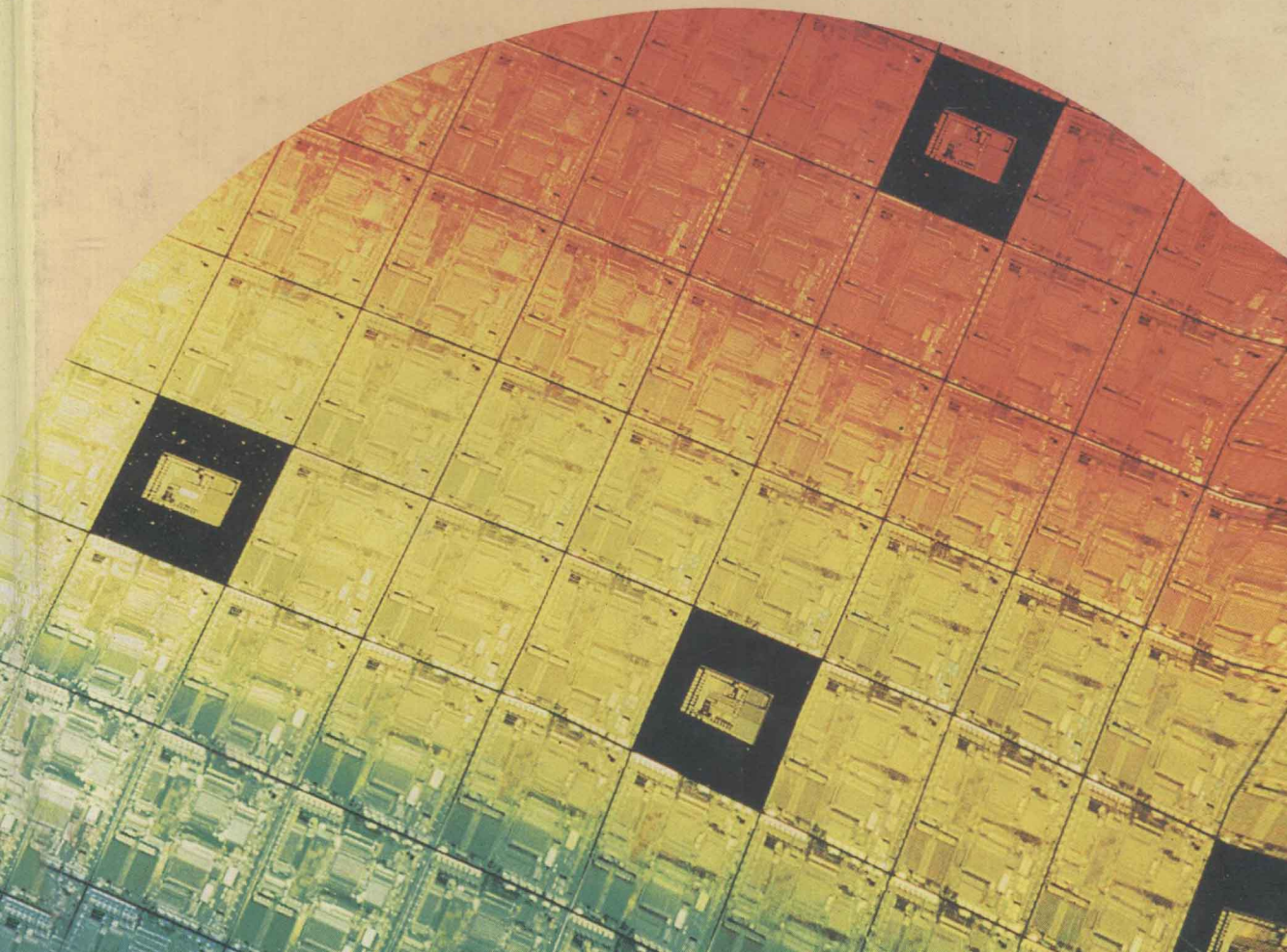


INFORMATION PROCESSING

concepts, principles, and procedures

Clark/Lambrecht



INFORMATION PROCESSING

concepts, principles, and procedures

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Preface

The effects of computer use have become an everyday part of your life. Whether you use a computer yourself or just interact with the output of computers used by others, it is important to understand this machine that is having such an impact on all of us. The principal goals of this book, therefore, are to introduce you to the many uses of computers and to help you learn the way in which computers process information. You will learn to speak and read several languages used with computers. Not only are these languages used in business, but they are popular in everyday life. In addition to learning how to communicate with computers, you will also learn how to write directions for computers in order to solve many kinds of problems.

