注意，但由于各教材的作者所处的政治、经济和文化背景不同，书中内容仍可能有不妥之处，望读者在阅读时注意比较和甄别。

徐二明

中国人民大学商学院

主持人语

(一)

2006年9月,中国人民大学出版社的编辑与我们联系,探讨筹划出版一套会计学系列英文原版教材,我们立即表示愿意合作。

在谈论我国改革开放伟大事业时有一个常被提到的故事:20世纪70年代后期,西方发达国家和我国港澳台地区的企业家、投资人来到中国大陆寻求商机和洽谈合作,总是有两种职业人才相伴,那就是律师和会计师。律师帮助企业家、投资人探究资本的安全性和发展的法制环境,会计师则帮助企业家、投资人分析合作者的财务状况和潜在的投资获利前景。所以,改革开放初期首先面世的相关规范,就是“三资企业法规”和“三资企业会计制度”。

一个显然的事实是,法律不可能国际化(甚至在一个主权国家之内,也存在着地区间的立法差异)。而会计,则一直在朝着成为“国际商业语言”的方向发展。资产负债表、利润表、现金流量表、股东权益变动表等作为会计语言的载体,在全世界的企业家、金融家、资本市场交易者之间,都是基本一致或相似的通用交流工具;而财务报告的编制者和审计者,都在遵循着促成大家得以相互理解、逐渐走向趋同的会计和审计专业规则。

相应地,我国改革开放20多年来,在国际交流的知识融会中,与国际接轨最快的领域当属商学各学科知识,其中会计学更是走在前面。大学会计专业教学在积极采用翻译教材的同时,很早就尝试采用英文原版教材,让广大师生受益匪浅。近年来国内出版的会计类英文版教科书越来越多,几乎没有漏掉大家公认的好书。而在出版时间方面,有些教材在中国出版的影印版和翻译版,甚至与其在母国的原版实现了同步,这使得我们在接受新知识方面几乎不存在时间差。可见,知识领域是没有不可逾越的语言界限的。

不过,我们也注意到,目前我国国内已经出版的众多会计专业英文版教科书,对院校教育的主角——教师和学生——来说,存在着两个严重的弱项:一是多而不成体系,分别看,每本都不错,可是怎么配套呢?要知道,一桌盛宴不能只是道道好菜一股脑儿端上来,还得有荤素冷热搭配才行;二是篇幅厚重、价格吓人,动辄数百元以上,别说多数学生买不起,就连教师们在书店也常常因囊中羞涩而犹豫再三,拿起又放下。

所以,我们很愿意与中国人民大学出版社的编辑一起,针对上述两个弱项来有意识地组织这套英文版改编教材。

(二)

工作的第一步是组织团队。接受邀请的团队成員都是在院校教学一线的教师,分别来自中国人民大学、北京大学、上海财经大学、厦门大学、北京师范大学、对外经济贸易大学、北京工商大学、北方工业大学、北京语言大学、上海交通大学等。他们都拥有博士学位;英文功底都非常好;都已经在教学中采用英文原版教材,从而深有体会;都在海内外核心期刊发表过学术论文;主持和参加的科学研究课题都得到国家自然科学基金、国家社会科学基金、国家博士后科学基金和教育部专项研究基金的大力支持。他们是会计教育和学术研究的

“少壮派”：其中两位获得 2007 年“教育部新世纪优秀人才支持计划”研究项目资助，三位曾留学美国，五位入选“首届全国会计学术带头人后备人才”。

第二步是选书。结合当前中国院校会计学专业培养学生的课程设置，在国际著名教育出版公司推荐的基础上，改编团队成员与中国人民大学出版社的编辑一起，选择能够配套成体系的英文教科书。然后请各位改编者提出意向，向国外版权公司提交改编方案，申请版权合同。目前选定的丛书都是在美国院校会计教育中享有盛誉的教科书，作者均为欧美会计、财务学界的知名学者和专业人士。其中有几本已经在国内出版多次翻译版，为会计界人士所熟悉。

