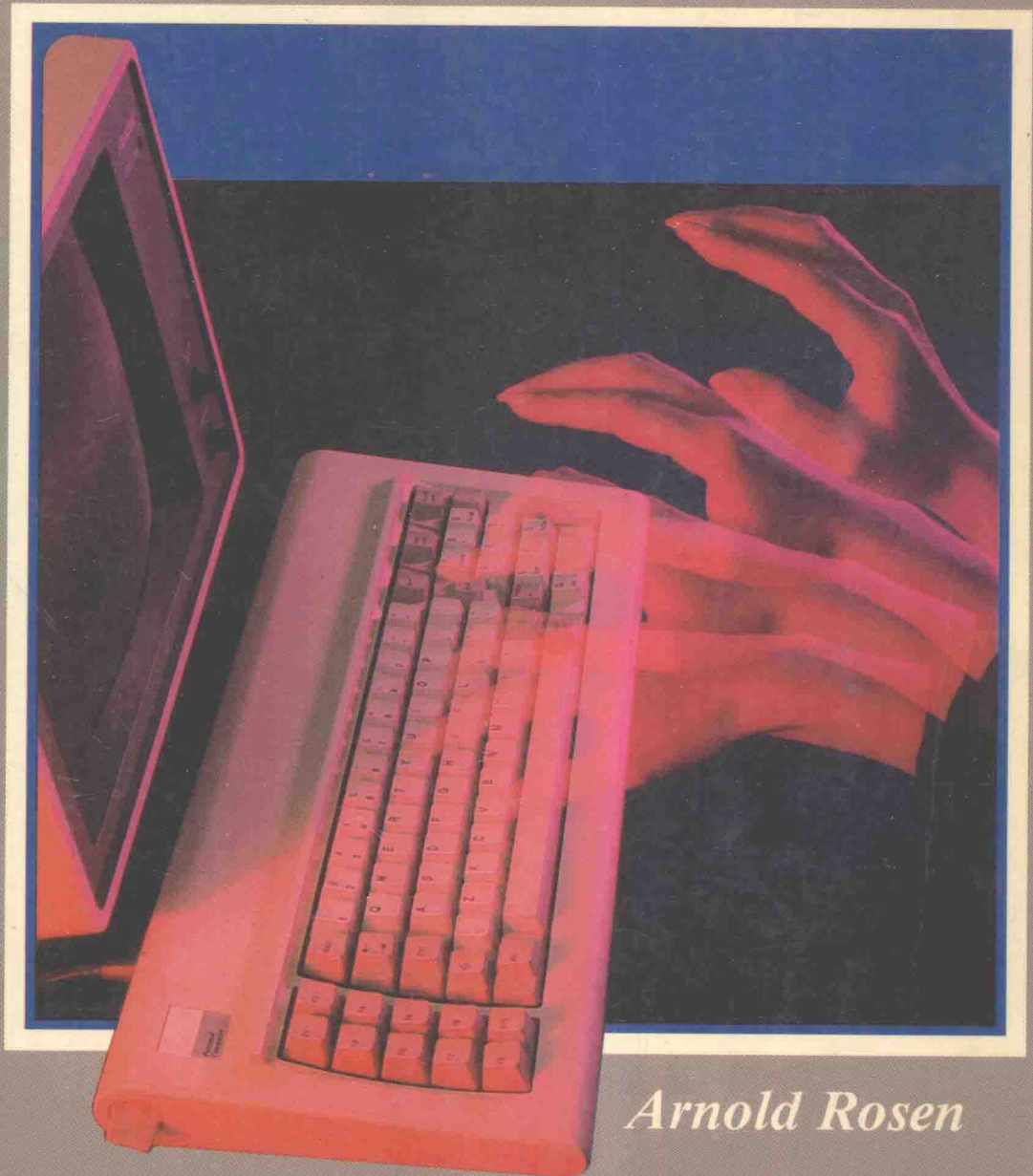


Office Automation and Information Systems



Arnold Rosen

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Office Automation and Information Systems

To my wife, Estherfay, and my son, Paul

*It is not really necessary to look too far into the future; we see
enough already to be certain it will be magnificent. Only let
us hurry and open the roads.*

Wilbur Wright

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PREFACE

Information Age Education

A goal of curriculum development has always been to keep pace with the changes taking place in the real world. The onslaught of microcomputers has led the white-collar masses into the technological mainstream. As the corporate world is moving toward integrating information systems, more information executives and white-collar workers are becoming computer literate. The language barrier between technical and business people is disappearing, and the two cultures are drawing even closer together as the mystique of computers fades.

Consider the following facts:

- By 1990 the number of electronic keyboards in American businesses will equal the number of white-collar workers.
- Installed computing capacity, measured by instruction processing ability, doubles every two to three years. By

1990 there will be roughly 1,000 times as much computing capacity as there was in 1970.

