

CASES IN ACCOUNTING SYSTEMS

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In memory of Kenneth Lane Bayes
who loved life
and lived it to its fullest

PREFACE

Many observers have commented that the accounting profession is in a state of flux, seeking to redefine and expand its traditional boundaries and methodologies and to adapt to the business environment of the 1990s and beyond. In order to continue supporting the changing profession, accounting education must be reexamined in a similar manner.

In a recent white paper, the managing partners of what were then the “Big Eight” accounting firms called for restructuring of accounting education programs. The partners felt that successful public accountants must be able to use creative problem-solving skills in a consultative context, solve diverse and unstructured problems in unfamiliar settings, and comprehend unfocused sets of facts. The partners also felt that the focus of accounting education should be on developing analytical and conceptual thinking, rather than on memorizing the details of rapidly expanding professional standards. In a similar vein, a committee of the American Accounting Association (AAA) was charged with examining the “Future Structure, Content, and Scope of Accounting Education.” The committee stated that accounting should be viewed as an information development and distribution function for economic decision making and recommended that accounting education be approached from the standpoint of effective support for that broad function. Emphasis was placed on flexibility, creativity, new ideas, and realism.

Unfortunately, much of the accounting curriculum is structured and rigid, with emphasis on Generally Accepted Accounting Principles, Generally Accepted Auditing Standards, and the Internal Revenue Code. Even in the relatively unstructured and flexible area of accounting information systems (AIS), there is a tendency to place undue emphasis on guidelines for forms design, good flowcharting principles, sound design of data base systems, and so forth and to expect students to deal with these areas in an academic vacuum.

As educators responding to the challenges issued by the national firms’ partners, the AAA, and others, we seek better ways of making our teaching come alive and relate to the real world. Many accounting information systems courses include a systems project in which students design a system for either a real or an imaginary organization. An alternative approach—one that may better lend itself

to the needs of many institutions, programs, and instructors—is the use of the case method. Cases provide a degree of realism in which theoretical textbook situations can be applied to real world situations. Working individually or in groups, students can explore the issues raised in the cases, discuss them, and propose and evaluate realistic solutions. Of course, cases are not new in accounting education, but they are not widely used in accounting information systems courses, chiefly because of the lack of available resource materials.

The case method can help bridge the gap between the conventional instructional model, which is based on lectures, problems, and examinations, and the learning styles of many students—sometimes the best students. Moreover, it helps raise the focus of instruction from the lower to the higher levels of learning. Bloom’s “Taxonomy of Educational Objectives” provided a look at different levels of learning. Each level of learning builds on the learning gained at the lower levels. Using these objectives, the AAA Committee on Contemporary Approaches to Teaching Accounting Information Systems identified the minimum levels to be reached in nine topical areas. Our choice of materials and exercises is consistent with the committee’s recommendations.

The cases presented in this book deal with a wide variety of organizations: a women’s retail apparel chain, a highway construction firm, an importer of antiques, a soft-drink bottling company, a custom metal works, a horse farm, a regional CPA firm, a theme park, a trucking company, a large professional service organization, a city government, an international insurance company, and a grocery products wholesaler. These diverse organizations have correspondingly varied accounting systems, ranging in technology from primitive manual processing to complex state-of-the-art computerized processing and telecommunications. The cases require students to devote much thought and some outside research in applying AIS and other accounting and management concepts.

The cases in this book provide content and exercises covering all of the commonly defined transaction cycles and virtually all of the familiar accounting applications. While the precise definition of the transaction cycles varies somewhat from one textbook to another, six cycles are normally identified: the purchasing or acquisition cycle, the production or conversion cycle, the revenue cycle, the planning/control cycle, the reporting cycle, and the investment or treasury cycle. Fund accounting and foreign currency exchange are included in two of the cases. These topics are becoming increasingly important in the accounting profession because of the large government sector in the economy and the multinational operations of most large private-sector organizations. However, instructors may prefer not to discuss these topics in detail, and the corresponding exercises need not be assigned. The cases in question retain their validity and usefulness even if certain topics are omitted.

