

Records Management

READ & GINN



9th Edition

Records Management

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Records Management 9e is a strong introduction to the increasingly comprehensive field of records and information management. New information continues to grow at a rapid rate, which causes the field of records and information management to be in a state of flux. This edition emphasizes principles and practices of effective records and information management for physical and electronic records systems. This approach offers practical information to students as well as to professionals at managerial, supervisory, and operating levels. Emphasis is placed on the need to understand the changes occurring with the volume of information, the need for compliance to government regulations, and advances in technology.

Records Management may be used for short courses or seminars emphasizing filing systems or longer courses such as quarter or semester plans. Basic physical systems concepts and the concepts needed for understanding electronic records storage and retrieval methods are discussed and applied.

As a reference book, this latest edition of *Records Management* serves several purposes. It presents sound principles of records and information management that include the entire range of records—physical (paper), image records, and electronic media used in computerized systems. Although the key management functions of records and information management are introduced, emphasis is placed upon control for ensuring that the records system achieves its stated goals. Professionals who direct the operation of records systems will find this edition to be valuable because the rules in the textbook agree with the latest standard filing rules presented by ARMA International.

Organization

The text is organized to facilitate the study of chapters in sequential order.

- Chapter 1 introduces the student to the expanding area of records and information management.
- Chapters 2–7 center on alphabetic storage and retrieval methods for physical and electronic systems and transferring records from active to inactive storage.
- Chapters 8–10 adapt the alphabetic storage and retrieval method to subject, numeric, and geographic storage methods.
- Chapters 11 and 12 cover records and information management technology, which includes an update of image systems and the technology that integrates the computer with other automated records systems. In addition, the need for controlling records storage and labor costs, the creation of correspondence, and forms management are reviewed for both large and small offices. The records audit, the records and information manual, knowledge management, and developing and implementing a disaster recovery plan conclude the discussion of a comprehensive records and information management program.

New to this Edition

Records Management is designed for easy reading and maximum retention.

NEW!

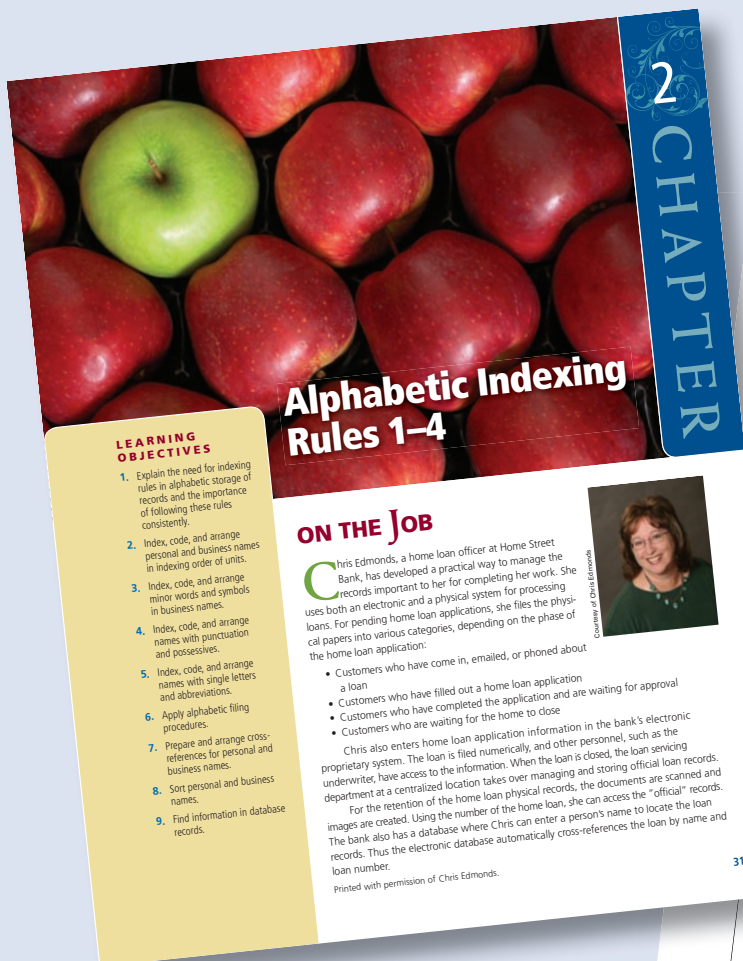
- **CourseMaster** online homework and gradebook solution offers interactive learning with plenty of review and feedback opportunities to enhance mastery of new concepts.

NEW!

- Terms and definitions appear in the margin.
- **On the Job** interviews with professionals in the field add relevancy to the concepts.

NEW!

- **Career Corner** features job descriptions of careers in records management that add realism.
- Soft-cover text-workbook design makes *Records Management* the perfect companion for both in-class and online learning.



2 CHAPTER

Alphabetic Indexing Rules 1-4

LEARNING OBJECTIVES

1. Explain the need for indexing rules in alphabetic storage of records and the importance of following these rules consistently.
2. Index, code, and arrange personal and business names in indexing order of units.
3. Index, code, and arrange minor words and symbols in business names.
4. Index, code, and arrange names with punctuation and possessives.
5. Index, code, and arrange names with single letters and abbreviations.
6. Apply alphabetic filing procedures.
7. Prepare and arrange cross-references for personal and business names.
8. Sort personal and business names.
9. Find information in database records.

ON THE JOB

Chris Edmonds, a home loan officer at Home Street Bank, has developed a practical way to manage the records important to her for completing her work. She uses both an electronic and a physical system for processing loans. For pending home loan applications, she files the physical papers into various categories, depending on the phase of the home loan application:

- Customers who have come in, emailed, or phoned about a loan
- Customers who have filled out a home loan application
- Customers who have completed the application and are waiting for approval
- Customers who are waiting for the home to close
- Customers who are waiting for the home to close

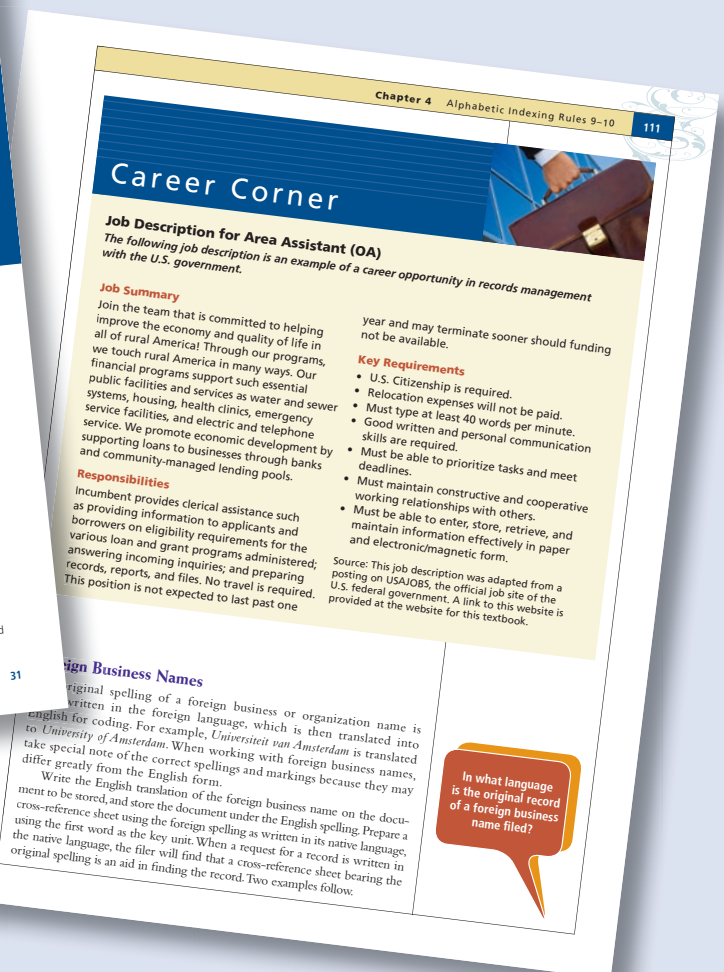
Chris also enters home loan application information in the bank's electronic proprietary system. The loan is filed numerically, and other personnel, such as the underwriter, have access to the information. When the loan is closed, the loan servicing department at a centralized location takes over managing and storing official loan records.

For the retention of the home loan physical records, the documents are scanned and department at a centralized location takes over managing and storing official loan records. images are created. Using the number of the home loan, she can access the "official" records. The bank also has a database where Chris can enter a person's name to locate the loan records. Thus the electronic database automatically cross-references the loan by name and loan number.

Printed with permission of Chris Edmonds.



Courtesy of Chris Edmonds



Career Corner

Job Description for Area Assistant (OA)

The following job description is an example of a career opportunity in records management with the U.S. government.

Job Summary

Join the team that is committed to helping improve the economy and quality of life in all of rural America! Through our programs, financial programs support such essential systems, housing, health clinics, emergency service facilities, and electric and telephone service. We promote economic development by supporting loans to businesses through banks and community-managed lending pools.

Responsibilities

Incumbent provides clerical assistance such as providing information to applicants and borrowers on eligibility requirements for the various loan and grant programs administered; answering incoming inquiries; and preparing records, reports, and files. No travel is required. This position is not expected to last past one

year and may terminate sooner should funding not be available.

Key Requirements

- U.S. Citizenship is required.
- Relocation expenses will not be paid.
- Must type at least 40 words per minute.
- Good written and personal communication skills are required.
- Must be able to prioritize tasks and meet deadlines.
- Must maintain constructive and cooperative working relationships with others.
- Must be able to enter, store, retrieve, and maintain information effectively in paper and electronic/magnetic form.

Source: This job description was adapted from a posting on USAJOBS, the official job site of the U.S. federal government. A link to this website is provided at the website for this textbook.

Sign Business Names

original spelling of a foreign business or organization name is written in the foreign language, which is then translated into English for coding. For example, *Universiteit van Amsterdam* is translated into *University of Amsterdam*. When working with foreign business names, take special note of the correct spellings and markings because they may differ greatly from the English form.

Write the English translation of the foreign business name on the document to be stored, and store the document under the English spelling. Prepare a cross-reference sheet using the foreign spelling as written in its native language, the native language, the filer will find that a cross-reference sheet bearing the original spelling is an aid in finding the record. Two examples follow.

In what language is the original record of a foreign business name filed?



- **Records Management in Action** are examples based on real-world companies.
- Access 2010 tutorial reinforces software basics; Access activities are included in each chapter.

Data Files

Students use data files (provided on the product website) to complete the self-check activities in Chapters 2–4 and end-of-chapter applications in all chapters. Because an understanding of our government’s hierarchy is helpful when applying alphabetic indexing rules to government names, a file that provides an overview of government structures is also included. In the textbook, a data files icon identifies applications that require data files.

Students will download and unzip these files, providing a practical application of electronic records management.

Study Guide

The study guide reviews important terms and provides sample test questions and several practical activities. Solutions are given at the end of each chapter to provide immediate feedback.



42 Chapter 2 Alphabetic Indexing Rules 1–4

Filing Segment	Indexing Order of Units			
	Key Unit	Unit 2	Unit 3	Unit 4
1. Grant & Reardon Sales	Grant	and	Reardon	Sales
2. Grant's Barber Shop, Inc.	Grant's	Barber	Shop	Inc
3. Grant's Homestyle Eatery	Grants	Homestyle	Eatery	
4. I Do Windows!	I	Do	Windows	
5. I Can Do It.com	Icandoit.com			
6. Ike & Sons Realty	Ike	and	Sons	Realty
7. Inter-Asia Services	InterAsia	Services		
8. Iron Mountain	Iron	Mountain	Mining	Co
9. Iron Mountain Mining Co.	Iron	Mountain	Mining	Co
10. Julia Jones-Zeta	JonesZeta	Julia		

RULE 3: Self-Check
1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a. In-and-Out Car Wash					
b. Imelda Irving-Brown					
c. The Flying Cow Dairy					
d. Inside/Outside Games, Inc.					
e. #s Away Diet Center					
f. The Ink-a-Do Stamp Store					
g. \$ Saver Store					
h. In-Town Couriers					
i. Allison Love-Jarvis					
j. Lively & Ripley Clothing					

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- Records media—physical (paper), micrographic, electronic, or optical
- Records size—letter, legal, tab/checks, other
- Records housing—folders, binders, disks, reels, etc.
- Records value—nonessential, important, useful, vital
- Retention requirements

E-mail Records

Depending on the content of electronic mail (e-mail) messages, instant messages (IMs), or text messages sent and/or received within an organization, they may be considered records or nonrecords. Although instant and text messages are more often used by employees for personal messages, they are often used for work-related correspondence that must be stored as records. E-mail is a primary form of business communication that reduces mailing costs. These primary forms of business communication that reduces mailing costs. These primary forms of business communication that reduces mailing costs. These primary forms of business communication that reduces mailing costs. These primary forms of business communication that reduces mailing costs.

Records and information managers must work with the Information Technology (IT) Department in their organizations to develop official policies regarding e-mail retention. Some organizations routinely purge/delete all e-mail after 30 days. Other organizations allow each user to determine what to retain as long as the user is following the organization's retention policy. E-mail users must be trained to delete unneeded documents. (See Chapter 12 for more information on e-mail policies.)

Is an e-mail message ever an official record?

Why should records of employee online benefit transactions be on a RRS?