Computers can be used in so many ways that only a small number of their applications can be covered in this book. Still, you should be able to understand the ways in which computers are being used in today's world to make this journey into the Information Age worthwhile.

To help you develop a deeper understanding of the concepts presented in the text, each chapter concludes with review questions. All new terms introduced and defined in a chapter are listed at the end of that chapter. These aids should be used to help you check your understanding of the material covered. If the questions and problems seem difficult, reread the material covering them.

A workbook is available for the text. The workbook contains various types of study guides and exercises designed to reinforce your understanding of the principles and procedures introduced in each chapter. Also available is a set of applications for the com-

puter. These applications, available on diskette for the Apple® II¹, IBM², and TRS-80™³ microcomputers, will help reinforce your understanding.

If your goal is computer literacy, you will find that this text and its accompanying materials are all you need. If your goal is a career in information systems, these materials will develop the foundation upon which to base advanced studies.

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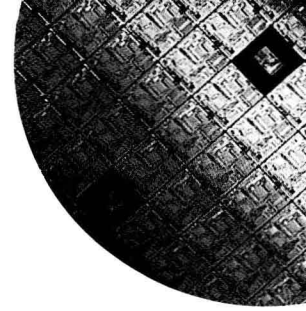
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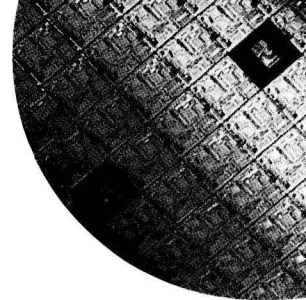
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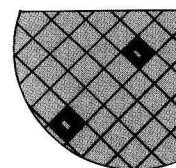
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Contents

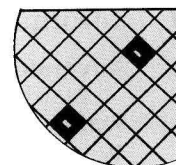


PART ONE – Impacts of the Computer on Society



1	Social Impact of the Computer	1
	Benefits of the Computer to Individuals in Their Daily Lives	2
	Advantages to Business Employees	11
	Benefits to Business	12
	CAD/CAM	14
	Negative Aspects of Computer Use	14

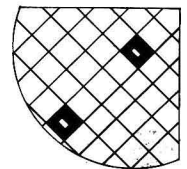
PART TWO – The Electronic Computer System



2	Functions and Components of Computer Information Systems	24
	Functions of an Information System	24
	Components of Computer Systems	27

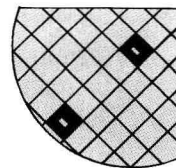
3	Representation of Information in the Computer	41
	Internal Coding of Information in the Computer	41
	Electronic Representation of Coded Information	47
4	Input Devices and Media	57
	Video Display Terminals	58
	Speech Recognition Devices	59
	Optical-Character Readers	60
	Optical-Mark Readers	64
	Bar-Code Scanners	66
	MICR Readers	68
	Magnetic Scanners	70
	Real-Time Sensors	71
	Other Input Devices	73
5	Output Devices and Media	79
	Video Displays	79
	Printers	81
	Speech Synthesizers	88
	Computer Output Microfilm	88
	Plotters	90
	Real-Time Controllers	91
	Robots	91
6	Auxiliary Storage Devices and Media	94
	Magnetic Disks	95
	Magnetic Tape	101
	Laser Disks	104

Information Processing



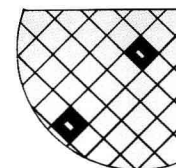
7	Information Processing Functions	112
	Integration of Data Processing and Word Processing	112
	Data Processing Functions	116
	Word Processing Functions	123
8	Systems for Processing Information	130
	Handling More than One User	131
	When the Data Is Processed	138
	Planning and Documenting a System	145

PART FOUR – Software Concepts



9	Programming Concepts	154
	Systems Software	154
	Applications Software	159
	Programming Language Hierarchy	162
	Structured Programming Concepts	165
10	Data Structures	173
	Definition of Data Structure	173
	Single Items of Data	174
	Character Strings	175
	Vectors	175
	Tables	176
	Linked Lists	178
	Text	180
11	Designing Data Files	183
	Terms Used to Describe Data in Auxiliary Storage	183
	Kinds of Files	186
	Types of File Access.....	187
12	Data Base Systems	193
	Applications Example Using Traditional Data Files	193
	What Is a Data Base?.....	196
	Advantages of Data Bases.....	196
	How Data Base Systems Work	197
	Kinds of Data Bases	198
	Query Languages and Report Writers	200
	Data Base Applications.....	201

PART FIVE – Applications Programming Languages

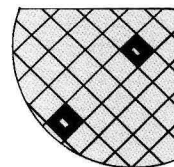


13	Introduction to BASIC Programming	208
	Advantages and Disadvantages of BASIC	208
	Overview of BASIC	210
	Developing Example Programs	214

