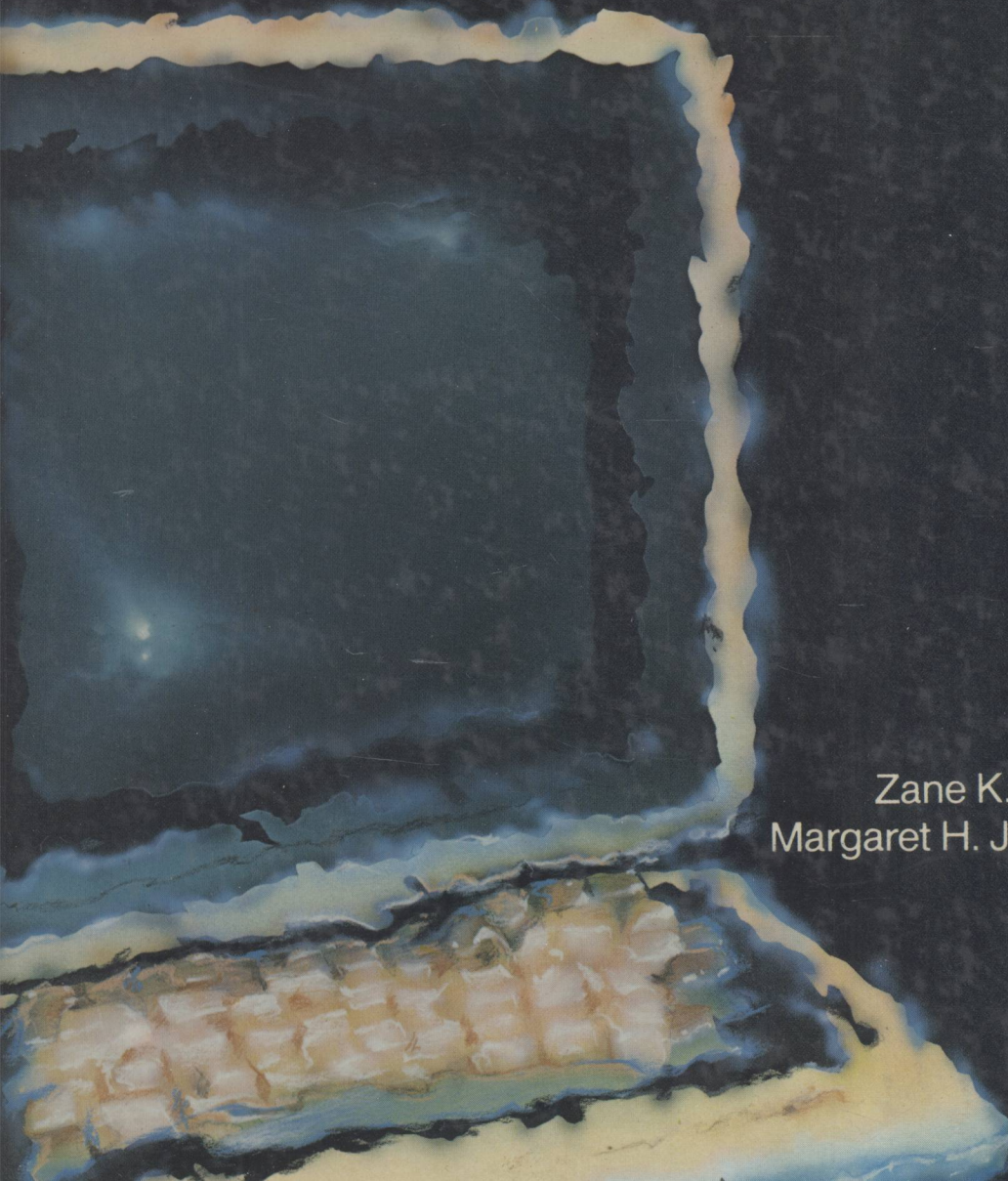


# Introduction to Word/Information Processing

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Second Edition

Zane K. Quible  
Margaret H. Johnson



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Zane K. Quible

Margaret H. Johnson



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# Preface

In the five years that have passed since the first edition of this text was published, word processing has changed in many ways. Most of these changes are found in the technology that is used in manufacturing the equipment, with few changes being found either in the personnel or in the procedures related to word processing. Without question, the technology affecting word processing has made the equipment not only more functional but also easier to use.

At the time the first edition was published, the interconnecting of devices designed to enable them to communicate with one another was for the most part more of a vision than reality. Today, the interconnecting of devices is a very real phenomenon that has resulted in the development of automated office systems.