Records Management in Action

RFID Provides Library Self-Checkout Option

Public libraries in the adjoining towns of Springdale and Fayetteville, Arkansas, installed RFID technology to improve their checkout processes. Springdale library staff were faced with increased circulation and a hiring freeze, so, RFID provided much needed helping hands. Library usage was up 4.4 percent, from 659,977 checkouts in 2007 to 689,133 checkouts in 2008. Through February 2009, circulation was up 1.2 percent compared to the same time frame in 2008. Circulation at the Fayetteville library increased by 57 percent, from 644,000 checkouts to more than one million from 2003 to 2008. Staff could not have handled the increase without hiring new people. With RFID, new hires were held to a minimum.

Source: Richard Massey, "SPRINGDALE: Radio Tags Give Patrons Option to Self-Checkout," Arkansas Democrat-Gazette, March 23, 2009.

Chapter 1 Records Management 9

My Records

Do You Know Where Your Records Are?

Think quickly—where is your birth certificate? Where is the title to your car?

If you are like most people, you might not know exactly where your important records are. Do you know where you keep each of these records?

- Birth certificate
- Marriage license
- Marriage certificate
- Passport
- Diploma
- Auto insurance policy
- Life insurance policy
- Property deeds
- Tax returns for previous years
- Will
- Automobile title
- Renter's or homeowner's insurance policy
- Divorce decree
- Adoption or naturalization papers
- Military discharge papers
- Vaccination records for all family members
- Medical histories for all family members
- Pay stubs from current and previous jobs
- Stock purchases and other investment records

Each of the records listed above are either vital or important records. What degree of protection have you provided for each record? Are your records in a fire resistant container or in a safe deposit box? Follow these suggestions for keeping your vital and important records safe:

- Identify a single location to store all vital papers and information related to your financial transactions.
- Create copies of your vital records. Some of the copies may need to be certified as official copies.
- Put important original documents in plastic sheet protectors to protect and easily identify them.
- Notify family members or friends not living with you where important information will be located if disaster strikes.
- Inventory the records you and/or your financial institutions keep only on computers. Include account numbers and passwords on your inventory. Keep the inventory safe.
- Make backups of your computer records. If possible, store the backups at another location.
- Once a month, update your stored information. Has anything changed? Make another backup.

Electronic Records

An **electronic record** is a record stored on electronic media that can be readily accessed or changed. A piece of equipment is required to view application software on personal computers, letters, memos, and reports were created electronically; however, the purpose of these systems was to facilitate the creation of physical records. As technology has advanced, true electronic records are in use today; i.e., records created, distributed, used, and stored on electronic media that can be readily accessed or changed.

Simulation

Records Management Simulation provides realistic activities for filing and retrieval of both physical and electronic records in a business environment. Rules are compatible with standard ARMA International guidelines. This set of practical learning materials consists of 13 filing jobs in which students practice correspondence filing in alphabetic, subject, consecutive numeric, terminal-digit numeric, and geographic filing systems as well as requisition/charge-out and transfer procedures. A data CD includes report sheets to be filled out by students after they complete each job, finding test forms, simulated e-mail messages, and files for use with database applications.



CourseMaster for Records Management

CourseMaster for Records Management is an online homework checker that includes an:

- Interactive online eHomework solution or grader
- Interactive eBook

The online homework grader checks all of these activities:

- Textbook activities and questions
- Study guide questions and activities
- Report forms in the simulation.

The screenshots illustrate various features of the CourseMaster for Records Management interface:

- Top-left:** A drag-and-drop activity titled "Records Management" where users index units into numbered tabs (1-4). The units listed are: 1. Thi Dien Personnel Inc., 2. Latasha Gregory, 3. Edward Simmons, 4. Greg Simmons Car Company, and 5. Albert Brown Suit Shop.
- Top-right:** A question: "Are the two names in each of the following pairs in correct alphabetic order? If not, explain why they are not." The pairs are: a. Dahlin Clothing Store / Charlotte Dahling, b. Rose Andrews / Rose Garden Nursery, c. Rayburn Law Office / Rayburn Electrical Co., d. Little Pond Productions / Lyle A. Little, e. David Allen / Allen Furniture Company. A table provides "Answers" (Yes/No) and "Explanation" (e.g., "Lyle comes before Pond").
- Bottom-left:** A classification activity where users drag units into boxes. Units include: Greg/ Simmons/ Car/ Company, Simmons/ Edward/ J., Gregory/ Latasha/ J., Thi/ Dien/ Personnel/ Inc., Albert/ Brown/ Suit/ Shop, Dien/ Annal/ C., Dien/ Dny/ Cleaners/ J., Simmons/ T/ F/ J., and Dien/ Thi/ J.
- Bottom-right:** A table for "Record Classification" with columns for "Records", "By Use", "By Date of Use", and "By Value of Record to the Firm". The table lists 13 record types with checkboxes for each classification method.

Instructor's Manual

The instructor's manual provides suggested teaching suggestions for the course, schedules to supplement your syllabus, chapter-specific teaching suggestions, and solutions to all self-checks and end-of-chapter activities. Additionally, the instructor's manual includes teaching suggestions, finding tests, and all solutions for the *Records Management Simulation*. Please refer to the table of contents for further details. Everything in the instructor's manual is also available on the product website.

Instructor's Resource CD (IRCD)

The Instructor's Resource CD includes many of the student and instructor resources found on the companion website including

- Access tutorial and activities
- Data files for the textbook and the simulation
- **Exam View**[®] test banks
- CourseMaster tips
- Instructor's manual
- Placement test and alphabetic filing test
- PowerPoints
- Self-check solutions
- Simulation finding tests, forms, and solutions
- Solutions
- Supplemental activities

Electronic Test Package

The **Exam View**[®] software contains objective questions for each test and enables instructors to modify questions and add instructor-written questions. Questions are included for 12 chapter tests. This flexible, easy-to-use test bank and test generator software is available on the IRCD.

Product Website www.cengage.com/officetech/read

Records Management offers a feature-packed website with tools and activities that will enhance the mastery of records and information management concepts.

⏪ ⏩ ⌂

Student Resources	Instructor Resources
◆ Flashcards	◆ Instructor's Manual
◆ Crossword puzzles	◆ PowerPoints
◆ Chapter quizzes	◆ Solutions
◆ Web links	◆ Test banks
◆ Access tutorial and activities	◆ Simulation finding tests, forms, and solutions
◆ Data files (textbook and simulation)	◆ Placement test and alphabetic filing test
◆ CourseMaster tips	
◆ Self-check solutions	
◆ Supplemental activities	

Acknowledgments

The authors are grateful to many companies and individuals who assisted in completing this revision of *Records Management*. Further, we appreciate the help of the filing equipment and supplies manufacturers and vendors who gave time and information to the authors in their efforts to update this edition effectively.

In addition, special appreciation is extended to the over 100 instructors who provided valuable feedback by responding to our surveys and to our families, friends, coworkers, project manager, consulting editor, and each other whose encouragement and direction have been invaluable in completing this revision. The result, we believe, is an easily understandable, instructive, up-to-date introduction to the field of records and information management.

Judy Read
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Records Management

LEARNING OBJECTIVES

1. Discuss the challenges of the information explosion to records managers.
2. Describe the importance of records management to an organization.
3. Describe how records are classified and used in businesses.
4. Discuss relevant legislation that affects records management.
5. Describe the management functions necessary to operate a records management program effectively.
6. Identify possible careers in records management.
7. Access the website that provides related information for this textbook.

ON THE JOB

According to Dr. Bruce W. Dearstyne, an adjunct professor of leadership, management, and information management courses at the University of Maryland, College of Information Studies, "There has never been a better or more exciting time to enter the records management field!" He believes that the challenges and opportunities associated with managing electronic records will continue to grow along with expansion of the RIM field itself. As institutions become more and more dependent on electronic information for all their work, the role of RIM professionals is bound to become more important. All that electronic information needs to be managed, and RIM professionals will be at the center of things.

Dr. Dearstyne anticipates the RIM field to continue to grow as a result of the trend toward electronic records. The RIM community will find new ways to manage records from social networking systems, such as wikis, and versatile communication systems, such as Twitter. Legal considerations and concerns will continue and increase as central factors in RIM, particularly in the area of e-discovery. Governments, companies, and other institutions will increase their reliance on digital information as a basis for operation, administration, and interaction with customers and the public.



Courtesy of Bruce W. Dearstyne

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INFORMATION GROWTH

Today's workers are increasing their use of information. This time in our history is frequently called the *Information Age*. Computers, so much a part of today's world, play a key role in information systems and the development of a knowledge-based economy.

Did you know that the amount of new information in the world has almost doubled in the past three years? Think of how much new information is generated and transmitted every day in newspapers, on radio and television, through the Internet via electronic mail, wikis, tweeting, webinars, blogs or podcasts, and through text messaging and phone calls. It is hard to quantify how much information comes and goes from all the listed sources! You could say that the world is in the middle of an information explosion in the Information Age. According to market research firm IDC, by 2011 the digital universe will be 10 times the size it was in 2006.¹

IDC also notes that e-mail volume has doubled over the past five years to over 40 billion person-to-person e-mails every day. And that number is expected to grow over 18 percent in each of the next five years. This translates to the world receiving every day eight times the information found in all US libraries!²

The proliferation of information, recent legislation, and storage of information all contribute to a growing problem for individuals, organizations, institutions, businesses, and countries: How is information managed to meet the needs of the people who need it? With so much information produced daily, how is specific information accessed when needed? Records and information management involves organizing information for retrieval.

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Records are stored on media such as DVDs and flash drives.

¹“How to Make the ‘Information Explosion’ Work for You,” itbusiness.ca website, <<http://www.itbusiness.ca/it/client/en/home/News.asp?id&=49692>> (accessed May 30, 2009).

²“You’ve got (too much) e-mail, IDEAS from IBM,” 20 October 2008, <http://www.ibm.com/ibm/ideasfromibm/us/email/20081020/IFI_10202008.pdf> (accessed June 29, 2009).

RECORDS MANAGEMENT

Management is the process of using an organization's resources to achieve specific goals through the functions of planning, organizing, leading, and controlling. Information is an important and valuable business resource. To survive, businesses and organizations must have up-to-date information in the right form, at the right time, and in the right place to make management decisions.

Records management is the systematic control of all records from their creation or receipt, through their processing, distribution, organization, storage, and retrieval, to their ultimate disposition. Because information is such an important resource to organizations, the records management function also includes information management. Therefore, records management is also known as records and information management (RIM).

Records management is not new. Records management has been taking place in organizations for many years. In recent years, the tragedies of the terrorist attacks on the United States and the well-known corporate scandals have affected the profession of records and information management. These events have forced senior managers in corporate America and the government to reconsider how information and records management processes should be updated and improved.

The role of records in recent business scandals affects the business climate. Searching for remedies, Congress has enacted legislation that affects the management of records. Compliance with the new rules and new auditing standards are now part of doing business in the United States. Records managers carry out these complex responsibilities in cooperation with the Information Technology and Legal Departments in an organization.



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Managers must consider how information and records management processes can be updated and improved.



management: the process of using an organization's resources to achieve specific goals through the functions of planning, organizing, leading, and controlling

records management: the systematic control of all records from their creation or receipt, through their processing, distribution, organization, storage, and retrieval, to their ultimate disposition

The American National Standards Institute (ANSI), a voluntary group of private sector businesses and government agencies, is a member of the International Organization for Standardization (ISO). The ISO is a worldwide federation of national standards organizations. **ISO 15489** is a standard for records management policies and procedures. The purpose of this standard is to ensure that appropriate attention and protection applies to all records, and that the evidence and information they contain can be retrieved efficiently and effectively using standard practices and procedures.³ International standards help the records management function of an organization clarify its purpose and prove its value by managing important information.

Traditional records management is being transformed because of changes in technology. Records management is also affected by legislation related to how businesses must operate and keep records. This textbook deals with records in business organizations; however, the principles you learn should also help you understand how to use records efficiently in other types of organizations and in your personal life.

RECORDS

The term **record** has a specific meaning in records management. **ARMA International** (an association for information management professionals) defines a record as stored information, regardless of media or characteristics, made or received by an organization that is evidence of its operations and has value requiring its retention for a specific period of time.⁴

ISO 15489 defines a record as follows:

A record is information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business.⁵

Records are not just any document an organization produces or receives. Some experts estimate that of all the documents an organization creates, only 10 to 15 percent qualify as records. Records management procedures for each organization specify which documents or information become records based on classification of records.

Records Classification

Common records, such as correspondence (letters and memos), reports, forms, and books, can appear on paper, on optical or digital storage media, or on an organization's intranet pages. An organization may receive records through regular mail, electronic mail, facsimile machines (fax), special couriers, or by accessing computer networks including the Internet and company intranets.

³International Organization for Standardization, *ISO 15489-1:2001, Information and Documentation—Records Management, Part 1: General* (Geneva, Switzerland: ISO, 2001).

⁴Definitions throughout this textbook are consistent with those in the *Glossary of Records and Information Management Terms* by ARMA International and *A Glossary for Archivists, Manuscript Curators, and Records Managers*, compiled by Lewis J. Bellardo and Lynn L. Bellardo (Chicago: The Society of American Archivists, 1992).