- Circuits and memory are continually getting cheaper, lending to the increasing computing capability of desktop devices. Today's \$5,000 device has more computational power than the minicomputers of the 1970s and the mainframes of the 1960s.
- Advances in printer technology, image processing, color and high resolution displays, and especially disk storage have added exponentially to the usability of desktop systems. A small business, or a department in a large business, can automate for less than \$5,000 today.
- The number of vendors marshalling workstations into the office is increasing daily. For instance, the number of personal computer vendors has grown from 30 in 1978 to 130 today.

- By 1990 a high level of connectivity will be achieved. Through X.400-compatible products, message interconnection standards will be supported by virtually every computer manufacturer. Computer systems of one worker will be interconnected with virtually every other computer screen on the planet, making the task of sending an electronic letter, a telex, a facsimile, or a voice message as easy as international dialing is today.

Such developments are clear indications that changes in curriculum are long overdue.

Need for This Book

For the past ten years, word processing has been the cornerstone of office automation curriculums. But now a fresh approach is needed, since word processing has expanded to encompass a broader scope of information systems.

Present courses and textbooks offer a limited approach to integrated office information systems: courses geared to secretarial and business education emphasize word processing and office automation, and books and courses designed for data processing and computer science are written for the computer science major, often in technical, hard-to-understand language. *Office Automation and Information Systems* replaces textbooks that focus on a single entity and provides a balance between office automation and management information systems.

Outstanding Features of This Book

Among this book's features are:

- Comprehensive coverage of all aspects of office automation and information systems.
- An easily understandable level of writing.
- A rich assortment of photographs and line drawings.
- End-of-chapter activities and projects that challenge the student to critical thinking and analytic problem solving.
- A complete glossary that includes up-to-date terms in office automation and computer systems.

Although this book is primarily designed for majors in secretarial and office technology programs, it may be used by those in business management and computer science or as an introductory text in other academic areas.

Blending the Best of Two Worlds

As office automation systems, personal computers, and even telephone systems increasingly tie into corporate computers, a new management challenge is emerging. Technical skills, computer science, systems analysis, and programming are no longer the only requisites for successful careers for computer professionals. Now, management and interpersonal communication skills are also necessary.

Office Automation and Information Systems offers a comprehensive approach within a changing business environment. Some of the key topics presented are:

- The planning and implementation of office information systems.
- New technologies and their applications, communications, networks, compatibility, service, and support.
- How users are automating office tools and integrating office technologies.
- How vendors are now offering not only workstations but integrated systems.
- The transition of the office, including the coordination of hardware and software products, word processing, graphics, and spreadsheets.

- New areas of interactive computing, telephony, and integration.
- The linking of micros to corporate mainframes and commercial data banks to access vast stores of data and process information instantaneously.

Recent books may include some of these aspects, but no current book includes a comprehensive presentation of all of these technologies and applications.

Today's educational training is moving away from the highly trained technician toward the well-rounded, computer literate professional. Among the trends that will shape the direction of our future educational programs are:

- The integration of the computer into the entire curriculum.

- The partnerships between business people and educators that are forming in many school districts.
- The growing recognition that the nation's educational plan must go hand in hand with plans for economic and social development.

The future of office education is intricately linked to computer technology. Change is never easy, whether it occurs in a business or an educational environment. Every change, however, represents an opportunity and brings a new and powerful challenge to education. If courses, curriculums, and resources are planned wisely—and if students and teachers face these inevitable changes realistically—the educational experience can be an exciting and profitable venture.

ACKNOWLEDGMENTS

Writing a book of this scope could not have been accomplished without the help of many devoted and talented people. My first contact with the publisher was by way of Dr. Richard Abel, Administrative Editor of the College Division at Merrill. He believed in the project at its inception and was instrumental in its acquisition, development, and continued support. I wish to thank Carol Sykes, who handled the many phases of production and who was always available for advice and professional guidance. There are many other people at Merrill who work behind-the-scenes to help create a successful book. I would like to acknowledge and thank them for their contribution and commitment to this project. Working with the people at Merrill became a pleasant and creative partnership.

I was very fortunate in having a group of reviewers whose critical evaluations were of great value during the preparation of the manuscript. I wish to thank Hal Babson, Columbus Technical Institute; Becki Chaney, University of Arkansas; Leona Gallion, Indi-

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Additional appreciation is extended to the members of the "information society"—the vendors, consultants, executives, and information professionals who have contributed their materials, ideas, and expressions of good wishes.

The foundation of my success in preparing this book was the support and tolerance of those closest to me—my wife, Estherfay, and my son, Paul. It was they who tolerated the disarray of a room full of computers, books, papers, and long periods of isolated work. They offered me the love and encouragement I needed to carry me through the rigors of writing. To you, Estherfay and Paul, I say thank you.

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PART ONE

Introduction

CHAPTER 1

The Information Age Arrives

After reading this chapter, you will understand

1. The meaning of the information age
2. The changes in the work force and workplace
3. The relationships among information processing, office automation, and other components that comprise a total information system environment