应该提到的一点是，这套丛书并不是封闭的，还计划继续增加新书（如信息系统、内部控制、会计理论、公司财务理论等），以不断充实和完善丛书体系。

第三步是确定改编原则。篇幅要缩小，但是力求改编后尽量保持全书结构的完整，主要是删除章后习题和附录，以及与我国实际情况相差较远、教学中不涉及的部分章节，使得改编后的书适合我国教学的实践。为了方便院校老师教学和学生学学习，在教材之外，还计划在中国人民大学出版社网站（www.rdjg.com.cn）上提供中英文对照的目录和术语表、教学辅助资料、习题、案例、英文 PPT 等，供老师们免费下载；对于删除的完整章节，有兴趣的读者也可以上网免费下载。

随着我国教育改革的深入发展，我国各大学的商学院都越来越重视双语教学，选择反映国外最新教学研究成果的英文原版教材，已经成为普遍要求。为此我们希望，这套丛书能为院校的同仁提供帮助，同时也欢迎提出批评指正意见和改进建议。

耿建新（中国人民大学商学院）

王立彦（北京大学光华管理学院）

改编者前言

随着世界经济全球一体化的发展,我国会计国际化进程正在加快,我国的高等会计教育也面临着严峻的挑战。如何培养具有良好的外语能力和知识结构的国际化会计人才是我国高等会计教育所面临的一个紧迫课题,其中有步骤地推行会计双语教学是国际化会计人才培养的切入点。此外,教育部早在2001年就颁布了推动双语教学的文件,2005年又强调要求高等院校继续增加双语课程,尤其是经济管理类课程,可见,双语教学已成为高校教学改革的热点问题。我们认为,推行双语教学的关键是推进教材的双语化,选用国际化通用教材。国外原版教材体系庞大,内容丰富,习题及案例充实齐全,理论与实务的阐述深度和广度并举。但原版教材篇幅过大,不适合目前会计专业教学学时的安排,而且有些内容与我国目前的会计实践尚有差距,因此,为了满足当前国内会计双语教学的实际需要,我们对原版教材进行了适当的改编,使之总体篇幅和结构体系更合理,既保持英文原版教材的特色,又突出教材的实用性。

由美国著名的会计学家罗姆尔和施泰因巴特教授合著的《会计信息系统》是美国经典的会计信息系统教材之一,至今已修订至第10版。第10版的主要变化为:REA数据模型等内容重新整合与扩展,计算机控制和内部控制等个别章节重新修订与更新,在删除原有个别章节的同时增加了新的章节等。另外,原版教材每章穿插综合案例,并在章末附有习题与案例讨论,有利于提高学生分析问题和解决问题的实际能力。全书共分五个部分:第一部分主要介绍会计信息系统的概述,涉及会计信息系统回顾、业务流程、系统开发方法等;第二部分主要介绍会计信息系统控制与审计,涉及计算机舞弊、会计信息系统控制、会计信息系统可靠性控制等;第三部分主要介绍会计信息系统应用,涉及收入循环、支出循环、生产循环、人力资源管理、总分类账与报告系统等;第四部分主要介绍REA数据模型,涉及REA模型数据库设计、REA模型执行及REA模型的专题等;第五部分主要介绍信息系统开发流程,涉及系统开发与分析、会计信息系统开发策略及信息系统设计、执行与应用等。

我们改编的原则是既忠实原版教材,又要符合国情。主要改编思路如下:

- (1) 在不影响全书的可读性、完整性和适用性的前提下,对原版教材的结构和内容进行调整与整合。
- (2) 删除在其他课程中涉及的重复性内容(如原版教材中的第4章)。
- (3) 删除书末的索引部分及各章后的各类阅读性的辅助材料、案例讨论、关键词等,只保留各章后的自测题及讨论题;同时,我们将这些删除的内容打包放在网上,读者可以免费下载。
- (4) 删除了与我国会计信息系统教学差异较大的内容或国内会计信息系统教学中不涉及、很少涉及或重复的内容。