⁵*Ibid: ISO 15489-1:2001, Information and Documentation—Records Management, Part 1: General.*

ISO 15489: a standard for records management policies and procedures

record: stored information made or received by an organization that is evidence of its operations and has value requiring its retention for a specific period of time

ARMA International: an association for information management professionals

Other types of records to consider are oral records that capture the human voice and are stored on cassettes and other magnetic media. Records also are stored on film, CDs, DVDs, videotapes, photographs, and microfilm. Records are valuable property, or resources, of a firm; and, like all other resources, they must be managed properly.

Usually, records are classified in three basic ways: (1) by the type of use, (2) by the place where they are used, and (3) by the value of the records to the firm as listed in Figure 1.1.

Classification by Use

Classification according to records use includes **transaction documents** and reference documents. A transaction document is a record used in an organization's day-to-day operations. These documents consist primarily of business forms which can be created manually, electronically, or generated via e-commerce systems on the Internet. Examples are invoices, requisitions, purchase and sales orders, bank checks, statements, contracts, shipping documents, and personnel records such as employment applications, time sheets, and attendance reports.

A **reference document**, on the other hand, contains information needed to carry on the operations of a firm over long periods. These records are referenced for information about previous decisions, quotations on items to purchase, statements of administrative policy, and plans for running the organization. Common reference documents, the most frequently used category of records maintained in an office, are business letters, reports, and interoffice e-mail. Other examples include catalogs, price lists, brochures, and pamphlets.



Computer data is a common record form.

How are records classified?

FIGURE 1.1 Records Classifications

Classifications	Examples
Use	<ul style="list-style-type: none"> • Transaction documents • Reference documents
Place of Use	<ul style="list-style-type: none"> • External records • Internal records
Value of Record	<ul style="list-style-type: none"> • Vital records • Important records • Useful records • Nonessential records

.....
transaction document: a record used in an organization's day-to-day operations

reference document: contains information needed to carry on the operations of a firm over long periods

Classification by Place of Use

Classification by place of use of the records refers to external and internal records. An **external record** is created for use outside an organization. Examples of such records are letters, faxes, or e-mail sent to a customer, client, supplier, or to the various branches of the government.

Internal records are a larger group of records classified by their place of use. An **internal record** contains information needed to operate an organization. Such a record may be created inside or outside an organization. Many internal records are created through the use of e-commerce systems using databases and web server applications. Examples are communications between a firm and its employees (payroll records, bulletins, newsletters, and government regulations) and communications among a firm's departments (inventory control records, interoffice memos or e-mail, purchase requisitions, and reports).

Classification by Value of the Record to the Firm

From an inventory and analysis of the use of each major record category, a manager determines the value of the record to the firm. This evaluation is used to develop a records retention schedule specifying how long to keep the records in an organization. Recent legislation makes records retention of critical importance. You will learn more about this in Chapter 7: Storing, Retrieving, and Transferring Records.

Some records are so valuable to a firm that they require special measures of protection. Each record maintained by a firm falls into one of four categories used to determine how records should be retained and the level of protection they require. These categories are **vital records**, **important records**, **useful records**, and **nonessential records** as shown in Figure 1.2 on page 7.

Why Records Are Used

Records serve as the memory of a business. They document the information needed for complying with regulations and the transactions of an organization. For example, management policies are developed and recorded to furnish broad guidelines for operating a business. Each department (for example, Finance, Marketing, Accounting, and Human Resources) bases its entire method of operations upon records. Usually, records are used and retained because they have administrative, legal, or historical values to a firm. Policy manuals and handbooks are examples of records that have administrative value. Contracts and deeds are documents that have legal value to a firm. Minutes of meetings have historical value. More examples of records and their values to the company are shown in Figure 1.3 on page 8.

From a personal standpoint, why do you keep your diploma, birth certificate, the title of ownership to your car, or the promissory note that provided you with the money to attend college? The answer is simple: In today's complex world, people cannot get along without records. They need records for the information records contain.

What four categories are used to classify the worth of a record?

.....
external record: a record created for use outside an organization

internal record: a record that contains information needed to operate an organization

FIGURE 1.2 Records Categories

Category	Examples
Vital Records	
<ul style="list-style-type: none"> • Necessary for the continuing operation organization • Usually not replaceable • Highest degree of protection necessary 	Legal papers, articles of incorporation, titles of property, reports to shareholders
Important Records	
<ul style="list-style-type: none"> • Assist in performing business operations • Usually replaceable but at great cost • High degree of protection necessary 	Personnel records, sales records, financial and tax records, selected correspondence and reports, contracts
Useful Records	
<ul style="list-style-type: none"> • Helpful in conducting business operations • Usually replaceable at slight cost • Low to medium degree of protection 	General correspondence and bank statements
Nonessential Records	
<ul style="list-style-type: none"> • Records have no predictable value after their initial use • Lowest degree of protection 	Announcements and bulletins to employees, acknowledgments and routine telephone/e-mail messages

HISTORY OF RECORDS MANAGEMENT

What are the earliest records of civilization? Hieroglyphics drawn on rock walls and caves reflect ancient humanity's need to tell stories. Museums of the world tell the story of ancient civilizations with artifacts and relics. How have records evolved from the beginning of time?

Early Records

Most of the business records before the invention of the printing press in 1440 AD were based upon simple trade transactions that provided evidence of money received and spent, lists of articles bought and sold, and simple contracts. These records and any copies were created by hand until the printing press and later the typewriter were invented.

Until the 1950s when computers were first used in business, records were almost entirely paper or physical documents. The most important emphasis during this stage in history was getting the records properly placed in the files. Emphasis on retrieval surfaced later. Little importance or status was granted to records and to records management functions at this time.

Before World War II, management directed its main business efforts toward work performed in factories and plants. Usually the plant workforce was large compared with the office staff. Consequently, managers gave their

What was the common form for most records until the 1950s?

FIGURE 1.3 Record Values and Types

Value and Record Type	Examples
Administrative	
Records that help employees perform office operations	<ul style="list-style-type: none"> • Policy and procedures manuals • Handbooks
Fiscal records used to document operating funds and other financial processes	<ul style="list-style-type: none"> • Organizational charts • Tax returns • Records of financial transactions: purchase and sales orders, invoices, balance sheets, and income statements
Legal	
Records that provide evidence of business transactions	<ul style="list-style-type: none"> • Contracts • Financial agreements that are legally binding • Deeds to property owned • Articles of incorporation
Historical	
Records that document the organization's operations and major shifts of direction over the years	<ul style="list-style-type: none"> • Minutes of meetings • Corporate charter • Public relations documents • Information on corporate officers

main attention to the factory because the factory produced the salable products that resulted in profits and against which expenses were charged. In this setting, management assumed that records should be the sole responsibility of the office staff and not managed as an important resource.

Trends in Records and Information Management

Even though more businesses than ever are investing in new technologies, using physical records continues to be a fact of office life. This can be attributed to the increased use of equipment that enables employees to create physical records from electronic media. Copiers, printers, and facsimile machines all have the ability to interface with office computer systems to produce large volumes of physical documents.

Other reasons for continued popularity of physical records are more personal and individual: paper requires no additional equipment for viewing; people can write on and annotate physical documents; and paper is easily transportable.

People who have grown up reading from a screen are comfortable with that medium. Will this comfort of reading from a screen change the dependence on physical documents? This change in work and learning methods could help reduce physical records in the future. As a consequence of the current information explosion, records managers must deal with increasing numbers of records—both physical and electronic.

Do you like to read from a computer screen?

hypermedia system (a network of computers that can read documents containing hyperlinks) that allows browsing in many databases. Companies, organizations, and individuals create locations, called websites, that can be accessed by anyone who has an Internet connection.

Companies use these sites to share information about themselves and their products. They also conduct business using these sites. A broad definition of **e-commerce** is an electronic method to communicate and to transact business over networks and through computers. In other words, e-commerce is the buying and selling of goods and services using the Internet and other digital communications such as electronic funds transfer, smart cards, and digital cash.

Complex, sophisticated e-commerce systems use a combination of technology: the organization's databases, server applications, and browser software to display the transaction. For example, when you decide to buy something from an e-commerce site, you create an account. Your account information is entered into a database—you, as the user, are creating a record for the company. The record is stored in the company's database until the next time you look at the company's website. Companies utilize "cookies," which are embedded information stored on your computer. When you visit the company site again, the cookie sends information about you to the site so that you can add purchases or edit your account.

As you buy more products, the company tracks your particular taste in products. If you haven't purchased anything for a while, an e-mail may be automatically generated to let you know of new products that match your previous purchases. The company is able to generate new business based on previous business. This process is called niche marketing, and it's available in an all-electronic format. Amazon.com is an example of a sophisticated e-commerce system with which you may be familiar.

Management of e-commerce bridges the gap between information technology, records and information management, and the company's legal departments. Cooperation between and among these departments ensures a smooth flow of customer service, sales, and evidence of the transactions.

Electronic File Transfer and Data Interchange

The business processes of electronic file transfer and data interchange are another way that organizations use digital communications.

Electronic fund transfer (EFT) provides for electronic payments and collections. It is safe, secure, efficient, and less expensive than paper check payments and collections. Many organizations deposit their employees' pay by using EFT.

Electronic data interchange (EDI) is a communication procedure between two companies that allows the exchange of standardized documents (most commonly invoices or purchase orders) through computers. If the two companies have compatible systems, the computers talk to each other through a connection. Walmart is an example of a retailer that communicates with suppliers using EDI. For example, suppose you buy a pair of jeans at a local retailer, such as Walmart. The item is scanned, and the inventory of these jeans is updated. If more jeans are needed, the retailer sends a purchase order to the apparel company by EDI. When the apparel company ships the order, an invoice is created and sent to the retailer, again through EDI. The retailer



Have you used e-commerce?



e-commerce: an electronic method to communicate and to transact business over networks and through computers

electronic fund transfer (EFT): electronic payments and collections

electronic data interchange (EDI): a communication procedure between two companies that allows the exchange of standardized documents through computers

can then pay the apparel company by electronic funds transfer. Thus, no physical records are exchanged. Records and information managers should ensure that the records transmitted in this business process are authentic, correct, and usable.

The next section tells about newer technologies and processes that organizations are implementing as a way to enhance the effectiveness of records creation, distribution, storage, and retrieval.

Enterprise Content Management

“**Enterprise content management (ECM)** is the term used to describe the technologies, tools, and methods used to capture, manage, store, preserve, and deliver *content* or *information* across an enterprise or organization.”⁶ This term and definition comes from AIIM, a global enterprise content management association. An enterprise is a business venture or company. Systems have long been in place for electronic document management (EDM) and business process management (BPM). The broader term of ECM is an attempt to deal with the complex world of information technology where one technology can become outdated and be replaced with several new ones.

The value of ECM is not only in its technology, but also in the activities that involve people and processes. Organizations need a solution that en-

ables their users to share documents and provides collaborative features (such as discussion threads, calendar items, and additional project information) in a secure manner.

Many organizations realize that implementing and managing an integrated process is a challenge. Organizations must invest in risk assessments, policy development, training, management strategies, and other activities, as well as technology. This involves several departments in an organization that work together to make ECM work in the organization.

.....
enterprise content management (ECM): the technologies, tools, and methods used to capture, manage, store, preserve, and deliver content across an enterprise

Records Management in Action

Records and Information Management and the Bottom Line

Records and information management procedures and policies help increase a company's bottom line. For example, not having a records retention policy can be costly for a business. A company agreed to lease a building it owned to another company. The building housed many years' worth of company records and little time was available to determine which records could be discarded. Thousands of bankers' boxes were sorted by a team of ten attorneys and two paralegals who worked three weeks to determine which records needed to be retained or destroyed. You can imagine the cost to the company for this team. If the company had been following a records retention policy, much of this expense could have been avoided.

Source: Pete Daly. "Lax Records Management Can Be Costly to Business Operations" *Grand Rapids Business Journal*, April 27, 2009, page 16–17.

⁶"EMC Roadmap 2005," AIIM website, <<http://www.aiim.org.uk/publications/ecmroadmap/2005/index.asp>> (accessed June 19, 2009).



As with all records, ECM acknowledges that not all records are created equal. The records have business, operation, legal, and/or regulatory value as discussed earlier. ECM also works well on unstructured information that exists outside the confines of database systems. The vast majority of information in most organizations comes from e-mail, word processing documents, digital images, and PDF (portable document format) files. Industry experts place this type of information at 80 percent of all information created for a company.⁷

ECM is a process that will help an enterprise benefit in efficiency and effectiveness because of the combination of people, processes, and technology. Because of the information explosion, most new information is stored on some type of electronic media. Records and information management professionals are concerned about the management of these records. In the next section, you will learn about the legal considerations for records management.

LEGAL CONSIDERATIONS FOR RECORDS MANAGEMENT

In 1947, concerns about the amount of paperwork generated for the federal government prompted the creation of the General Services Administration (GSA). Since that time, the GSA has been responsible for improving government practices and controls in records and information management.

The federal government's pioneer studies in records management were widely acclaimed. They provided the example and motivation needed by business, industry, and lower levels of government to study the need for records and for setting up programs for their management.

As the number of records increases dramatically, legislation to balance and protect an individual's right to privacy, the public's access to information, and the quest for national security also increases. When individuals' rights to privacy have been violated, the public's access to information denied, or the national security has been breached, steps need to be taken to protect these three important rights in a democratic society. These three rights are kept in balance by legislation.

Figure 1.6 on pages 16 and 17 contains a summary of key legislation related to the field of records and information management. Records and information managers are responsible for implementing phases of these laws.

