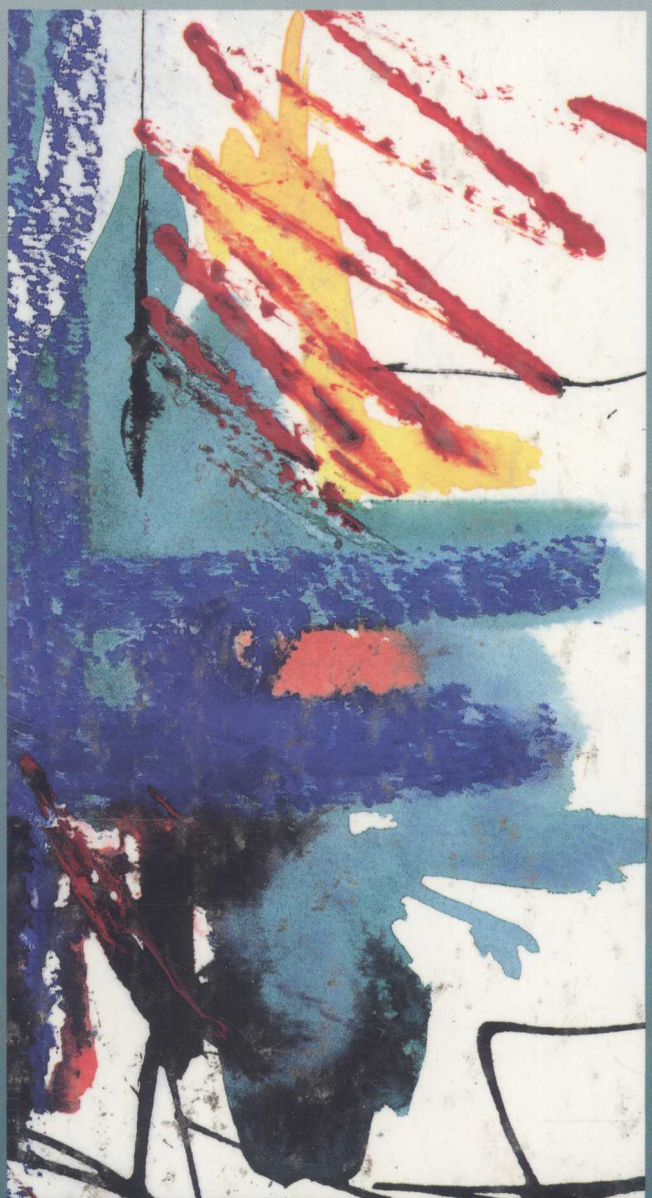
PRINCIPLES OF INFORMATION SYSTEMS

A Managerial Approach



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A Managerial Approach

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To Lila and Leslie

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PREFACE

It was inevitable—and you are fortunate. When compared to other academic business disciplines, the field of information systems (IS) is relatively new. The increasingly important role played by information systems in modern business organizations has made the IS discipline itself, and the publication of a book such as this, a necessity. For any academic discipline, there are certain fundamental concepts that every interested student must know. Here, in this book, you will find the fundamental IS concepts for business students. You are fortunate in that you can take advantage of the experience of those who have gone before you without, hopefully, repeating the same costly mistakes.

In many significant respects, information system technology has led the way; in advance of academic guidelines directing how this technology should best be employed. Perhaps it is the dynamic nature of the discipline that this shall remain so. The driving force of this technology has captured the attention of most authors of introductory information systems textbooks. These texts have historically concentrated on discussing the components of an information system (primarily the technological components) and, perhaps to some degree, how information systems are developed. Yet they have all too often neglected *why* and *how* information systems should be used to meet organizational goals. The result: general business graduates who were thrust into a work environment where information systems are critical to their success, yet they are unprepared to successfully interact with them. An understanding of information system technology alone does not enable one to successfully apply it in information systems activities.

Your instructor, however, has adopted an approach whereby the fundamental principles of information systems are brought together and presented in a way as to be directly accessible, and not buried within historical detail or technical jargon—or even postponed to some other advanced course you might never take.

Changing Business and the Changing IS Discipline

The single most significant influence on business organizations over the past decade has been the rapid transformation in the way information systems are structured, utilized, and, in turn, affect the entire organization.