改编后的教材保持了原书的构架与风格,内容精炼,篇幅适中,适合作为高等院校的会计学专业或非会计学专业进行双语教学的重要教材。此外,本书适合作为高等院校本科财务、会计专业的学生,以及MPAcc, MBA和EMBA的教科书或参考书,也可供感兴趣的读者学习或参考。

本书配有原版的教学辅导资料,主要包括英文PPT、教师指导手册、习题解答、题库等,同时也为广大读

者提供了原版书中被删除的习题、部分整体章节、中英文对照的术语表、中英文对照的原版书目录等资料，读者可以到中国人民大学出版社工商管理出版事业部的网站（www.rdjg.com.cn）注册并经人大出版社确认后免费下载。

在改编过程中，虽经反复推敲核证，力求做到准确无误，但仍难免不妥甚至疏漏之处，恳请广大读者提出宝贵意见，不胜感激。

张瑞君 除广成

The tenth edition of *Accounting Information Systems* provides students with the knowledge and skills they need to pursue successful careers in accounting. We discuss how recent IT developments—such as the widespread deployment of wireless connections to the Internet and the move to replace bar code technologies with radio frequency identification (RFID) tags—are fundamentally transforming the way organizations conduct their business activities. In order to redesign accounting systems to capture and measure accurately the results of those activities, accountants need to understand how new IT developments affect business processes. Technological changes also create new control threats and risks. This text helps accountants understand these issues so that they can effectively modify accounting systems controls to address those new threats. We also discuss the effect of recent regulatory developments, most notably the Sarbanes-Oxley Act and the extension of the COSO Framework (the new Enterprise Risk Management model), on the design and operation of accounting systems.

In addition to technological and regulatory-driven changes, companies are responding to the increasingly competitive business environment by reexamining every internal activity in order to reap the most value at the least cost. As a result, accountants are being asked to do more than simply report the results of past activities. They must take a more proactive role in providing and interpreting both 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 (AIS) so that it truly adds value to the organization.

As with the first nine editions, this book is written to help students acquire the understanding and knowledge of AISs that they must have to succeed in their chosen field. Today's accounting students will become tomorrow's users, auditors, and managers of computer-based information systems. For example, accounting managers must measure and evaluate the performance of information systems; internal and external auditors must assess the quality of information processing and evaluate the accuracy of information input and output; and the accounting consultant's work is often in the design, implementation, and evaluation of information systems. Therefore, to be successful in pursuing an accounting career, students must possess a basic knowledge of computer-based information systems and the role of AIS in performing the accounting function in contemporary business organizations.

In order to prepare students for successful careers in accounting, this text is designed to help graduating students understand the following key concepts:

- The business activities performed in the major business cycles and the flow of accounting data and information in those systems
- 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 fundamentals of e-business and how they affect modern accounting information systems
- Designing an AIS to provide the information needed to make key decisions in each business cycle
- The development, implementation, and maintenance of an AIS
- The motives and techniques used to perpetrate fraud
- Internal control objectives and the effects of IT on these objectives, as well as the specific controls used to achieve those objectives

* 前言中提到的部分内容在改编时已作了调整和精简，但为使读者了解原书概貌，前言未作改动，仍保持原貌。——改编者注

- Computer and information security
- The AICPA's Trust Services framework for ensuring systems reliability by developing procedures to protect the confidentiality of proprietary information, maintaining the privacy of personal-identifying information collected from customers, assuring the availability of information resources, and providing for information processing integrity
- Goals, objectives, and methods for auditing information systems
- Fundamental concepts of database technology and data modeling and their effect on an AIS
- The tools of AIS work, such as REA diagrams, data flow diagrams, and flowcharting

This book is intended for use in a one-semester course in accounting information systems at the undergraduate or graduate level. Introductory financial and managerial accounting courses are suggested prerequisites, and an introductory information systems course that covers a computer language or software package is helpful. The book can also be used as the main text in graduate or advanced undergraduate management information systems courses. Indeed, the topics covered in this text provide information systems students with a solid understanding of transaction processing systems. They can then build on this as they pursue a more in-depth study of specific topics such as databases, data warehouses and data mining, networks, systems analysis and design, computer security, and information system controls.