As companies rely increasingly on information stored on a variety of media, records managers must be certain that their companies' recordkeeping systems are legally acceptable to governmental agencies and courts of law. Compliance issues are a concern to many organizations. Records management professionals are working together in organizations such as ARMA International and AIIM to optimize the effectiveness of records and information management to their organizations.

What is unstructured information?

What three rights are addressed by legislation?

How does the Privacy Act impact you?

⁷ Barclay T. Blair, "An Enterprise Content Management Primer," *The Information Management Journal*, September/October 2004, pp. 64–66.

FIGURE 1.6 Legislation Related to Records Management

Legislation and Amendments	Outcome and/or Intended Solution
General Services Administration records (GSA) 1947	Improve government practices and control in management
Freedom of Information Act, 1966 Privacy Act, 1974, 1994	Individuals have a right to see information about themselves. Imposes strict rules on the government's use of records collected about individuals, requiring government agencies to permit individuals to: <ul style="list-style-type: none"> • Control disclosure of information in their records • Retain records of information that is disclosed • Review and have a copy of information in their records • Request amendment of information in their records
Copyright Act, 1976 Intellectual Property Protection and Court Amendments of 2004	Provides copyright protection for many forms of physical and media works
Right to Financial Privacy Act, 1978	<ul style="list-style-type: none"> • Prevents financial institutions from requiring customers to authorize the release of financial records as a condition of doing business • States that customers have a right to access a record of all disclosures
Paperwork Reduction Act, 1980, 1995	To have Federal agencies become more responsible and publicly accountable for reducing the burden of Federal paperwork on the public and for other purposes
Video Privacy Protection Act, 1988	A criminal law that prohibits disclosure about videotapes individuals have rented without the informed, written consent of the individual
Computer Matching and Privacy Protection Act, 1988	<ul style="list-style-type: none"> • Establishes procedural requirements for government agencies to follow when engaging in computer-matching activities • Provides matching subjects with opportunities to receive notice and to refute adverse information before having a benefit denied or terminated • Requires that agencies engaged in matching activities establish Data Protection Boards to oversee those activities
Uniform Electronic Transaction Act 1999	<ul style="list-style-type: none"> • First Federal effort to provide uniform rules to govern electronic commerce and transactions in every state • Gives electronic signatures and records the same validity and enforceability as natural signatures and paper based transactions
Electronics Signature in Global and National Commerce Act (E-SIGN), 2000	Eliminates legal barriers to the use of electronic technology to form and sign contracts, collect and store documents, and send and receive notices and disclosures
Fair Credit Reporting Act	<ul style="list-style-type: none"> • Designed to promote accuracy and ensure the privacy of the information used in consumer reports • Allows controlled access to credit bureau files

FIGURE 1.6 (Continued)

Legislation and Amendments	Outcome and/or Intended Solution
Health Insurance Portability and Accountability Act, Privacy Rule (HIPAA), 2001	<ul style="list-style-type: none"> • Creates national standards to protect individuals' medical records and other personal health information • Gives patients more control over their health information • Sets boundaries on the use and release of health records • Establishes appropriate safeguards that health care providers and others must achieve to protect the privacy of health information
Patriot Act, 2001 (In response to the terrorist attacks on September 11, 2001)	<ul style="list-style-type: none"> • Allows investigators to use the tools already available to investigate possible terrorist activities • Facilitates information sharing and cooperation among government agencies • Updates the law to reflect new technologies and new threats
Sarbanes-Oxley (SOX) Act, 2002	<p>Passed in response to a number of major corporate and accounting scandals, this law</p> <ul style="list-style-type: none"> • Enhances standards for all U.S. public company boards, management, and public accounting firms • Strengthens corporate governance

RECORDS MANAGEMENT FUNCTIONS IN ORGANIZATIONS

As noted earlier, management is the process of using an organization's resources to achieve specific goals through the functions of planning, organizing, leading, and controlling.

- Planning involves establishing goals or objectives and the methods required to achieve them.
- With the firm's goals in mind, organizing involves arranging the tasks, people, and other resources needed to meet the goals set in the planning stage.
- Leading refers to managerial behavior (such as training, supervising, and motivating) that supports the achievement of an organization's goals.
- Finally, controlling involves measuring how well the goals have been met.

Keep these four functions in mind when you study the management of records. Also, observe how you manage because you, too, perform these steps when you manage your study time, money, and social and professional life.

Life Cycle of Records and Information

As a manager, you must see the whole picture, which involves understanding the four managerial functions discussed earlier and how each relates to the other. In the same way, managing records involves clearly understanding the phases making up the life cycle of information or a record.

What are the four functions of management?



Image Source/Getty Images

Planning is an important phase of records management.

As Figure 1.7 on page 19 shows, the **record and information life cycle** is the life span of a record as expressed in the five phases of creation, distribution, use, maintenance, and final disposition. The phases of the life cycle often overlap. Note how this cycle is carried out.

Whenever a letter is produced, an e-mail written, a form completed, or a pamphlet printed, a record is created. This record is then distributed (sent) to the person responsible for its use. Records are commonly used in decision making, for documentation or reference, in answering inquiries, or in satisfying legal requirements.

When a decision is made to keep the record for use at a later date, it must be stored, retrieved, and protected—three key steps in the maintenance of physical or electronic records. During this phase, the records must be stored (filed), which involves preparing and placing records into their proper storage place—a filing cabinet or a folder on a computer system. After a record is stored, a request is made to retrieve it (find and remove a physical record from storage or open an electronic file and look up the information). When the retrieved record is no longer needed for active use, it may be re-stored and protected, using appropriate equipment and environmental and human controls to ensure record security. Also involved in the maintenance phase are activities such as updating stored information and discarding obsolete physical or electronic records that are no longer useful or that have been replaced by more current ones.

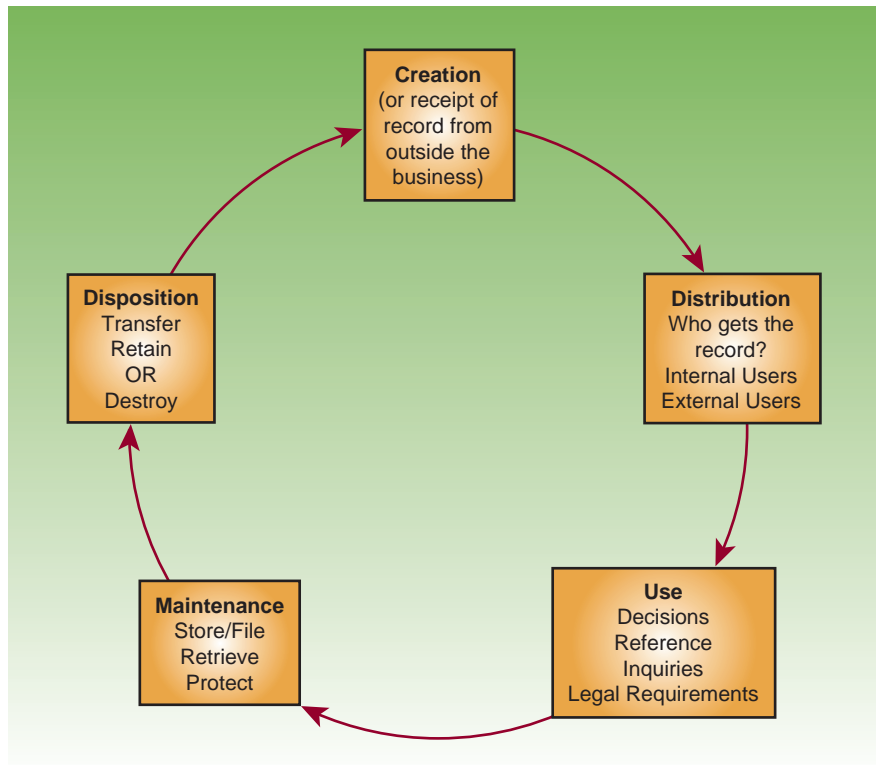
Electronic records are usually stored or saved on the organization's servers and are backed up on a daily, weekly, or monthly basis. Vital and important electronic records are also maintained as physical records.

The last phase in the record and information life cycle is disposition. After a predetermined period of time has elapsed, records to be kept are transferred to less expensive storage sites within the firm or to an external records storage facility. At the end of the number of years indicated in the retention schedule, the records are disposed of, either by destruction or by transfer to a permanent storage place. The facilities where records of an organization are preserved because of their continuing or historical value are called the **archives**. The records retention schedule is discussed in detail in Chapter 7.

.....
record and information life cycle: the life span of a record as expressed in the five phases of creation, distribution, use, maintenance, and final disposition

archives: facilities where records of an organization are preserved because of their continuing or historical value

FIGURE 1.7 The Record and Information Life Cycle



The record and information life cycle is an important concept for you to understand. It shows, for example, that filing is only one part of records and information management. Many interrelated parts must work together for an effective records and information management program. Knowing the meaning and importance of each part of the entire record life cycle, you will be able to understand what is needed to manage all records—physical records and electronic media.

Programs for Managing Records

As mentioned earlier, a records program must be in place to manage all phases in the record life cycle. Although the contents of records and information management programs vary, such programs generally have these features:

- Well-defined goals that are understood by all workers (See Figure 1.8 on page 20 for an example.)
- A simple, sound organizational plan
- Efficient procedures for managing each of the five stages in the record life cycle (See Figure 1.7. You will study these procedures in detail in Chapter 12.)
- A well-trained staff (See the “Careers in Records Management” section later in this chapter.)

Sometimes, the program is centralized (records are physically located and controlled in one area); in other cases, it is decentralized (records are physically located in the departments where they are created and used). Each

What are common problems in records systems?

FIGURE 1.8 Goals of a Records and Information Management Program

ABC Company

Goals of the Records and Information Management Program

1. To provide accurate, timely information whenever and wherever it is needed.
2. To provide information at the lowest possible cost.
3. To provide the most efficient records systems, including space, equipment, and procedures for creating, storing, retrieving, retaining, transferring, and disposing of records.
4. To protect information by designing and implementing effective measures for records control.
5. To determine methods for evaluating all phases of the records and information management program.
6. To train company personnel in the most effective methods of controlling and using records.

plan offers advantages and disadvantages that managers should consider carefully before deciding on an organizational plan. In large firms where work can be specialized, computers and other information systems, as shown in Figure 1.9, play a major role in records and information management.

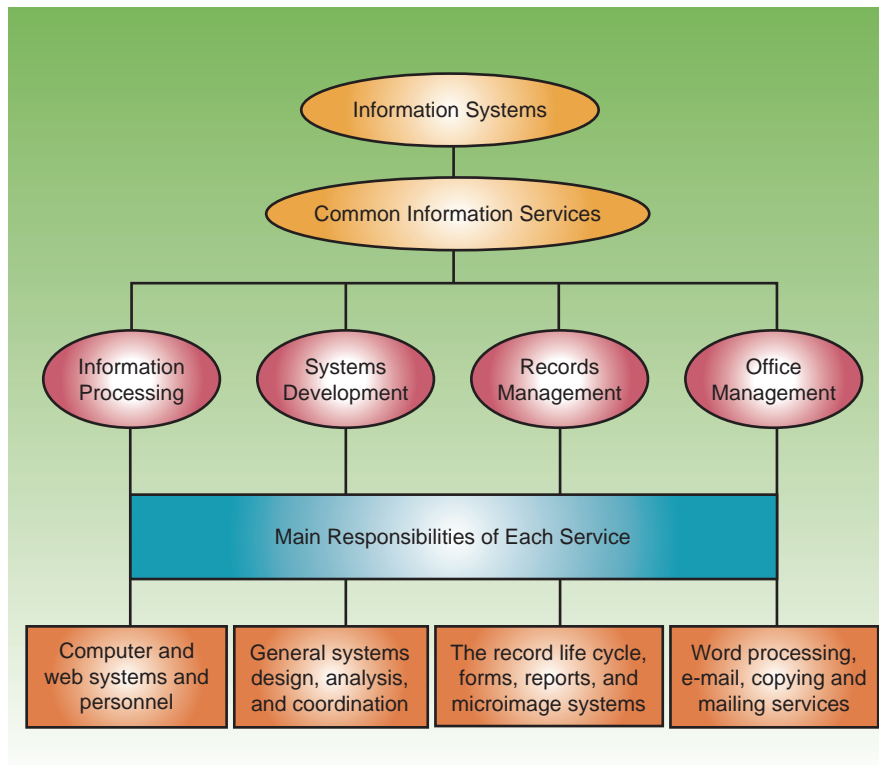
Problems in Records Systems

The programs for managing records discussed earlier achieve their goals through the operation of an organization's records system. In this sense, a **records system** is a group of interrelated resources—people, equipment and supplies, space, procedures, and information—acting together according to a plan to accomplish the goals of the records and information management program. Anything that interferes with the operation of one or more of these resources, either individually or in combination, creates a problem in the records system and, therefore, hinders the effectiveness of the records and information management program. Common problems in records systems and typical symptoms of such problems are listed in Figure 1.10 on page 22.

To resolve such problems, managers frequently turn to various forms of information technology. Solutions may include company-wide computer systems, microfilm systems, and image systems. These systems, however, are not a panacea for records-related problems. Nor do they eliminate the use of physical records. Companies still rely on paper, and this situation will continue because of the ease of producing paper copies with computers and copying machines.