The thirteen cases also cover each of their major phases of the system life cycle: analysis, design, implementation, and operation. However, we have cho-

sen to avoid an overly rigid compartmentalism, in which one case might deal with systems analysis and another with design. The real world is not so tidy and clear-cut. There is substantial coverage of computer technology and internal controls, and many timely topics, such as satellite transmissions, electronic data interchange, and just-in-time inventories, are included. All of the cases involve explicit or implicit internal control concerns. Topic coverage extends beyond a narrowly defined accounting information systems area. Understanding an organization's information needs may require an appreciation of issues in general management, computer systems, finance, or economics. It may also require additional research to obtain further insight into specific issues or gather data to solve an accounting systems problem. To the extent that the cases force students into this kind of experience, the book will provide students with ideal preparation for the accounting profession in the 1990s and 2000s.

The book is intended to be flexible in adapting to each instructor's course objectives and priorities. The possibilities for exploiting the material are almost limitless. Each case is accompanied by a selection of both short and long exercises, and either all of the exercises or just specific ones can be assigned. The complete set of exercises in each case would occupy students for much of an academic term. Those in the comprehensive *Hengist and Horsa* case could form the basis of a term project for individual students or small teams of students. Many of the exercises are general in nature and could be assigned with other cases.

Instructors can use all or parts of cases independently or in appropriate combinations. Any topic in the cases can be used by an instructor as the opportunity for a more complete discussion. For example, the cases involving organizations with multiple branches or locations could be used as the basis of a discussion of system decentralization or telecommunications. Instructors can also change or add to the cases. An instructor who wanted to provide an exercise on long-term budgeting or planning could modify either the *PEK Construction Company* case or the *Funtime Forever* case by adding further questions and/or changing the case's parameters. The potential for varying the assignments allows the cases to be used over a period of many course offerings without undue repetition.

This book offers interesting case studies, a wide variety of exercises, flexibility of use, and coverage of a broad range of accounting and other issues. It is intended for use in conjunction with any of the popular textbooks, as a second text in accounting information systems courses at the undergraduate or graduate level. The breadth of coverage also makes the book suitable as a supporting text in auditing, managerial accounting, management information systems, and other college business courses.

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CONTENTS

CASE 1

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Halverson Career Fashions, Inc.

An apparel chain with twenty retail stores in the northwestern United States concentrates on fashion wear for professional and business women. As part of the fashion industry, this organization faces the uncertainties of predicting consumer tastes and fads during the buying lead time. Each store in the chain is operated as a profit center, although buying is centralized at the corporate headquarters. The assignments emphasize buying, distribution, and handling of merchandise inventory, and sales and cash-handling operations at the local stores.

CASE 2

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PEK Construction Company, Inc.

A highway construction firm in Florida confronts the problems of high investment in fixed assets and the need to offer competitive bids on public-works contracts. It also faces a difficult multi-state payroll problem, involving requirements for government reporting and compliance with minority hiring and immigration laws. Assignments focus on the selection of a new payroll software package and on the maintenance of effective communications among construction supervisors, field offices, and the corporate headquarters. A petty cash fund and contract billing system are also discussed.

CASE 3

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Yesteryear Antiques Unlimited

A wholesale and retail antiques firm imports most of its merchandise from Western Europe and sells from its headquarters in Connecticut. Its European base is in the south of England. Shipping, maintenance of inventory records, and foreign currency translation are major problems for the firm. The present manual accounting system is hopelessly inadequate, leading to long delays and harassed bookkeeping clerks. The emphasis in the assignments is on the company's preparations for its first computerized system. Three system alternatives are evaluated and dual pricing policies are considered.

Fizzy Cola Bottling Company

The bottling company has an exclusive regional franchise for distributing a popular line of soft drink products. The bottling plant is operated on a just-in-time basis, employing highly automated processing and materials handling equipment. However, there are fears that the accounting system may not have kept pace with developments in the operations area, and suspicions have been cast on the continued relevance of the standard process costing system used to accumulate and analyze production costs. The assignments emphasize the inventory management and product distribution systems.

Schwartz Metal Products, Inc.