Major Changes in the Tenth Edition

The tenth edition includes a number of significant changes from prior editions that are designed to make it even easier to use and understand:

- 1 Coverage of the REA data model has been expanded and reorganized. The REA material was removed from the five cycle chapters and brought together with the material from Chapter 5 in the ninth edition ("Data Modeling and Database Design") to form a set of three chapters in Part IV of the text. Chapter 15 introduces the basic structure of the REA data model, focusing on the revenue and expenditure cycles. Chapter 16 focuses on implementing the REA model in a relational database. Chapter 17 covers other cycles as well as a variety of advanced data modeling topics, including the acquisition and sale of intangible products and rental transactions.
- 2 A new chapter on computer security (Chapter 7) is introduced.
- 3 The coverage of computer-based controls in Chapter 8 has been revised and updated to reflect recent developments in the AICPA's Trust Services Framework, including the principle of privacy and the issues surrounding identity theft.
- 4 The material on e-business included in Chapter 3 of the ninth edition has been moved and integrated into the cycle chapters. This was done to reflect the continuing evolution of business practices. E-business is no longer a new topic but is now an integral part of the business processes of most organizations.
- 5 Chapter 6 on internal controls has been thoroughly revised and updated to reflect developments associated with the Sarbanes-Oxley Act and the new COSO enterprise risk model.
- 6 Chapter 5 has been thoroughly revised and updated to reflect the new computer fraud techniques such as spyware and phishing.
- 7 Chapter 4 has been updated and now includes a discussion on how to use Microsoft Access to create and query data bases.
- 8 New hands-on Excel and Access exercises are included to help students hone their computer skills. Many of these exercises are based on "how-to" tutorials that appeared in recent issues of the *Journal of Accountancy*. This introduces students to the wealth of IT-related knowledge that is available in the professional literature.

Important Features

The tenth edition also contains the following features that are designed to enhance student learning:

Improved Online Support. Any student or instructor using the 10th edition of *Accounting Information Systems* has FREE access to Prentice Hall's content-rich, text-supported Web site at www.prenhall.com/romney. The "Companion Web site" for this book is designed to help students study the course material. Each text chapter is supplemented with an online study guide with immediate feedback, current news articles supported with exercises and activities, Internet exercises, PowerPoint slides, and more. Students can also access Prentice Hall's on-line tutor for additional help.

Integrated Cases. Each chapter begins with an **integrative** case, based on a fictional company, 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.

Focus Boxes and Real-World Examples. Each chapter includes one-to-four focus boxes that summarize articles describing how specific companies are using the latest IT developments to improve their AIS. Numerous real-world examples, featuring both large and small companies in a variety of industries, have also been added to each chapter to highlight and reinforce key concepts.

AIS in Action Section to Enhance Student Learning. Each chapter now concludes with a student-learning focused section called "AIS in Action." In every chapter this section includes a short multiple-choice quiz that students can take to test their understanding of fundamental concepts. The answers to the quiz are also provided, along with detailed explanations of why a particular choice is the correct answer to the problem. In addition, some chapters also present a Comprehensive Problem or a Chapter Case along with a detailed explanation of its solution.

End-of-Chapter Discussion Cases and Problems. The end-of-chapter material is designed to help students develop and test their knowledge. It includes discussion questions and problems that integrate material from various parts of the chapter. Many problems were developed from reports in current periodicals. Other problems were selected from the various professional examinations, including the CPA, CMA, CIA, and SMAC exams.

End-of-Chapter Cases. Most chapters have two or three end-of-chapter cases. One or two are stand-alone cases designed to address specific issues discussed in that chapter. In addition, every chapter contains the Any Company case. This is an ongoing case providing students with the opportunity to apply their knowledge to the specific problems and challenges faced by a business in their local area. The Any Company case also gives students the chance to practice their written and oral communication skills in a realistic setting. The requirements for each Any Company case are tailored to the topics offered in the respective chapter. These suggested requirements are too extensive to permit assignment of all Any Company 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 stressed in the course.

Graphics. The text contains hundreds of figures, diagrams, flowcharts, and tables that illustrate chapter concepts.