.....
records system: a group of interrelated resources acting together according to a plan to accomplish the goals of the records and information management program

FIGURE 1.9 Location of Records Management in a Large Corporation



The physical records system is the best place to begin a study of records management. Good records and information management principles are universal. They can and should be applied to electronic systems as well. Additionally, the tangible nature of physical records, the fact that physical records are familiar to most people, and that such records can be located easily make the study of physical records the logical introduction to the records and information management field.

From such study, you need to understand alphabetic storage and retrieval systems discussed in Chapters 2–7 along with subject, numeric, and geographic storage and retrieval systems explained in Chapters 8–10. Chapters 11 and 12 focus on the function of control in the records and information cycle.

CAREERS IN RECORDS MANAGEMENT

Opportunities to work with records exist in every type and size of office. In a small office with one administrative assistant and an owner/manager, working with records occupies much of the time of both people. In this setting, opportunities for records work are unlimited. The classified ads section of daily newspapers lists many general positions in small offices.

Another potential career connected to records and information management is the marketing of records supplies and storage equipment. Offices need the paper, folders, file cabinets, shelves, and other supplies and equipment that are necessary for records storage and retrieval. Office supply vendors are an important resource to a records and information management department. A career as a marketing service representative for an office supplies company offers growth opportunities.

What opportunities for work exist in records management?

FIGURE 1.10 Common Problems in Records Systems

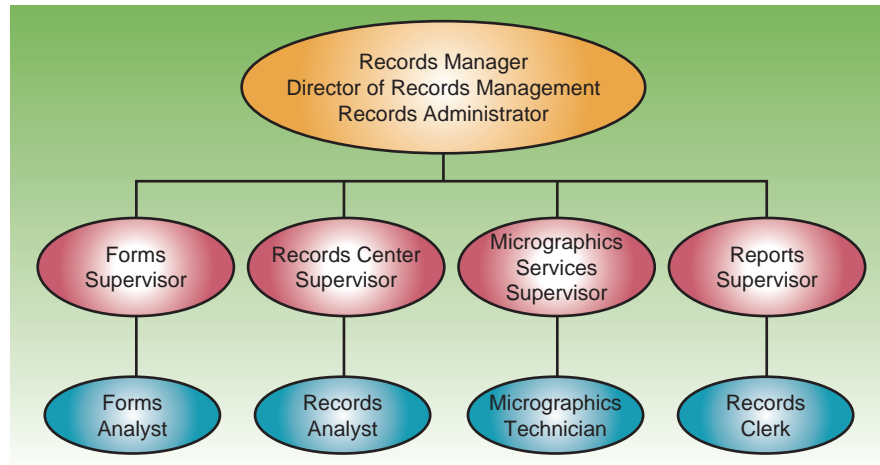
Problem	Symptoms
Management	<ul style="list-style-type: none"> • No overall plan for managing records problems • No plan for retaining or destroying records • No standards for evaluating workers
Human problems	<ul style="list-style-type: none"> • Lack of concern about the importance of records • Hoarding of records • Assuming that people know how to use the files for storage and retrieval of records
Insufficient filing procedures	<ul style="list-style-type: none"> • Computer files not organized into folders • Overloaded and poorly labeled drawers and folders • Failure to protect records • Misfiles resulting in lost records or slow retrieval • Records removed from and placed in files without proper authorization
Poor use of equipment	<ul style="list-style-type: none"> • No equipment standards • No use of fire-resistant equipment • Improper type of storage containers for records • Lack of or improper use of automated systems
Inefficient use of space	<ul style="list-style-type: none"> • Crowded working conditions • Poor layout of storage area • Resistance to the use of magnetic media
Excessive records costs	<ul style="list-style-type: none"> • Inefficiency due to the above problems

Larger firms with more specialized staff often employ records supervisors who direct the work of several records clerks. In major corporations or other large administrative headquarters, you can find levels of records workers as shown in Figure 1.11 on page 23 and described below.

1. **Managerial level**, where the top position is the records manager who is responsible for directing the entire program.
2. **Supervisory level**, which includes specialists responsible for operating the records center, supervising the design and use of business forms, and directing the creation and use of physical and electronic records.
3. **Operating level**, which includes those workers responsible for routine filing and retrieving tasks, and assisting with vital records and records retention work. Because this is the level of work emphasized in this textbook, you will concentrate on the basic principles involved in storing and retrieving records.

Companies that place a high value on their information resources have created a new position to oversee all information-related departments, including Records and Information Management. These new positions are variously titled “Chief Information Officer” (CIO) or “Chief Knowledge Officer” (CKO). Because of the potential liability due to the unlawful disclosure of

FIGURE 1.11 Typical Job Levels and Job Titles in Records Management



confidential records, some government agencies have created an Information Security Program Manager position.

Many experienced records and information management professionals have become Certified Records Managers (CRMs) by taking and passing a multipart test administered by members of the Institute of Certified Records Managers (ICRM). This certification represents a standard by which persons involved in records and information management can be measured, accredited, and recognized according to criteria of experience and capability established by their peers. Each individual is experienced in active and inactive records systems and related areas such as archives, computer technology, micrographics, and optical disk technology. The CRM designation is earned by meeting both educational and work experience requirements and by passing the required examinations.⁸

In times of economic downsizing, many organizations are outsourcing portions of their records and information management services such as inactive records storage. Because inactive records may be kept for a long period of time but may not be referenced often, records storage facilities are usually located offsite in lower rent districts. Many companies offer storage and retrieval services for several types of businesses. Career opportunities exist in these records and information management service businesses.

You can easily locate information on the records and information management profession by checking the publications and websites of the various professional associations specializing in the records and information management profession. ARMA International is an important professional group interested in improving educational programs in schools and industry and providing on-the-job knowledge about records and information management. ARMA members receive subscriptions to *Information Management* magazine and access to the records and information management blog *infopro*. Learn more about ARMA International at the organization's website. You can find a link to this site at the website for this textbook.

Information on records management jobs can be found in the *Occupational Outlook Handbook*. This handbook is published by U.S. Bureau of

⁸Visit the Institute of Certified Records Managers website for more information about the CRM examination.

What is ARMA International?

Career Corner



Job Description for Administrative Services Clerk

The following job description is an example of a career opportunity in a government agency.

Series and Grade: GG-0303-04

Promotion Potential: 04

Position Information: Full Time Career/Career Conditional

Duty Locations: Vacancy(s) in one of the following locations: El Paso, TX*

Who May Be Considered: United States Citizens

Job Summary

The United States Section of the International Boundary and Water Commission United States and Mexico (USIBWC), is responsible for addressing environmentally-sensitive, timely and fiscally-responsible boundary and water issues along the United States and Mexico border region while sustaining an atmosphere of

binational cooperation and by being responsive to public concerns.

This position is responsible for a variety of clerical and administrative support duties involving library services, records, and directives management, correspondence, forms coordination, and mail handling services.

*Relocation expenses are NOT authorized and will NOT be paid.

Key Requirements

- All required documents must be submitted by the closing date (How to Apply)
- U.S. Citizenship
- Background and/or Security Investigation required

Labor Statistics and is available online. O*NET, the Occupational Information Network, is a comprehensive database of worker attributes and job characteristics. As the replacement for the *Dictionary of Occupational Titles* (DOT), O*NET is the primary source of occupational information in the United States. O*NET may also be accessed online. You can find links to these two sites at the website for this textbook.

AIIM is the international authority on enterprise content management, the tools and technologies that capture, manage, store, preserve, and deliver content in support of business processes. AIIM provides subscriptions to *Infonomics*, a bi-monthly publication, and a variety of electronic publications such as webinars, podcasts, blogs, and industry specific forums. Learn more about AIIM at their website. You can find a link to this site at the website for this textbook.

AHIMA (American Health Information Management Association) is specifically for health and related industry records and information managers. AHIMA provides members subscriptions to the *Journal of AHIMA* as well as information about careers, schools, and online courses. Learn more about AHIMA at the organization's website. You can find a link to this site at the website for this textbook. Records and information management is universal in its concepts; however, medical records procedures are unique. This text does not cover managing medical records.

Chapter Review and Applications

KEY POINTS

- The information age is in an information explosion.
- Records and information management is the systematic control of all records from creation to disposition.
- Records are used to document information needed for complying with regulations and transactions of an organization.
- Legislation balances and protects an individual's right to privacy, the public's access to information, and the quest for national security.
- Management functions include planning, organizing, leading, and controlling.
- The life cycle of records and information includes creation, distribution, use, maintenance, and disposition.
- Career opportunities in records and information management are available in small, medium, and large offices.

TERMS

archives	Internet forum
ARMA International	ISO 15489
blog	management
document imaging	nonessential records
e-commerce	podcast
electronic data interchange (EDI)	record
electronic fund transfer (EFT)	record and information life cycle
electronic mail (e-mail)	records management
electronic record	records system
enterprise content management (ECM)	reference document
external record	transaction document
important records	tweet
internal record	useful records
Internet	vital records
	wiki
	World Wide Web

REVIEW AND DISCUSS

1. Describe the information explosion. (Obj. 1)
2. What is the role of records and information management in an organization? (Obj. 2)
3. What is the purpose of ISO 15489? (Obj. 2)
4. What are the main classifications for records? What types of records are commonly found in each classification? (Obj. 3)
5. Why are records used in businesses? (Obj. 3)

6. What is the intended outcome of the Sarbanes-Oxley Act? (Obj. 4)

7. List the phases in the record and information life cycle and describe the activities that occur during each phase. What phases, if any, do you eliminate in your own personal records cycle? Why? (Obj. 5)

8. What are some common problems found in records systems? (Obj. 5)

9. How can you best prepare for work and advancement in records and information management positions? (Obj. 6)

10. Describe two benefits available for members of ARMA International. (Obj. 6)

APPLICATIONS

1-1 Records Management Website Discovery (Obj. 3)

The publisher of this textbook maintains a site on the World Wide Web where you can access data files, supplementary activities, and links to other sites you need to visit as you complete applications. You will explore this site in this application.

1. Access the Internet and go to <http://www.cengage.com/officetech/read>
2. Add this site to your Favorites or Bookmarks list. Use the Favorites or Bookmarks link for quick access to this site in later activities.
3. Browse the site to become familiar with it. Where do you find the links to related sites?

4. Where do you find the supplemental activities to enhance your learning?

5. Locate and download the data files you will use with this book:
 - Click **Student Downloads** in the navigation area.
 - Choose **All Data Files**.
 - Choose **Save** from the download box.
 - Navigate to the drive and folder where you want to store the data files. Click **Save**.
 - When the download is complete, a file (such as *Datafiles.zip*) that contains the data files in compressed format will be saved on your computer. You will need to decompress (extract) the files using a program such as *WinZip*[®].
6. Exit the website.

1-2 Classifying Records (Obj. 3)

1. Work in a team with two or three classmates to complete this application. Visit a business. Ask the person you visit to share with you five examples of the records of the business.
2. Open the *Microsoft® Word* file *1-1 Classification* from the data files. Record each business record by name in the first chart in the data file. Working with your teammates, decide how each record should be classified—by use, by place of use, or by value to the firm. Key an X in the appropriate column on the chart for each record.
3. List the records again in the second chart in the data file. Working with your teammates, decide how each record should be classified—vital, important, useful, or nonessential. Key an X in the appropriate column on the chart for each record.
4. Compare your charts and records with another team in the class. Discuss the reasons for any differences in the way you classified the records.
5. Analyze the records from the business. Why did the business develop each record? How will each record help that company conduct business? Key your analysis below the table in the file.

1-3 Using Technology (Obj. 1)

1. Access a search engine on the Internet. Search using the key words *information explosion*.
2. Follow at least three links in the search results list. Read and summarize the article or other information you find at each of the three sites.
3. Send an e-mail to your instructor that contains the summary of your findings.

ACCESS BASICS

As you complete later chapters of this textbook and the related simulation, you will use *Microsoft Access®* database software for electronic records management. Before completing these activities, you should complete the *Access* tutorial (found on the website for this textbook). This tutorial will allow you to review or learn the basics of using *Access*. The tutorial is provided in PDF files. You will need a program that can read PDF files, such as *Adobe® Acrobat® Reader®*, to view or print the tutorial.

Access data files for use in completing the tutorial and other applications are provided on the website for this textbook. To use an *Access* data file, you should download the student data files from the website to a working folder on a hard drive or a removable storage device. Directions for copying files using *Microsoft® Windows® Explorer* are provided in the *Access* tutorial.



Data File

To download the *Access* lessons and the *Access* data files, follow these steps:

1. Access <http://www.cengage.com/officetech/read> using an Internet browser.
2. Click **Student Downloads** in the navigation area.
3. Click on **Access Data Files**, **Access Lessons**, **Access Solutions**, or **Access Tutorial**. (You will need to click on each item by itself.)
4. You will see a downloading box. Choose **Save**.
5. Navigate to the drive and folder where you want to save the files. Click **Save**.
6. When the download is complete, a file in compressed format will be saved on your computer. You will need to decompress (extract) the files using a program such as *WinZip*.

If you are an experienced *Access* user, read the tutorial to review *Access* concepts. Follow the instructions provided to learn to use any *Access* features with which you are not familiar. If you have little or no experience using *Access*, read and complete each lesson carefully to learn to use the basic features of *Access*.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

For More Activities Go To:
www.cengage.com/officetech/read

Alphabetic Indexing Rules 1–4

LEARNING OBJECTIVES

1. Explain the need for indexing rules in alphabetic storage of records and the importance of following these rules consistently.
2. Index, code, and arrange personal and business names in indexing order of units.
3. Index, code, and arrange minor words and symbols in business names.
4. Index, code, and arrange names with punctuation and possessives.
5. Index, code, and arrange names with single letters and abbreviations.
6. Apply alphabetic filing procedures.
7. Prepare and arrange cross-references for personal and business names.
8. Sort personal and business names.
9. Find information in database records.