Information systems are critical to the success of every business. (Just how critical they are will become clear as you read this text.) However, in the past, advances in IS technology and applications have moved faster than the business curriculum. Books and courses dealing with important IS concepts have fallen too late in the curriculum. Introductory texts have tended to be more focused on the descriptive (what have business managers been doing) and less focused on the prescriptive (what *should* business managers be doing).

We've learned much from the experiences of business organizations over the recent past, and this book represents a fresh approach to the introductory IS course. Enough lessons have been learned that we can safely say there are some overriding guidelines for successful interaction with information systems to which all business managers should adhere.

As a result of the continuous change in thinking within the IS discipline, certain principles have evolved that indicate there are definite ways in which business organizations can take advantage of improved technology and systems. Although certainly not pretending to be complete, nor intending to present these principles as original codifications of this author, this book offers a fundamental core of guiding IS principles for you to use as you face your career challenges ahead.

The Changing Role of the IS Professional

As businesses and the IS discipline have changed, so too has the role of the IS professional. Once thought of as a dedicated specialist, the IS professional of today is called upon to be an internal consultant to all functional areas, knowledgeable about their needs and competent in bringing the power of IS to bear throughout the business. The IS professional must exercise a broad, enterprise-wide perspective, encompassing the entire organization—and often even beyond. This text provides the starting point for you to build your expertise as just such a professional.

The scope of responsibilities of an IS professional today ranges not only throughout the organization, but throughout the entire interconnected network of suppliers, customers, competitors, and other entities; no matter where they may be physically located. This broadened scope now offers IS professionals a new challenge: the survival of the organization in a highly interconnected, highly competitive, international environment. In accepting that challenge, the IS professional can now play a pivotal role in shaping the business itself and ensuring its success. In order to survive, businesses today must strive for ultimate customer satisfaction and loyalty through ever-improving product and service quality. The IS professional assumes critical responsibility in shaping an organization's approach to quality performance, and therefore plays an important role in the ongoing survival of the organization.

About the Book

This book stresses a single all-encompassing concept: The right information, if it is delivered to the right person, in the right fashion, and at the right time, can improve and ensure organizational effectiveness and efficiency.

This concept is carried out through three major themes. First, information systems can play a vital role in problem-solving at all levels of the organization. Second, the scope of IS problem identification can and should be expanded to include all activities, especially those at the highest strategic level of the organization. Third, integrated information systems promise vastly superior organizational efficiencies.

In addition to those core IS principles that every business student should master, regardless of their specific chosen field of concentration, this book offers a survey of the entire IS discipline. It is hoped that by providing insight into the various areas in which advanced specialized IS courses are offered, you will gain a fuller appreciation of the discipline.

About the Course

Whether or not you decide to go on to become an IS professional, the principles presented in this book, and stressed throughout the course by your instructor, are those you should take with you as you consider any specialized area of business study. IS permeates all functional areas of the firm, and its value is truly significant.

This book is intended for the first information systems concepts course required of all business majors. As such, it presumes very little knowledge or experience of business organizations. Because it deals with many far-reaching aspects of business organizations, however, this presumption may cause you some difficulty. Your instructor will be asking you to deal with business issues with which you may not yet have personal experience. You will be challenged to go beyond a mere knowledge of computer technology and skills, and to grapple with those issues and ideas relating to the far greater role of information systems within business organizations. These issues go much farther than those you may have encountered in your previous experience with computers—in fact, they go to concepts at the very heart of business organization performance. Often the problems these issues address are vague and unstructured, with no clear-cut or easy answer. Sometimes the issues are complex, involving multiple factors or objectives. Moreover, occasionally the issues are clouded by organizational politics and power. You are encouraged, however, to stretch your thinking so as to absorb these concepts. These challenges are not unlike those faced daily by the IS professional.

If you strive to understand the concepts presented in this course, you will be well suited for the modern business world. More importantly, you will be on the right track to being able to take full advantage of the powerful ideas behind information systems.

Not least of all, this course is intended to expose you to various aspects of the IS field. We hope that some of the excitement IS professionals share for this field will rub off on you. The challenges and opportunities available to future IS professionals are broad and diverse. Moreover, they are exciting—affecting, as they so often do, major business systems of the organization, and the overall organization itself.

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Principles of Information Systems

BRIEF TABLE OF CONTENTS

CONTENTS

PART II

INFORMATION TECHNOLOGY CONCEPTS 61