A metal-working job shop in Long Beach, California, does one-of-a-kind machining and fabrication work as well as small "bread and butter" work. The owner, an opinionated entrepreneur and automobile buff, has built up a good trade supplying parts for vintage cars. Installation of computer aided design and manufacturing (CAD/CAM) equipment is being considered. However, the present raw-materials inventory and job-cost accounting systems leave much to be desired. The emphasis in the assignments is on cost estimation procedures, materials requirements planning, and the accumulation and control of manufacturing costs.

Bowling Horse Farms

A 1,000-acre farm in Kentucky operates to breed, raise, board, and train thoroughbred horses. Rapidly increasing market prices for the most successful race horses, losses on unsuccessful ones, the protection of the horses against disease and other threats, and developers' encroachment on farm land all contribute to the uncertainties of this industry. Unique accounting problems arise from the live inventory of 400 horses, many of which are owned by syndicates. Horses are treated as cost centers for accounting control. The assignments focus on planning and control of the live inventory and on billing the multiple owners for the associated costs. Cash flow problems, the development of a genealogical data base, and evaluation of a fixed-asset package are also considered.

Debit and Credit, CPAs

An accounting firm's main office is in San Francisco and its four branch offices are located throughout northern California. Ten partners and a staff of nearly one hundred other professionals and support personnel provide a varied practice in audit, tax, small-business, and management advisory services. The assignments focus on professional time-keeping and cost accumulation, client billing, the peer review process, and information-system disaster planning.

Funtime Forever

The theme park, located in the upper Midwest, operates throughout the summer months. Revenue sources include ticket sales and the park's attractions, concession sales, and game booths. Some elaborate accounting procedures have been installed, but management is still concerned about cash control, and there are some major weaknesses in internal control. The emphasis in the assignments is on personnel issues and their relationship with internal control and on handling and accounting for the large amounts of cash taken in daily. Financing alternatives for future expansion are also considered.

Jason Argo Truck Lines

A medium-sized trucking firm with terminals throughout the eastern United States has a centralized management style, despite its geographically dispersed operations. The company recognizes that setting competitive rates and scheduling trips to improve truck usage are two of the keys to success. Management of the company's fixed assets and human resources are other important concerns. However, information flows to and from the corporate headquarters are inefficient. Assignments concentrate on intracompany information flows and on the need for a new computerized accounting system.

Finsbury Corporation

A design team has been assembled in a large service organization to create three new accounting applications that will interface with a relational data base management system. The project manager is wrestling with project staffing, scheduling, and budgeting. Assignments emphasize project planning and control, including use of the critical path method for task scheduling. Extensions of the case consider several scenarios during the later design, implementation, and postimplementation phases of the project. As the work progresses, technical and "people" problems strain the project manager's ability to complete the project on schedule and within budget. Students are asked to help solve these problems as well as to participate in the project work.

Bluemont City Government

A Rocky Mountain city of 90,000 people has five major operating departments: Utilities, Public Safety, Parks and Recreation, Public Works, and Mass Transit. Government is entrusted to the elected Board of Commissioners and an appointed City Manager and his staff. Preparation of the city's \$27 million budget occupies much administrative and legislative effort. The city's operations are effective and efficient, except in the Division of Management Services, where waste and some incidents of wrongdoing have recently been discovered. Assignments focus on the city's information needs, the mechanics of the budget preparation process, accounting for the general fund, and internal controls.

Pittsburgh American Insurance Company

After sustained growth in North America, a major insurance company is in the process of establishing branches throughout the Pacific Basin and has just acquired a large insurance company in Southeast Asia. Crucial to its success has been the branches' ability to access the central data base of insurance policies and accounting data. Maintaining this ability has required continual enhancement of the company's telecommunications facilities. Students evaluate alternative wide-area-network media, consider the problem of allocating telecommunications costs, and try to devise effective internal controls for a large telecommunications system.

Hengist and Horsa, Inc.