ON THE JOB

Chris Edmonds, a home loan officer at Home Street Bank, has developed a practical way to manage the records important to her for completing her work. She uses both an electronic and a physical system for processing loans. For pending home loan applications, she files the physical papers into various categories, depending on the phase of the home loan application:

- Customers who have come in, emailed, or phoned about a loan
- Customers who have filled out a home loan application
- Customers who have completed the application and are waiting for approval
- Customers who are waiting for the home to close

Chris also enters home loan application information in the bank's electronic proprietary system. The loan is filed numerically, and other personnel, such as the underwriter, have access to the information. When the loan is closed, the loan servicing department at a centralized location takes over managing and storing official loan records.

For the retention of the home loan physical records, the documents are scanned and images are created. Using the number of the home loan, she can access the "official" records. The bank also has a database where Chris can enter a person's name to locate the loan records. Thus the electronic database automatically cross-references the loan by name and loan number.

Printed with permission of Chris Edmonds.



Courtesy of Chris Edmonds

How do business records help decision makers?

filing method: the way in which records are stored in a container such as a filing cabinet or a folder on a hard disk or removable storage device

NEED FOR ALPHABETIC ORDER

As you studied in Chapter 1, records serve as the memory of an organization. Records also help an organization conduct business. Business records help provide decision makers with the right information when it is needed. To store records in an efficient way, some type of filing or storing method must be used. A **filing method**, sometimes called a *storage method*, describes the way in which records are stored in a container, such as a filing cabinet or a folder on a hard disk or removable storage device. This text presents alphabetic, subject, numeric, and geographic methods of storage. Alphabetic storage is discussed in Chapters 2 to 7, subject storage in Chapter 8, numeric storage in Chapter 9, and geographic storage in Chapter 10. The most common filing method is alphabetic.

The alphabetic filing method is a method of storing records arranged according to the letters of the alphabet. Sounds simple, right? Everyone knows the alphabet. However, consistently accurate alphabetic filing is not that simple. Look in the telephone books of two major cities, and you will find major discrepancies in the order of the listings. Another example is filing under the letters *Mc*. *Mc* is not one of the 26 letters of the alphabet; however, it is included in some alphabetic filing systems and not in others.

Records Management in Action

State of Florida Primary Recount Caused by Poor Records Organization

Poor records management can have serious consequences as evidenced by Florida's August 26, 2008, primary election. The State of Florida had changed from punch card ballots to optical scanning ballots for the election. A difference of only 17 votes between two candidates for a judicial seat triggered an automatic recount of the 102,523 ballots cast.

At first the discrepancy between the tally of the votes and the number of ballots cast were thought to be from errors in the new optical scanning system. As the dispute unfolded, county elections officials found that up to 3,700 ballots were inadvertently excluded from earlier counts. After careful investigation, the problem was attributed to boxes of ballots missed because they were not organized in the warehouse. Following proper records management procedures for labeling and sorting the boxes might have saved the time and money spent on ballot recounts.

Source: Weiss, Todd R., "Poor Records Organization at Root of Palm Beach County Recount Woes," *Computer World*, September 16, 2008, <<http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9114879>> (accessed June 29, 2009).



Filing Rules

The most important filing concept to remember is that all filing is done to facilitate retrieving information when it is needed. To retrieve information efficiently, a set of rules must be followed. Different businesses have different needs for information retrieval. Businesses do not all follow a universal set of rules for alphabetic filing because the goals and needs of businesses vary. ARMA International has published *Establishing Alphabetic, Numeric, and Subject*

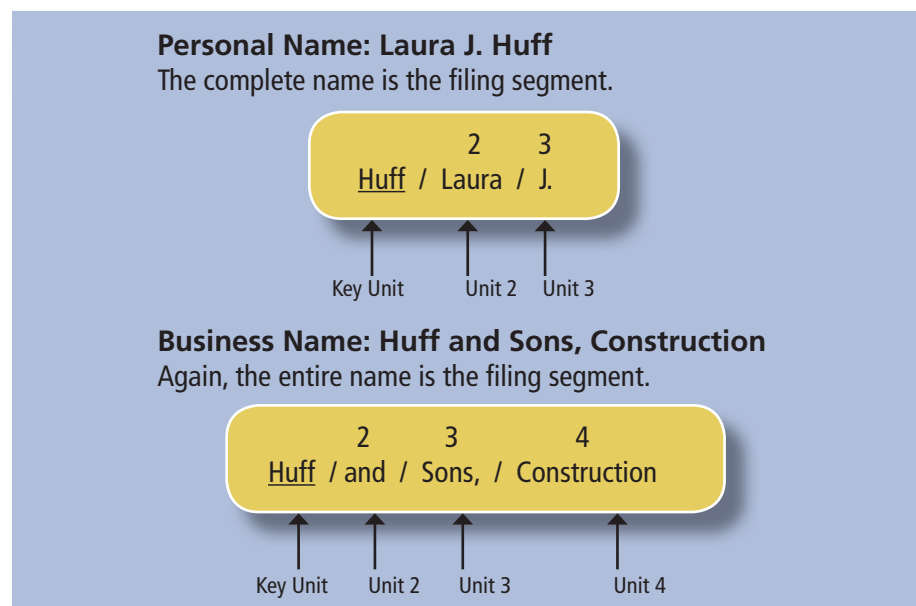
FIGURE 2.1 Filing Segment of a Letter



name is labeled with a unit designation (*Key Unit, Unit 2, Unit 3, or Unit 4*). These units are the **indexing units** of the filing segment; in other words, the indexing units are the various words that make up the filing segment.

The **key unit** is the first unit of a filing segment. It is the part of the segment considered first when determining where the record will be stored. Units 2, 3, 4, and so on are the next units by which the placement of the record is further determined. The order in which units of the filing segment are considered is called the **indexing order**. Identifying the key and succeeding units makes a complex process simpler and easier to handle. Marking these units is the next step in the process.

FIGURE 2.2 Coded Filing Segments for Personal and Business Names



indexing units: the various words that make up the filing segment

key unit: the first unit of a filing segment

indexing order: the order in which units of the filing segment are considered

Coding

Coding is the act of assigning a file designation to records as they are classified. For paper records, coding is marking a record to indicate the filing segment (name, number, or subject) by which it is to be stored and indicating the indexing units. Coding for a list of names may also be accomplished by placing the units of the filing segment in separate columns of a table. Coding is a physical act, as contrasted with indexing, which is a mental determination.

Coding procedures for paper records are to place diagonals (/) between the parts of the filing segment, underline the key unit, and then number each succeeding unit (i.e., 2, 3, 4), which you have mentally identified in the indexing process. The filing segments shown in Figure 2.2 are coded in this manner.

To code properly, a set of rules for alphabetic storage must be faithfully followed. **Indexing rules** are the written procedures that describe how the filing segments are ordered. The indexing rules that follow give you a good start in following appropriate alphabetic storage procedures.

ALPHABETIC INDEXING RULES

In this section, rules for alphabetic storage are presented with examples to help you understand how to apply the rules. Study each rule and the examples of its application carefully; above all, be sure you understand the rule.

Follow these guidelines to study the indexing rules effectively:

- Read the rule carefully. Make sure you understand the meaning of the words used to state the rule.
- Look at the examples. Note that the complete filing segment (the name and other words, such as a title) is given at the left. Then the filing segment is separated into indexing units at the right according to the rule you are studying.
- Be sure you understand why the filing segment has been separated as it has.



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Following indexing rules when coding a record is very important.

What is an effective way to study alphabetic indexing rules?



coding: the act of assigning a file designation to records as they are classified

indexing rules: written procedures that describe how filing segments are ordered

In determining alphabetic order, compare the units in the filing segments for differences. If the key units are alike, move to the second units, the third units, and succeeding units until a difference occurs. The point of difference determines the correct alphabetic order, as shown here. Compare the three filing segments shown in units and note the correct order.

Filing Segment	Key Unit	Unit 2	Unit 3
Diane Ruhl	Ruhl	Diane	
Diane M. Ruhl	Ruhl	Diane	<u>M</u>
Dianne Ruhl	Ruhl	Dian <u>e</u>	

In an office, filing records goes much more quickly when filers are able to determine the proper indexing order of personal and business names on the records. Filing records based on incorrect indexing order can result in lost records or additional time required when users want to retrieve records.

When working with paper documents, the next step in the filing process is sorting. **Sorting** is arranging records in the sequence in which they are to be stored (placed in filing cabinets or folders on storage media.) In this chapter, you will practice sorting coded names.

Examples are provided for each alphabetic indexing rule. In the examples, you will find an underscore in one of the indexing units for each filing segment except the first one. This underscore indicates the letter of the unit that determines alphabetic order. Examples are numbered for ease in referring to them. Indexing units are shown in mixed case. Marks that appear over or under some letters in different languages are disregarded (such as Señora, Marçal, René, Valhallavägen). Be sure you understand each rule before going to the next.

RULE 1: Indexing Order of Units

A. Personal Names

A personal name is indexed in this manner: (1) the surname (last name) is the key unit, (2) the given name (first name) or initial is the second unit, and (3) the middle name or initial is the third unit. If determining the surname is difficult, consider the last name written as the surname. (You will learn how to handle titles that appear with names in a later rule.)

A unit consisting of just an initial precedes a unit that consists of a complete name beginning with the same letter—*nothing before something*. Punctuation is omitted. Remember, the underscored letter in the example shows the correct order. For example, 1 and 2 in the examples table have the same Key Unit (*Sample*). The underscored “D” in *Darin* shows the alphabetic difference between the two names.

What does
“nothing before
something” mean?

sorting: arranging records in the sequence in which they are to be stored

Examples of Rule 1A

Filing Segment		Indexing Order of Units		
Name	Key Unit	Unit 2	Unit 3	
1. Charlene Sample	Sample	Charlene		
2. Darin Sample	Sample	<u>D</u> arin		
3. Darlene A. Samples	Sam <u>p</u> les	Darlene	A	
4. Jeff Simmons	<u>S</u> immons	Jeff		
5. Neil S. Simon	Sim <u>o</u> n	Neil	S	
6. Paula Simon	Simon	<u>P</u> aula		
7. Neil S. Simone	Sim <u>o</u> ne	Neil	S	
8. Michelle Skrzynski	<u>S</u> krzynski	Michelle		
9. Robert Sunderland	<u>S</u> underland	Robert		
10. Roberta Sunderland	Sunderland	Rob <u>e</u> rta		
11. Andrew Taylor	<u>T</u> aylor	Andrew		
12. Andy Taylor	Taylor	<u>A</u> ndy		
13. Anne M. Taylor	Taylor	<u>A</u> nne	M	
14. Armand R. Taylor	Taylor	<u>A</u> rmand	R	
15. Joyce Utterbock	<u>U</u> tterbock	Joyce		

B. Business Names

Business names are indexed as written using letterheads or trademarks as guides. Each word in a business name is a separate unit. Business names containing personal names are indexed as written.

Examples of Rule 1B

Filing Segment		Indexing Order of Units		
Name	Key Unit	Unit 2	Unit 3	
1. Samantha Seger Designs	Samantha	Seger	Designs	
2. Secure Design	<u>S</u> ecure	Design		
3. Secure Digital Networks	Secure	Digital	Networks	
4. Sester Farms Inc.	<u>S</u> ester	Farms	Inc	
5. Settlement Professionals Inc.	<u>S</u> ettlement	Professionals	Inc	
6. Shelly Sherman Photography	<u>S</u> helly	Sherman	Photography	
7. Sherman Auto Sales	<u>S</u> herman	Auto	Sales	
8. Silver Pizza Co.	<u>S</u> ilver	Pizza	Co	
9. Silverwood Apartments	Silver <u>w</u> ood	Apartments		
10. Silvin Painting Inc.	Sil <u>v</u> in	Painting	Inc	

What does
"as written"
mean?



RULE 1: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column. The first name is shown as an example.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	Thi Dien Personnel, Inc.		Thi	Dien	Personnel	Inc
b.	Latasha Gregory					
c.	Edward Simmons					
d.	Greg Simmons Car Company					
e.	Albert Brown Suit Shop					
f.	Elbert Albert					
g.	Thi Dien					
h.	T. F. Simmons					
i.	Dien Dry Cleaners					
j.	Anna C. Dien					

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.
3. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank below the names. If the order is not correct, write No in the blank.

a. Dahlin Clothing Store
Charlotte Dahling

f. Rosalie Simmons
Rod Simmons

b. Rose Andrews
Rose Garden Nursery

g. Kent Wade
Wade Eves Designs

c. Rayburn Law Office
Rayborn Electrical Co.

h. Red Robin Restaurant
Red Robin Bait Shop

d. Little Pond Productions
Lyle A. Little

i. Tewksbury Ornamental Plants
Olivia Tewksbury

e. David Allen
Allen Furniture Company

j. Gerald Minton
G. L. Minton

4. Are the names in each group listed in correct order? If the names are in correct order, write Correct in the blank beside the names. If the names are not in correct order, indicate the correct order of the names by writing their numbers in the blank. For example, 3, 1, 2.