Accompanying the widespread interconnecting of devices is a totally new concept—information processing—that enhances the area of word processing. As time passes, the distinction between word processing and information processing is becoming less clear. By the time the next edition of this text is published, these two terms will likely be used interchangeably. In fact, the number of individuals who are using these terms interchangeably is increasing daily.

This text is suitable for use in several ways: as a primary text in a word processing concepts course, as a secondary text in a word processing applications course, or as a general reference text for those individuals who wish to learn more about word/information processing.

The human element as it relates to word processing is the focal point of this text. While the technology and procedures are covered in sufficient detail, it clearly emphasizes the role of employees at various levels in word/information processing. The authors are well aware that employees, more than either of the other two components, determine how successful a given word processing installation is.

A number of changes have been made in this edition, including the following:

1. Chapter terms are presented for each chapter.
2. The chapter in the first edition that was concerned with installing the word processing system has been expanded into two chapters. Special emphasis is given to the ergonomics of the word processing center in this new two-chapter sequence.
3. The equipment chapter contains information about the latest

developments in text-editing hardware.

4. A totally new chapter is included that explains how documents are prepared in word processing. The information in this chapter will be especially helpful to individuals who are not familiar with the operation of text-editing equipment.

5. A new chapter on the word/information processing manager is included in this edition.

6. The chapter in the first edition that pertained to the office of the future has been removed for this edition, and a new chapter on automated office systems is included as a replacement.

The authors wish to thank a number of individuals whose assistance in undertaking this project is greatly appreciated:

At Reston Publishing Company, Inc., Barbara Lovenvirth, Editor; Ann Mohan, Production Editor; and Nancy Sutherland, cover designer.

At Oklahoma State University, Ellen Palmieri, who typed the Teacher's Manual.

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# Introduction to word/information processing

Second edition

# 1

## Outline

### **Components of word/information processing systems**

- Personnel
- Equipment
  - Text-editing equipment
  - Dictation/recording equipment
  - Copier equipment
- Procedures

### **The administrative support concept**

### **Structure of word processing and administrative support systems**

- Centralized structure
- Decentralized structure
- Special-purpose structure
- Integrated structure

### **Advantages of word processing**

- Cost reduction
- Increased efficiency
- Greater productivity
- Faster turnaround
- Better quality work

### **Historical development of word processing**

#### **Phases of development**

- Phase 1: Mechanical text-editing typewriters
- Phase 2: Communicating stand-alone text editors
- Phase 3: Display text editors
- Phase 4: Integration of data processing and word processing
- Present state of the art

### **A word processing system illustrated:**

#### **A narrative**

## Terms

- Administrative secretaries
- Administrative specialists
- Artificial intelligence
- Automated office systems
- Centralized structure
- Communicating text-editing equipment
- Copier
- Decentralized structure
- Dictation/recording equipment
- Display text editors
- Distribution procedures

- Electronic document distribution
- Expeditor
- Facsimile transmission
- Information processing
- Input procedures
- Integrated structure
- Manager of word processing/administrative support
- Messenger
- Optical character recognition

- Output procedure
- Phototypesetting
- Proofreaders
- Reprographics
- Scheduler
- Special-purpose structure
- Supply clerk
- Telecommunications
- Text-editing equipment
- Word originators
- Word processing
- Word processing specialist

---

# Word/information processing: An overview

## Objectives

After studying this chapter, you should be able to

1. Identify and discuss the components of word/information processing systems.
2. Discuss the nature of the administrative support concept.
3. Identify the characteristics of each of the word processing structures.
4. Discuss the various advantages of word processing.
5. Discuss each of the phases of the development of the word processing concept.
6. Identify the significant trends that are shaping the word processing concept.

During the early years of its existence, word processing was used primarily to expedite written communication. Because of its fairly recent emergence as a crucial component of information processing, the role of word processing in today's office has expanded. As the word processing concept continues to mature, it will undoubtedly become an even more crucial component of information processing.

The growing interdependence of word processing and information processing tends to blur the clarity of the distinction between these two areas. By definition, **word processing** is a system comprised of electronic office equipment and specialized procedures used by specially trained employees in preparing a transmittable copy of material created by originators. **Information processing**, on the other hand, is a system resulting from the merger of data processing and word processing that is used to expedite numerous business operations through the integration of data, text, voice, and image components.

## 4 Word/information processing: An overview

More than ever before, word processing functions are being integrated into each phase of the document cycle, which is comprised of origination, production, reprographics, distribution, and storage. Word processing now has a systems focus because of the increased integration of these functions into each phase of the cycle. The following explains how word processing functions are integrated into each phase:

*Origination:* The executives and managers who use the word processing system are involved in the origination phase. The two most common origination processes are dictation and handwriting.