References. On the Web site 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.

Glossary. A comprehensive glossary located at the back of the book allows students to master the many terms used in the text.

An Overview of the Tenth Edition

Part I: Conceptual Foundations of Accounting Information Systems

Part I consists of the following four chapters that present the underlying concepts fundamental to an understanding of AIS:

Chapter 1 introduces basic terminology and discusses how an AIS can add value to an organization. It also discusses basic strategies and the strategic positions that firms can pursue, so that students can understand how IT can be used to help organizations achieve their goals.

Chapter 2 provides an overview of AIS topics, focusing on understanding fundamental business processes. It introduces the basic data processing steps used in an AIS. We help students see the wide range of data that must be collected by the AIS, and this information in turn helps students to understand what an AIS does. As they read the remainder of the book, they see how advances in IT affect the manner in which those functions are performed. 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 the course on principles. The chapter also discusses transaction processing in automated systems, presenting basic information processing and data storage concepts.

Chapter 3 covers two of the most important tools and techniques used to understand, evaluate, design, and document information systems: data-flow diagrams and flowcharts.

Chapter 4 introduces students to databases, with a particular emphasis on the relational data model and creating queries in Microsoft Access.

Part II: Control and Audit of Accounting Information Systems

Part II consists of five chapters that focus on threats to the reliability of AIS and applicable controls for addressing and mitigating the risks associated with those threats:

Chapter 5 discusses the threats to an AIS and why they are growing. It also defines fraud and explains how and why it occurs, with special emphasis on the techniques and approaches used to perpetrate computer fraud. It uses examples of recent computer frauds to illustrate the various threats and to discuss methods for preventing and detecting fraud.

Chapter 6 discusses the basic concepts of control. The chapter then discusses the major components of the COSO internal control model: the control environment, control activities, risk assessment, information and communication, and monitoring systems. It also examines the other components of COSO's expanded enterprise risk-management model: the internal environment, objective setting, event identification, and risk response.

Chapter 7 addresses computer and information security. It introduces the fundamental concepts of defense-in-depth and the time-based approach to security. The chapter provides a broad survey of a variety of security topics including access controls, firewalls, encryption, and incident detection and response. In addition, it stresses the importance of management involvement through the development and implementation of policy.

Chapter 8 discusses the many specific computer controls used in business organizations. The chapter material is organized so that these controls are explained in the context used by the AICPA's Trust Services Framework: privacy, confidentiality, availability, and integrity of processing.

Chapter 9 reviews principles and techniques for the audit and evaluation of internal control in a computer-based AIS and introduces the topic of computer-assisted auditing. In auditing an information system, an auditor should make sure that audit objectives are met in six critical areas: overall security, program development, program modifications, processing of transactions, source data capture and input, and data storage.

Part III: Accounting Information Systems Applications

Part III consists of five chapters, each of which focuses on a major business cycle and highlights the differences between stand-alone legacy systems and integrated ERP systems:

Chapter 10 covers the revenue cycle, including sales, billing, accounts receivable, and cash receipts.

Chapter 11 covers the expenditure cycle, including purchasing, receiving, accounts payable, and cash disbursements.

Chapter 12 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 13 discusses the human resources management/payroll cycle and explores the ways in which these two systems can be integrated.

Chapter 14 focuses on the general ledger and reporting activities in an organization. XBRL, the balanced scorecard, data warehousing, and graph design are also covered.

These five chapters have been written to reflect the three basic functions performed by the AIS: efficient transaction processing, provision of adequate internal controls to safeguard assets (including data), and preparation of information useful for effective decision making. The role of IT in providing a competitive advantage is stressed and numerous real-world examples are incorporated throughout this part.

Part IV: The REA Data Model

Part IV consists of three chapters that focus on using the REA data model to design an AIS:

Chapter 15 introduces the REA data model and how it can be used to design an AIS database. The chapter focuses on modeling the revenue and expenditure cycles. It also demonstrates how the REA model can be used to develop an AIS that can not only generate traditional financial statements and reports but also more fully meet the information needs of management.