_____ a. 1. Mark Joackims
2. Vicky Jolly
3. Ardis Johnson

_____ d. 1. Miranda Moore
2. Miranda's Hobbies
3. Miranda A. Moore

_____ b. 1. Zelda Bruss
2. Bruss Flower Arranging
3. Ryan T. Bruss

_____ e. 1. Richard Pope
2. Popeye's Deli
3. Theresa Pope

_____ c. 1. Linda Podany
2. Daniel Potter
3. Maria Ponzi

_____ f. 1. Carroll Guest
2. Edgar Guest
3. Ella May Guest

5. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.



RULE 2: Minor Words and Symbols in Business Names

Articles, prepositions, conjunctions, and symbols are considered separate indexing units. Symbols are considered as spelled in full. When the word *The* appears as the first word of a business name, it is considered the last unit.

Articles:	a, an, the
Conjunctions:	and, but, or, nor
Prepositions:	at, in, out, on, off, by, to, with, for, of, over
Symbols:	&, ¢, \$, #, % (and, cent or cents, dollar or dollars, number or pound, percent)

How are symbols indexed?

Examples of Rule 2

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. A & A Drilling	A	and	A	Drilling	
2. A Clean House	A	Clean	House		
3. The An Dong Market	An	Dong	Market	The	
4. Dollar Drug Store	Dollar	Drug	Store		
5. The \$ Shop	Dollar	Shop	The		
6. Golf By The Mountain	Golf	By	The	Mountain	
7. Gone But Not Forgotten	Gone	But	Not	Forgotten	
8. Gone To The Dogs	Gone	To	The	Dogs	
9. Granger & Graves Yachts	Granger	and	Graves	Yachts	
10. # One Copy Store	Number	One	Copy	Store	

My Records



What Is Identify Theft?

Beware! Identity theft is on the rise. Might you be one of the estimated 7 to 10 million victims per year?

Identity theft is a serious crime in which an impostor obtains key pieces of information about you, such as your Social Security number (SSN) and/or driver's license number, and uses your information for his or her personal gain. Impostors use this information to impersonate their victims, spending as much money as they can in as short a time as possible before finding another victim's name and identifying information.

Account takeover identity theft occurs when a thief steals your existing credit account information and purchases products and services using either the actual credit card or simply the account number and the expiration date.

Application fraud identity theft occurs when a thief uses your SSN and other identifying information to open new accounts in your name. Victims of application fraud are not likely to learn about it for some time because

the monthly account statements are mailed to an address used by the impostor.

Federal legislation holds victims of credit and banking fraud liable for no more than the first \$50 of the loss. However, victims of identity theft can spend months or years clearing their good names and credit records. Victims may also lose job opportunities, be refused loans or housing, or even get arrested for crimes committed by the identity thief.

Learn more about identity theft at the U.S. Department of Justice Computer Crime and Intellectual Property website. You can find the URL in the Links section of the website for this textbook. Preventing identity theft is the subject of My Records in Chapter 3, and recovering from identity theft is the subject of My Records in Chapter 4.

Source: Adapted from the Federal Trade Commission—Your National Resource for ID Theft, <<http://www.ftc.gov/bcp/edu/microsites/idtheft/consumers/about-identity-theft.html>> (accessed July 7, 2009).

FIGURE 2.3 U.S. Department of Justice Website



Source: United States Department of Justice, available from <http://www.cybercrime.gov> (accessed August 26, 2009).



PRNewsFoto/Steve & Barry's/Associated Press

Symbols in business names are considered as spelled in full for indexing purposes.

 **RULE 2: Self-Check**

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	The Chimney Sweepers					
b.	The Crazy Fox					
c.	A Shop of Wonders					
d.	An Honorable Store					
e.	C & R Offerings					
f.	Camp By The Sea					
g.	C & R Company					
h.	The Clip Joint					
i.	\$ Saver Cleaners					
j.	Cybersurf By The Hour					

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.
3. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.



What do you do with punctuation marks when indexing?

RULE 3: Punctuation and Possessives

All punctuation is disregarded when indexing personal and business names. Commas, periods, hyphens, apostrophes, dashes, exclamation points, question marks, quotation marks, underscores, and diagonals (/) are disregarded, and names are indexed as written.

Examples of Rule 3

Filing Segment	Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4
1. Grant & Reardon Sales	Grant	and	Reardon	Sales
2. Grant's Barber Shop, Inc.	Grants	Barber	Shop	Inc
3. Grant's Homestyle Eatery	Grants	Homestyle	Eatery	
4. I Do Windows!	I	Do	Windows	
5. I_can_do_it.com	Icandoitcom			
6. Ike & Sons Realty	Ike	and	Sons	Realty
7. Inter-Asia Services	InterAsia	Services		
8. Iron Mountain	Iron	Mountain		
9. Iron Mountain Mining Co.	Iron	Mountain	Mining	Co
10. Julia Jones-Zeta	JonesZeta	Julia		



RULE 3: Self-Check

- Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	In-and-Out Car Wash					
b.	Imelda Irving-Brown					
c.	The Flying Cow Dairy					
d.	Inside/Outside Games, Inc.					
e.	#s Away Diet Center					
f.	The Ink-a-Do Stamp Store					
g.	\$ Saver Store					
h.	In-Town Couriers					
i.	Allison Love-Jarvis					
j.	Lovely & Ripley Clothing					

- Compare the key units and the other units to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.

3. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank below the names. If the order is not correct, write No in the blank.

- a. Yolanda's \$ Saver
Yolanda Doolittle
- f. Temp-A-Cure Company
Temp-Control Mechanics

- b. Rod-N-Reel Store
Rodney Associates, Inc.
- g. Nor-West Growing Company
Nor'Wester Novelties

- c. Do-Rite Pharmacy
Do-Rite Builders
- h. Ezekiel M. Swanson
The Swan Dive Shop

- d. Rob & Son Electric
Rob & Sons Alignment
- i. Heckman Law Firm
Dennis Heckman

- e. Colt-Western Company
Colt Industries
- j. Chi Kuo
Ching-yu Kuo

4. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.

RULE 4: Single Letters and Abbreviations

A. Personal Names

Initials in personal names are considered separate indexing units. Abbreviations of personal names (Wm., Jos., Thos.) and nicknames (Liz, Bill) are indexed as they are written.

B. Business Names

Single letters in business and organization names are indexed as written. If single letters are separated by spaces, index each letter as a separate unit. An acronym (a word formed from the first, or first few, letters of several words, such as NASDAQ and ARCO) is indexed as one unit regardless of punctuation or spacing. Abbreviated words (Mfg., Corp., Inc.) and names (IBM, GE) are indexed as one unit regardless of punctuation or spacing. Radio and television station call letters (KDKA, WNBC) are indexed as one unit.



Data File

How do you index abbreviated personal names?

How do you index single letters in business names?

Examples of Rule 4

Filing Segment		Index Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. A CT Realty	A	C	T	Realty	
2. Ace Smile Dental Lab	Ace	Smile	Dental	Lab	
3. Ackerson & Day Mfgs.	Ackerson	and	Day	Mfgs	
4. KKRS Radio Station	KKRS	Radio	Station		
5. K-Nine Security	KNine	Security			
6. KOGO Television	KOGO	Television			
7. M A C Construction	M	A	C	Construction	
8. MAC, Inc.	MAC	Inc			
9. U & I Nursery	U	and	I	Nursery	
10. Ulys. A. Udey	Udey	Ulys	A		



RULE 4: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	IDEA Corporate Services					
b.	I-Can-Fix-It Auto Body					
c.	I C A Corp.					
d.	I Dig It Services					
e.	I Am Woman, Inc.					
f.	I C Clearly Vision					
g.	I Buy Antiques					
h.	ICAP Inc.					
i.	ID Booth Inc.					
j.	IBT Associates					



Data File

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.
3. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.

CROSS-REFERENCING

Some records of persons and businesses may be requested by names that are different from the ones by which they were stored. This is particularly true if the key unit is difficult to determine. When a record is likely to be requested by more than one name, an aid called a cross-reference is prepared. A **cross-reference** shows the name in a form other than that used on the original record, and it indicates the storage location of the original record. The filer can then find requested records regardless of the name used in the request for those records.

Both the filing segment used to determine the storage location for the record and the cross-reference notation are coded on the document as shown in Figure 2.4. A copy of the document may be stored in the cross-reference location or a cross-reference sheet may be prepared. Cross-reference sheets used with correspondence records are discussed in Chapter 6.

Cross-referencing must be done with discretion. Too many cross-references crowd the files and may hinder retrieval rather than help. Each cross-reference requires valuable time to prepare, creates at least one additional sheet to be stored, and, therefore, requires additional space in a file.

Cross-references for data stored in an electronic database are often not needed. Because the search features of database software are extensive, a record can usually be found easily using any part of the filing segment. Also,

Why are cross-references needed?



cross-reference: shows the name in a form other than that used on the original record and indicates the storage location of the original record

FIGURE 2.4 Letter with Filing Segment and Cross-Reference Coded



entire records are often visible when a search result shows on the screen. There may be instances, however, when a cross-reference is needed under an entirely different name. In these instances a cross-reference database record can be created.

Four types of personal names should be cross-referenced:

1. Unusual names
2. Hyphenated surnames
3. Alternate names
4. Similar names

Also, nine types of business names should be cross-referenced. Two will be presented in this chapter; the remainder, in Chapters 3 and 4.

1. Compound names
2. Names with abbreviations and acronyms

An explanation of the procedure to be followed in cross-referencing each of these kinds of names follows. To practice coding and cross-referencing records in these early chapters, you will work with names that might appear on paper documents. Later, in Chapter 6, you will code and file actual business documents.

Personal Names

Cross-references should be prepared for the following types of personal names.

1. **Unusual (easily confused) names.** When determining the surname is difficult, use the last name written as the key unit on the original record. Prepare a cross-reference with the first name written as the key unit. On the original correspondence for Charles David, *David* (last name) is the key unit, and *Charles* (first name) is the second unit. However, a request might be made for *David Charles*. In a correspondence file, the cross-reference sheet would show *Charles* as the key unit and *David* as the second unit. Someone looking under *C* for *Charles* would find the cross-reference directing the filer to look under *D* for *David*. Study the following examples.

How do you cross-reference a hyphenated surname?

Coded Filing Segment	Cross-Reference
2 Charles / <u>David</u>	2 <u>Charles</u> / David SEE David Charles
2 Gee-Hong / <u>Cheung</u>	2 <u>Gee-Hong</u> / Cheung SEE Cheung GeeHong
2 Keooudon / <u>Sayasene</u>	2 <u>Keooudon</u> / Sayasene SEE Sayasene Keooudon

2. **Hyphenated surnames.** Hyphenated surnames often are used by married women. With hyphenated surnames, a request for records could be in either of the two surnames. A cross-reference enables retrieval in either case. An example is *Wendy Reardon-Bruss* shown below.

Many men use hyphenated surnames that are their family names, and they are known only by their hyphenated surnames. A cross-reference is not necessary. Some men choose to adopt a hyphenated surname when they marry and may, in that case, be known by more than one name. A cross-reference is needed for accurate retrieval of records when a man changes his surname to a hyphenated surname. See *Douglas Edwards-Read* shown below. You will be told when a cross-reference is needed for a man's name; otherwise, a cross-reference will not be required.

Coded Filing Segment	Cross-Reference
2 Wendy / <u>Reardon-Bruss</u>	2 3 <u>Bruss</u> / Wendy / Reardon SEE ReardonBruss Wendy
2 Douglas / <u>Edwards-Read</u>	2 3 <u>Read</u> / Douglas / Edwards SEE EdwardsRead Douglas

3. **Alternate names.** When a person is known by more than one name, you need to make cross-references. Two examples are *Michelle Starkinsky* doing business as *Michelle Star* and *Faith Moran*, who is also known as *Faith Moran-Ripley*, *Mrs. Michael Ripley*, and *Mrs. Faith Ripley*. Note that three cross-references are required for Faith Moran.

Coded Filing Segment	Cross-Reference
2 Michelle / <u>Star</u>	2 <u>Starkinsky</u> / Michelle SEE Star Michelle
2 Faith / <u>Moran</u>	2 <u>MoranRipley</u> / Faith SEE Moran Faith

	2 3 <u>Ripley</u> / Michael / Mrs SEE Moran Faith

	2 3 <u>Ripley</u> / Faith / Mrs SEE Moran Faith

4. **Similar names.** A variety of spellings exist for some names like *Brown* and *Johnson*. A SEE ALSO cross-reference is prepared for all likely spellings. If the name is not found under one spelling, the filer checks

the SEE ALSO sheet for other possible spellings. In a correspondence file, there would likely be a permanent cross-reference (could be a guide) to show the different spellings for common names. Cross-reference guides are discussed in Chapter 6.

Coded Filing Segment

Cross-Reference

Brown

SEE ALSO Browne, Braun, Brawn

Browne

SEE ALSO Brown, Braun, Brawn

Braun

SEE ALSO Brown, Brawn, Browne

Brawn

SEE ALSO Brown, Browne, Braun

Johnson

SEE ALSO Johnsen, Johnston,
Jonson

Johnsen

SEE ALSO Johnson, Johnston, Jonson

Johnston

SEE ALSO Johnson, Jonson, Johnsen

Jonson

SEE ALSO Johnson, Johnsen, Johnston

How many cross-references are needed for a business that includes three surnames?