*Production:* The production phase involves the operators who use text-editing equipment to keyboard the originators' work.

*Reprographics:* Reprographics is used to prepare copies of the material keyboarded in the word processing system.

*Distribution:* A variety of distribution methods are now used, including mail delivery and electronic transmission of the material.

*Storage:* The material prepared in a word processing system can be stored either on paper or electronically on a magnetic medium.

Word processing is also used extensively in most **automated office systems**, which has further expanded its use in the modern office. The role of word processing in automated office systems is examined in detail in chapter 13.

Figure 1-1a illustrates the role of word processing in information processing, while figure 1-1b illustrates its role in automated office systems.

## Components of word/information processing systems

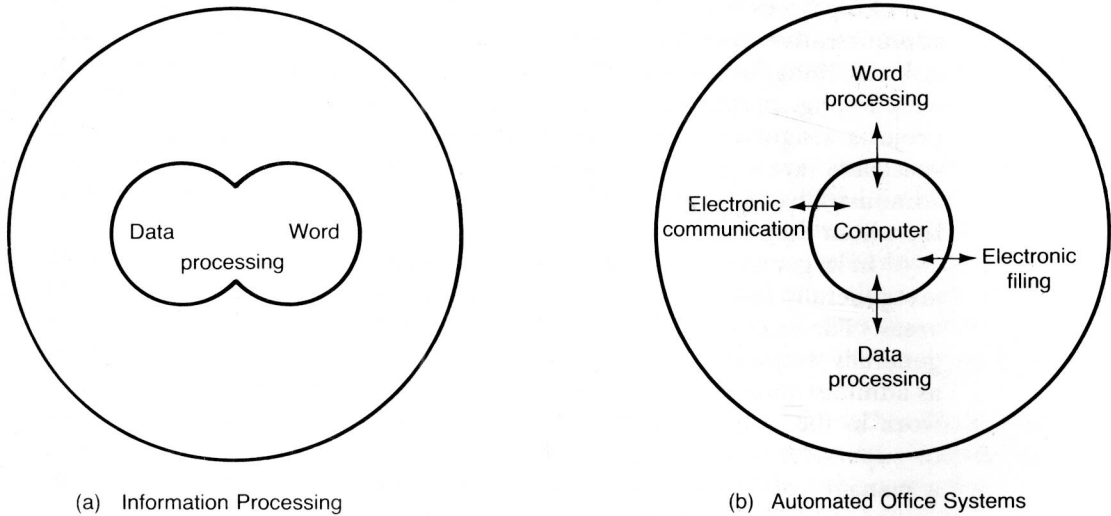
Word/information processing\* systems are comprised of three basic components: personnel, equipment, and procedures. Each of these components is examined as a means of illustrating the nature of the word/information processing concept.

### Personnel

The practice of dividing traditional office positions into two components, which is known as division of labor, is common in word processing systems.

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\* Although the content of this text pertains to word/information processing, the authors hereafter substitute the simpler term of **word processing** for future references to **word/information processing**.



*Figure 1-1. Role of word processing in information processing and automated office systems*

Some employees, who are typically housed in a word processing center, are responsible only for keyboarding and other related tasks, such as proofreading. Other office employees perform nonkeyboarding tasks.

Although the titles of employees who are responsible for keyboarding vary, the following are among the most common: word processing specialist, word processing secretary, correspondence secretary, and word processing operator. Hereafter, in this text, the individual whose job is comprised mainly of keyboarding activities is referred to as a **word processing specialist**.

Another position commonly found in the keyboarding sector is the **messenger**, whose job tasks include transporting the rough drafts and finished work back and forth between the word processing center and the individuals who originate the documents. These individuals are officially known as **word originators**. Some word processing installations also have a **supply clerk**. This individual is responsible for maintaining adequate reserves of supplies used in the word processing center.

**Proofreaders**, who are found in some word processing installations, are responsible for verifying the accuracy of the material keyboarded in the word processing center. In large word processing operations, an **expeditor** or **scheduler** is also sometimes found. The primary function of this individual is to schedule work to meet deadlines and to facilitate smooth-flowing operations.

## 6 Word/information processing: An overview

Employees in the nonkeyboarding sector, who are known as **administrative specialists** or **administrative secretaries**, perform such tasks as filing, receiving office callers, preparing mail for distribution, telephoning, preparing and dictating drafts of material, and completing projects assigned by the word originators. While the word processing specialists are typically located in the word processing center, the administrative specialists are generally located near the word originators for whom they work.