Chapter 16 explains how to implement an REA data model in a relational database system. It also shows how to query a relational database in order to produce various financial statements and management reports.

Chapter 17 discusses how to develop REA data models of the production, HR/payroll, and financing cycles. It also presents a number of advanced modeling issues, such as the acquisition and sale of intangible products and services and rental transactions.

Part V: The Systems Development Process

Part V consists of three chapters that cover various aspects of the systems development process:

Chapter 18 introduces the systems development life cycle and discusses the introductory steps of this process (systems analysis, feasibility, and planning). It places particular emphasis on the behavioral ramifications of change.

Chapter 19 discusses an organization's many options for acquiring or developing an AIS (e.g., purchasing software, writing software, end-user-developed software, and outsourcing) and for speeding up or improving the development process (business process reengineering, prototyping, and computer-assisted software engineering).

Chapter 20 covers the remaining stages of the systems-development life cycle (conceptual design, physical design, implementation, and operation and maintenance) and emphasizes the interrelationships among the phases.

Many real-world examples are included in these last chapters to enable students to understand the accountant's role in the systems-development process.

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, the following supplementary materials are available on an Instructor's Resource CD, which is free of charge to adopters of the text:

- *Solutions Manual* prepared by the authors
- *Instructor's Manual*. Developed by Carol Johnson of the University of Arkansas, this Instructor's Manual works in conjunction with the PowerPoint presentation and Test Item File to present a comprehensive guide to course preparation. As with the PowerPoints, concepts are not merely reiterated but expanded upon to aid instructors in flexible topical coverage.
- *Test Item File*. Prepared by Amelia Baldwin of the University of Alabama, this Test Item File is an ideal resource for creating custom quizzes, tests, and homework. Each chapter contains true or false, multiple choice, essays, and problems, providing a wide range of testing material.
- *"TestGen" Testing Software*, a computerized test item file, developed by Tamarack Software, Inc. Create custom tests in a matter of minutes, using either a drag and drop feature, a random test question selector, or any one of a number of easy-to-use features available.
- *PowerPoint Presentation* slides developed by Carol B. Johnson. The tenth edition includes an entirely new set of PowerPoint slides that make extensive use of high-quality graphics to illustrate key concepts. The slides do not merely consist of bullet points taken verbatim from the text but instead are designed to help students notice and understand important relationships among concepts. Many chapters include well over 100 slides, providing instructors a great deal of flexibility in choosing which topics they wish to emphasize in class.

In addition, instructors can access supplements on the Prentice Hall catalog page, linked-to from www.prenhall.com/romney. Please note that this page is password protected, and requires you to register online for access.

Instructors may also wish to use specific software packages when teaching the AIS course. The following materials are available from Prentice Hall and can be packaged together with the textbook:

An Introduction to Microsoft Great Plains, an Integrated Approach, by Marshall Romney, Paul Steinbart, and Terri Brunsdon

Getting Started with Peachtree, by Jean Insinga, Middlesex Community College

Getting Started with QuickBooks, by Jean Insinga, Middlesex Community College

Peachtree Complete 2004, Educational Version

Manual A.I.S. Practice Set: *Comprehensive Assurance and Systems Tool*, by Frank Buckless, Laura Ingraham, and James G. Jenkins

Peachtree Computerized Practice Set: *Comprehensive Assurance and Systems Tool*, by Frank Buckless, Laura Ingraham, and James G. Jenkins

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We are grateful for permission received from four professional accounting organizations to use problems and unofficial solutions from their past professional examinations in this book. Thanks are extended to the American Institute of Certified Public Accountants for use of the CPA Examination materials, to the Institute of Certified Management Accountants for use of CMA Examination materials, to the Institute of Internal Auditors for use of CIA Examination materials, and to the Society of Management Accountants of Canada for use of SMAC Examination materials.

Of course, any errors in this book remain our responsibility. We welcome your comments and suggestions for further improvement.

Finally, we want to thank our wives and families for their love, support, and encouragement. We also want to thank God for giving us the ability to start and complete this book.

—Marshall B. Romney
Provo, Utah

—Paul John Steinbart
Tempe, Arizona