The company is a grocery products wholesaler, or “middleman,” buying from farmers and food processors and selling to supermarkets and convenience stores. Its policy is to minimize its own inventory and to operate whenever possible as a broker, arranging for direct shipment from supplier to customer. Company policy insists on a high level of customer service, but keeping track of purchase orders and sales orders is a major headache. Much of the present accounting system is either manual or automated on outdated equipment. The firm is now planning a major upgrade of its accounting information system to embrace modern computer technology, including local area networks. Student assignments in this comprehensive case require a broad range of decisions to develop a major part of the new system.

Halverson Career Fashions, Inc.

SMART ATTIRE FOR PROFESSIONAL WOMEN

Company Background

Halverson Career Fashions, Inc., is a women's apparel chain in the Northwest. Major product categories include coats and outerwear, suits, dresses, skirts, blouses, sweaters, hats, shoes, and accessories such as pocketbooks, scarves, hosiery, and gloves. The business was started by Louise Halverson with the objective of providing smart, stylish attire and accessories to professional women, aged twenty-five to forty-five. Demand for this type of apparel has increased substantially in recent years as more and more women enter or return to the workplace.

Halverson Career Fashions' first store opened in a Seattle shopping mall in 1972. Louise Halverson served as store manager, and was assisted by two full-time sales clerks and a part-time clerk helping on weekends. The store prospered, and in 1974 Halverson decided to expand the operation with additional outlets. At the same time, she incorporated in the State of Washington with herself as president. The chain now has twenty stores distributed in metropolitan areas throughout Washington and Oregon, and Halverson is now contemplating further expansion into British Columbia, Canada. The corporate headquarters is still in Seattle, but several years ago all administrative activities were moved to a suite in a suburban office park. The original Seattle store is now treated in the same way as any other local store.

Because of the expansion, Louise Halverson is now almost totally engaged in directing the business and selecting lines of merchandise. Along with her merchandise manager, Anthony Rogers, a young man recently hired from a prominent fashion design house, Halverson regularly attends fashion shows and trade fairs in New York City and other major cities. They also spend a considerable amount of time visiting clothing manufacturers throughout the country. Rogers

has additional responsibilities as a wardrobe consultant, advising customers on color combinations, dress image, style, and similar matters.

Headquarters staff includes the merchandise manager (who supervises the buyers); a general manager, Sally Stephens; and a financial manager, Nancy Lou Wolford. Also on the staff are three assistant buyers, two marketing specialists, three inventory control clerks, five accountants, and clerical support personnel. Three years ago, Halverson Career Fashions bought a minicomputer to perform routine accounting and other data processing, and hired two full-time computer operators. An organization chart for the corporate headquarters is shown in Exhibit 1.1.

Local Retail Stores

The retail stores are located in major shopping malls, and they typically occupy about 2,000 square feet of floor space. Each store is run by a store manager who supervises an assistant manager and four to five sales clerks. The stores are evaluated as profit centers, and managers are given a fair amount of autonomy as long as their stores are profitable. Building market demand in a new area obviously takes time, but sales and profits are monitored closely by headquarters to gauge future potential. Stores are normally given one year to demonstrate profitability. If a store fails to do so, Halverson decides whether to extend the probation period, replace the manager, or close the store. So far, only two stores have been closed, in each case because the mall in which the store was located did not grow as fast as anticipated. New store managers are usually recruited from the ranks of the assistant managers of existing stores. Currently, most of Halverson Career Fashions' employees are women, although there are three successful male store managers and several male assistant store managers and sales clerks.

Store profit is defined, for performance-evaluation purposes, as segment margin: net sales revenue less direct and allocated indirect costs. Direct costs include the cost of merchandise sales, rent, utilities, salaries and sales commissions, local advertising, credit-card fees, and miscellaneous expenses. Indirect costs include corporate overhead costs allocated to stores at a rate of 15 percent of gross sales. In return for this overhead allocation, the corporation performs all collections and payroll services and also pays for major product and institutional advertising. As discussed later, stores are charged a separate burden to cover centralized purchasing expenses.

Purchasing and Merchandise Policies

Buying in the apparel business requires a good feel for fashion trends, but inevitably it is subject to considerable risk. Merchandise must be displayed three to four months before the selling season and must be ordered six to nine months before expected delivery. During that period, fashions and consumer taste may