In larger word processing systems, several levels of employee positions are generally found within each of the keyboarding and nonkeyboarding areas. For example, two or more levels of word processing specialists are generally employed in the keyboarding area. Two or more levels, such as administrative specialists and senior administrative specialists, will likely work in the nonkeyboarding area. Typically, each unit has a manager or supervisor who is responsible for day-to-day operations. In addition, a **manager of word processing/administrative support** who has overall responsibility for both areas will probably be found.

### Equipment

The word processing concept emerged as a result of the development of equipment that possessed text-editing capability. In comparison with the equipment available today, the early text-editing devices were quite limited in the number of functions they were capable of performing. The types of equipment now used to perform word processing operations include

1. Text-editing typewriters (also called text editors and word processors)
2. Desk-top computers (also called personal computers)
3. Desk-top terminals

Other types of equipment found in word processing systems include dictation/recording equipment and copier equipment.

While chapter 5 contains a detailed description of the various types of equipment used in word processing, the following provides a brief overview.

**Text-editing equipment** The primary function of **text-editing equipment** is to facilitate the conversion of thoughts and ideas into a transmittable format. These devices are used when keyboarding material authored by the word originators.

Several types and many different brands of text-editing devices are now on the market. A distinguishing feature of this equipment is its ability to capture and store keyboarded material. As a consequence, this material

is readily available for subsequent use when the need arises. Material is generally stored on magnetic media—magnetic tape, magnetic cards, or magnetic disks—although other formats, such as perforated paper tape, have been used.

Figure 1-2 illustrates a text-editing device.

By storing the keyboarded material on a magnetic medium, editing and revising are easily accomplished. The magnetic medium on which the material is stored is simply inserted into the device, and the desired changes are keyboarded and stored. This feature also facilitates the almost-effortless preparation of multiple original copies of the material. Some equipment now available is capable of printing at rates in excess of 1000 words per minute, although most of the equipment presently used prints between 120 and 500 words per minute.

The ease with which the errors are corrected is another distinguishing feature of text-editing equipment. Errors are corrected electronically by backspacing “over” the error and then keyboarding the correction.

**Dictation/recording equipment** The ability to record dictation for later transcription is critical to the success of word processing systems. The equipment used in this process is known as **dictation/recording equipment**.

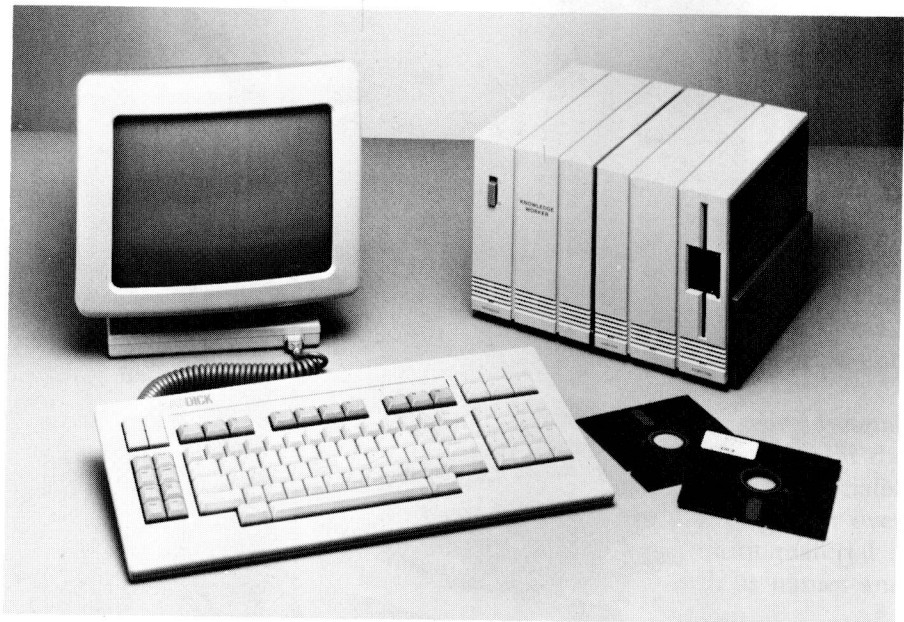


Figure 1-2. Text-editing device (Courtesy A.B. Dick Company)

## 8 Word/information processing: An overview

The accessibility of word originators to this equipment enables them to dictate whenever they wish. This eliminates their having to handwrite material for later keyboarding or their having to wait until a secretary is available to take their dictation or shorthand. Both of these situations, which can have a negative impact on originator productivity, are common when traditional office procedures are used.