14	Introduction to Pascal Programming	225
	Advantages and Disadvantages of Pascal.....	225
	Overview of Pascal.....	226
15	Introduction to COBOL Programming	241
	Advantages and Disadvantages of COBOL	241
	Overview of COBOL	243
	Writing a COBOL Program.....	244
	Developing Example Programs.....	248

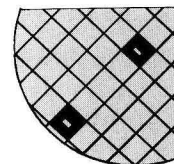
PART SIX – Careers

16	Careers in Information Processing	266
	Types of Information Processing Jobs	267
	Job Entry as Related to Educational Level	268
	A Look at Five Information Processing Jobs	269
	Career Advancement	279
	Information Processing Salaries	281

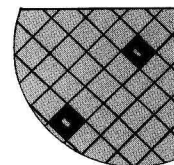


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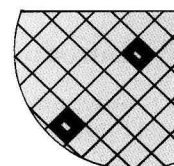
17	A Brief History of Computing	290
	From Finger Counting to Electronic Computers	290
	Early Computers	298
	Computer Generations.....	303
	Improvements in Data Entry.....	307



GLOSSARY	311
-----------------	------------



INDEX	325
--------------	------------





1 Social Impact of the Computer

Objectives:

1. Describe the benefits of the computer to individuals.
2. Describe the advantages of the computer to businesses and their employees.
3. Describe the negative aspects of computer use.

Some people compare it to the discovery of the wheel or the invention of the printing press. Others say its effects on society are more important than those of the Industrial Revolution. Some say that the very survival of the human race depends on it. A totally different opinion is that this device ignores human values, that individual differences and rights are not recognized, and that our way of life is threatened.

The device, of course, is the computer—the electronic device that does computations and makes logical decisions according to instructions that have been given to it. It is apparent that the computer's impact on society is great, whether good or bad. Why do these different opinions exist? The computer is a tool, a complex and powerful tool, but still a tool to do tasks that might also be done without it. These tasks might not be done as well without the computer. They might not be done as fast. As with any tool,

however, people make the choice to use its power to help or to harm themselves or others.

BENEFITS OF THE COMPUTER TO INDIVIDUALS IN THEIR DAILY LIVES

You are probably aware of many ways in which the computer affects your daily life. There are other ways of which you are probably not aware. Let's take a look at some of the benefits of the computer to you as an individual.

Information Sources

Businesses known as **information utilities** have large computers that store huge groups of information about many different things. These groups of information are known as **data bases** and are available for your use. You can then obtain information on many topics, read the daily news, play games, make your own airline reservations, obtain the latest stock market quotations, or perform other activities. The range of services provided by information utilities is continually increasing.

To get information from an information utility you can use a small computer. A device known as a **modem** attaches the small computer to a phone line. Communication can then be set up between your computer and the large computer. You pay a fee to the utility for the amount of time your computer is hooked up to theirs. Some services available from the utility also require payment of additional fees.

Electronic Banking and Shopping

Banks have used computers for years. Nearly every bank offers an electronic teller, such as the one shown in Figure 1.1, that is in service 24 hours a day. Many customers prefer the machine to a human teller, even during hours when the bank is open. Growing numbers of banks are offering bill-payment-by-phone services. To use one of these services, you tell the bank the name and address of each business that you pay on a regular basis, along with your account number at each business. Payments that are the same every month, such as rent or mortgage payments, can be scheduled for automatic payment. Items that vary in amount, such as the phone bill or electric bill, are paid when you instruct the computer to do so. To tell the bank's computer to pay your bill, you simply dial the



Figure 1.1 Many bank customers find 24-hour tellers useful.

computer's phone number. Then, using your phone's keypad, enter your bank card number and secret password, the codes for the transfer of payment to the business from either your checking or savings account, the business' code number (bank provides this), the amount of money to be paid, and the date on which the payment should be made.

Many banks have started issuing identification cards that allow their customers to use other banks' 24-hour tellers nationwide. **Debit cards** have also been introduced. These cards look just like credit cards, but cause the amounts of purchases to be immediately deducted from the checking account rather than appearing on a bill days or weeks later. Since items must be paid for immediately, persons who use debit cards to purchase items will be inclined to buy fewer items on impulse than those who use credit cards.

In addition to the use of debit cards, computers are changing shopping in many other ways. Many stores have joined forces with the information utilities discussed earlier. After "browsing" with your computer, and perhaps watching animated demonstrations of products, you may immediately place your order with a business' computer. Figure 1.2 shows a person shopping by computer.