Figure 1-3 illustrates a word originator using a dictation device.

The dictation devices in the originators' offices and the recording units in the word processing center are typically connected either by telephone lines or by direct wires. Some brands of dictation equipment use the telephones in originators' offices, while other brands use special dictation microphones. The dictation is recorded on a magnetic medium (tape, disk, belt) in the recording unit located in the word processing center. This material is subsequently keyboarded by a word processing specialist. Generally, the keyboarded material is magnetically stored, either temporarily or permanently, for later use.

**Copier equipment** A third type of equipment extensively used in word processing systems is the **copier**. The use of carbon paper to

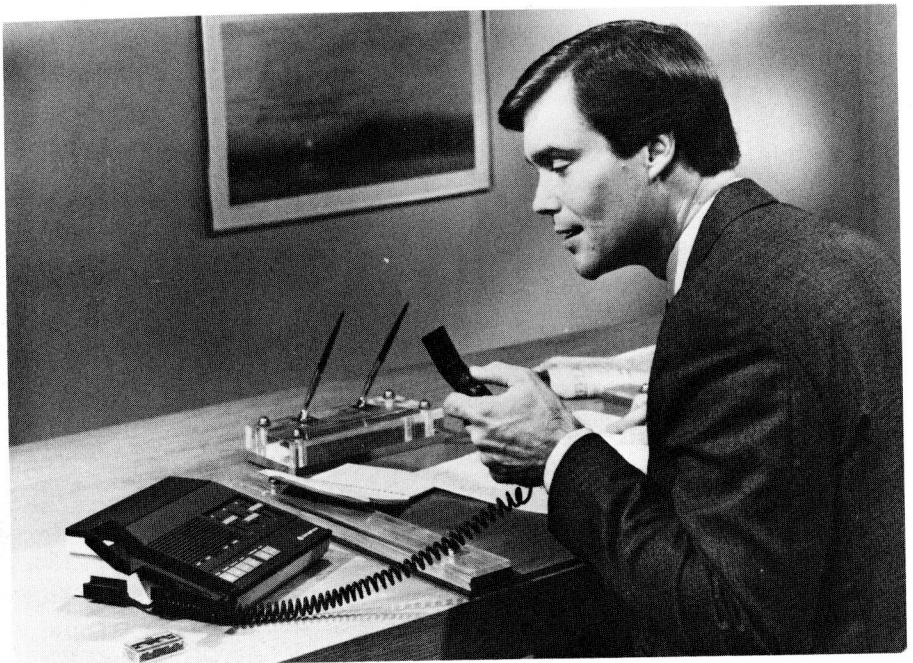


Figure 1-3. Dictation/recording device (Courtesy Dictaphone Corporation)

make copies of original documents is generally inefficient in most word processing operations. When word processing is used, documents may go through several revisions before the originator releases the final draft for distribution. It is not practical to make a carbon copy of each draft, nor is it possible to predetermine which draft of a document will be the final draft. A more efficient alternative is to use a copier to make a copy of the final draft upon its approval for distribution by the originator.

## Procedures

The procedures used in word processing systems are classified as input procedures, output procedures, and distribution procedures. While the characteristics of each classification are fully discussed in chapter 8, the following provides a brief overview.

The **input procedures** involve the material authored by the originators. Two common types of input are dictation and handwritten material. Dictation input requires the use of dictation/recording units. The originator, using either a standard telephone or a special dictation microphone, dictates the material, which is simultaneously recorded on the recording unit located in the word processing center.

When a touchtone phone is used as a dictation device, the keys on the phone are used to activate the recording unit in the word processing center. The keys are used to start and stop the recording unit, to get a playback of the dictation to verify content, to erase and rerecord material, and to signal an employee in the word processing center. When dial phones are used, a key-pad device, which is used to activate the various functional controls on the recording unit, may have to be installed on the phone.

With one exception, the dictation devices that use special microphones operate similarly to those that use telephones. The difference is the use of buttons, keys, or levers on the dictation unit to operate the machine's functional controls rather than the use of keys on a telephone.

In some instances, material is entered into the system by hand carrying it to the word processing center. Examples are handwritten material and magnetic belts or tapes prepared on certain types of dictation equipment, such as portable devices.

Two other types of input sometimes used in word processing systems are dictation at the typewriter and form letters. When dictation at the typewriter is used as an input method, the word processing specialist keyboards the material as the originator dictates either in person or over the telephone. When using form-letter input, the constant material is the same in each letter, while the variable material, such as names and addresses, is different in each.

When the material arrives in the word processing center, it is logged into a schedule book according to the time of its receipt and priority.