Business Names

Cross-references should be prepared for the following types of business names. The original name is the name appearing on the letterhead.

1. **Compound names.** When a business name includes two or more individual surnames, prepare a cross-reference for each surname other than the first.

Coded Filing Segment

Cross-Reference

2 3
Jarvis, / Rasmussen, / and /

4 5
Sheraden / Antiques

2 3
Rasmussen / Sheraden / and /

4 5
Jarvis / Antiques
SEE Jarvis Rasmussen and Sheraden
Antiques

2 3 4
Sheraden / Jarvis / and / Rasmussen /

5
Antiques
SEE Jarvis Rasmussen and Sheraden
Antiques

2. **Abbreviations and acronyms.** When a business is commonly known by an abbreviation or an acronym, a cross-reference is prepared for the full name. Examples are *MADD* (Mothers Against Drunk Driving) and *EZ Electronics* (Ewen and Zucker Electronics) shown below.

Coded Filing Segment	Cross-Reference
	2 3 4
<u>MADD</u>	<u>Mothers</u> / Against / Drunk / Driving SEE MADD
2	2 3 4
<u>EZ</u> / Electronics (Ewen and Zucker Electronics)	<u>Ewen</u> / and / Zucker / Electronics SEE EZ Electronics

	2 3 4
	<u>Zucker</u> / and / Ewen / Electronics SEE EZ Electronics

Cross-Referencing Self-Check

1. Identify the units in the filing segments (names). Code the names by underlining the key unit, numbering the other units, and placing diagonal lines between the units.
2. Write cross-references for the names that require them. See the example below.

2 3 4	2 3 4
<u>Lundry</u> / and / Masur / Meats	<u>Masur</u> / and / Lundry / Meats SEE Lundry and Masur Meats

	Coded Filing Segment	Cross-Reference (if needed)
a.	WKKP Radio Station	
b.	IBM (International Business Machines)	

c.	Sideras and Shadduck Company	
d.	Platika and Miller Investment Firm	
e.	Joan Childress-Edwards	
f.	The Riverside Terrace	
g.	Akeo Saga	
h.	Mauruka's Diner	
i.	Smith, Childers, & Jones Inc.	
j.	BBCC (Big Bend Community College)	



3. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.

Career Corner



Office Specialist 2; Benefit Support Assistant (OA)

The following job description is an example of a career opportunity in records management with a state agency.

General Information

The Oregon Public Employees Retirement System (PERS) is seeking an Office Specialist 2. This is a full-time, limited duration position that will last up to 17 months. This position is represented by the Service Employees International Union (SEIU)/Oregon Public Employees Union (OPEU).

Purpose

Receive, validate, verify, intake, process, data enter, and reconcile forms accurately and timely for maintenance of individual member accounts and/or the process of benefits as provided under multiple programs outlined in PERS retirement law. Provide general administrative support for multiple programs. Provide basic customer service in person, by phone, or in writing.

Main Duties

- Verify eligibility for benefits based on individual member information, applicant age, and length of service.
- Review forms for accuracy, compliance to PERS law, and completeness.
- Request and review official member records to identify and determine special handling needs.
- Maintain and adjust member and employer records.
- Make complete and accurate computer entries.
- Validate hard copy data to computer entries for accuracy.
- Reconcile online data errors.
- Review computer reports for follow-up actions and processing accuracy.
- Establish and maintain filing systems.
- Ensure records are microfilmed.
- Explain basic program requirements and eligibility.
- Prepare correspondence.
- Send routine or boilerplate letters with accurate information and meeting deadlines.
- Maintain weekly statistical reports.



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A benefit support assistant performs a variety of duties.



RULES 1–4: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	Carolyn's Autos for Less					
b.	Janet Crawford					
c.	Crow's Nest Pass Inn					
d.	Andrew Carstairs					
e.	Crawford Law Firm					
f.	Deseree Campbell					
g.	George M. Caldwell					
h.	Cross-Town Transit					
i.	Linda E. Craft					
j.	Cyrus Campbell					



Data File

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.
3. The answers to this exercise are shown in the *Word file 2 Check Answers* found in the data files. Compare them with your answers.

Chapter Review and Applications

KEY POINTS

- A set of written rules helps make filing consistent.
- Indexing is the mental process of determining the filing segment (or name) by which the record is to be stored.
- Coding is the physical process of marking the filing segment into indexing units.
- Personal names are indexed by the surname, the given name, and then middle name or initial.
- Business names are indexed as written.
- Minor words and symbols in business names are indexed as written and are considered separate indexing units.
- Symbols in business names are spelled out.
- When the word “The” is the first word in a business name, it is considered the last indexing unit.
- Ignore all punctuation marks when indexing personal and business names.
- Single letters and abbreviations are indexed as written for both personal and business names. When single letters in a business name are separated by spaces, each letter is considered a separate indexing unit.
- Cross-reference personal names that are unusual, hyphenated surnames, alternate names, and similarly spelled names.
- Cross-reference business names that are abbreviations and acronyms and those that contain more than one surname.
- Sorting is the process of arranging records in the sequence in which they are to be stored.

TERMS

coding	indexing order
cross-reference	indexing rules
filing or storage method	indexing units
filing segment	key unit
indexing	sorting

REVIEW AND DISCUSS

1. Why is consistency in filing important? (Obj. 1)
2. Why are indexing rules important when filing names alphabetically? (Obj. 1)
3. In personal names, what is the key unit? (Obj. 2)
4. How is the key unit of a business name determined? (Obj. 2)
5. Index and code the following names by underlining the key unit, numbering the other units, and placing diagonal lines between the units. Sort the names in alphabetic order for filing. Indicate the order for the names in the blank provided. (Objs. 2 and 4)
 - a. Randolph Thornton
 - b. Randy's Painting Company
 - c. Rachelle Thornton
 - d. Randall Printing CompanyOrder: _____
6. Index, code, and sort the following names as instructed in question 5. (Objs. 2 and 3)
 - a. Gardner & House Produce
 - b. The Garden Deli & Restaurant
 - c. G/T Delivery
 - d. The \$ Off StoreOrder: _____

7. Index, code, and sort the following names. (Objs. 2, 3, and 4)

- a. Lindsey Morris-Hatfield
- b. Moore's Mercantile
- c. Lindsey's Copies, Inc.
- d. Morris and Moore Hardware Store

Order: _____

8. Index, code, and sort the following names. (Objs. 2 and 5)

- a. MLG, Inc.
- b. M L G Associates
- c. Will Jones
- d. Wm. S. Jones

Order: _____

9. Index, code, and sort the following names. (Objs. 2, 4, and 5)

- a. Janet Owens
- b. Owen's Mower Repair
- c. Lisa Ovey
- d. O T H Consulting

Order: _____

10. Can you have too many cross-references? Explain. (Obj. 7)

11. Give two examples of types of personal names that should be cross-referenced. (Obj. 7)

12. Give two examples of types of business names that should be cross-referenced. (Obj. 7)

APPLICATIONS

2-1 Index, Code, and Sort Records (Objs. 2–8)

1. Practice using alphabetic indexing rules 1–4. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
1.	Lydia Cavanaugh						
2.	Maria Christina Castro						
3.	Vagif Agayev						
4.	Jane Carter-Anderson						
5.	Chia Cha						
6.	Best-Lock Gate Company						
7.	C & R Inc.						
8.	Allison's Salon of Beauty						
9.	Julie Anderson						
10.	C A B Services						
11.	Bio-Logic Resources						
12.	Abbott, Brady, & Craig Attorneys						
13.	Anderson Hardware Store						
14.	Anderson and Carter Associates						
15.	Abbott Furniture Store						
16.	C/K Corporation						
17.	Anne Carter Brokerage						

continued next page

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
18.	BioGems, Inc.						
19.	Be-U-Ti-Ful Salon						
20.	“Build-It” Construction Co.						

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See example.
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

2 3

4X Anderson / Jane / Carter

SEE CarterAnderson Jane

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

2-2 Index, Code, and Sort Records (Objs. 2–8)

In this activity, you will practice using alphabetic indexing rules 1–4 to index, code, and sort names such as those that would be found on paper documents.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
1.	WRAP Television Station					
2.	TUT Games & Video (Taylor, Underwood, and Travis)					
3.	John Vanguard					
4.	U-Nique Business Solutions					
5.	Wilson and Travis Consulting					
6.	Watson's Electronics					
7.	Tots-R-Us Pre-School					
8.	Williams Business College					
9.	Will's Construction Company					
10.	The # One Printer					
11.	U-n-I Delivery Service					
12.	U-R-Healthy Natural Foods					
13.	Mary Underwood-Watson					
14.	Wanda Wells Bakery					
15.	Ultra-Bright Skin Care					
16.	Trent Taylor					

continued next page

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
17.	Upper/Lower Deliveries, Ltd.					
18.	San-li Truong					
19.	WORK Radio Station					
20.	Tall/Big Clothing Store					
21.	Watch Repair					
22.	Lucinda Watson					
23.	Jos. H. Warner					
24.	Ralph Ventura					
25.	Laura Wilson					

2 3 4
 5X Travis / and / Wilson / Consulting
 SEE Wilson and Travis Consulting

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See example.
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

2-3 Find Information in Database Records (Obj. 9)

Locate the *Access* file *2-3 Customers* in the data files. Copy the file to your working folder on a hard drive or removable storage device. Open the file. This file includes contact data for customers. It also includes the indexing units used to file paper records for the customer. If a paper record is requested by number, this database can be used to find the customer name and how the paper records should be coded for filing in the alphabetic filing system. This facilitates finding the records quickly. The database can also be used to find other information about the customers.

Open the Customer Form database form. Use the Find feature to find the answers to the following questions.

1. How many people or businesses are located in Illinois?
2. Where is the Sterling Investments, Inc., located?
3. Which record number contains data for Donna Saba?
4. A record with data for a storage company is included in the database. What is the exact name of this company?
5. How many beauty salons have records in the database? Give the name(s) of the beauty salons.



Data File



Access Activity

6. Are any of the people or businesses in the database from Alaska? If yes, list the record number(s).

7. One of the people listed in the database is from Hartford, Connecticut. What is the name of the person who lives there?

8. One of the records in the database is for an agency. What is the name of the agency?

9. In which city is the Satin-N-Lace Boutique located?

10. What is the Postal Code for the Sav-On Oil Company?

2-4 Research Identity Theft

1. Access a search engine on the Internet. Search using the key words *identity theft*. You are interested in learning about what identity theft is, not how to prevent it. In Chapter 3, you will research preventing identity theft.
2. Follow at least three links in the search results list. Read and summarize the article or other information you find at each of the three sites. Be sure to list each site as a reference.
3. Send an e-mail to your instructor that contains the summary of your findings.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 1 Alphabetic Filing Rules 1–4

A simulation titled RECORDS MANAGEMENT SIMULATION, Ninth Edition, is available for use with this textbook. If you have been instructed to complete this simulation, you should begin to do so now.

Welcome to Auric Systems, Inc., a company that sells cell phones and high-speed Internet access to individuals, companies, and government agencies. Read the Overview and examine the organization chart; then complete Job 1. All supplies necessary for completing Job 1 and all other jobs in RECORDS MANAGEMENT SIMULATION, Ninth Edition, are contained in the simulation packet.

For More Activities Go To:
www.cengage.com/officetech/read

Alphabetic Indexing

Rules 5–8

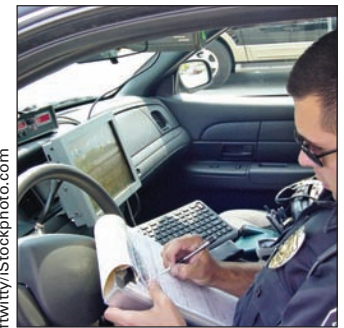
LEARNING OBJECTIVES

1. Index, code, and arrange personal and business names with titles and suffixes.
2. Index, code, and arrange personal and business names with articles and particles.
3. Index, code, and arrange business names with numbers.
4. Index, code, and arrange the names of organizations and institutions.
5. Apply alphabetic filing procedures.
6. Prepare and arrange cross-references for business names.
7. Sort personal, business, organization, and institution names.
8. Create and find information in a database table.

ON THE JOB

Audio, digital, physical, and sometimes video records are part of police officers' documentations. The complexity of skills that police officers must have include the ability to properly document police reports in a logical, organized way. "You never know who is going to read your document," says Jim Parks, retired sergeant of the Portland Police Bureau.

The Portland Police Bureau now has computers on board police cars. The police officer needs to multitask: talking with radio dispatches, viewing the computer screen listing the dispatches, driving, and keeping an eye out for illegal behavior. When an office hears a dispatch from the 911 Center, she or he responds to the address. The officer arrives at the scene and investigates what is happening. The officers have a notebook to keep notes of the interviews, questions, and facts about the incident. At the conclusion of the event, the officer closes the call via the computer and files a "disposition code" for each call. There are several choices to be made. If the incident is assigned a police case number, the officer fills out a report by using the on-board computer or on paper. If the officer is busy with other calls, the report writing is completed at the end of the shift. Both the officer's notebook and computer records are official records. If the crime goes to the courts, the officer may be asked if the notebook and report are complete. Since the officer may be questioned about his/her actions, it is important to write accurately and organize the notes carefully.



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ALPHABETIC INDEXING RULES

In this chapter, you will continue your study of alphabetic filing rules. Remember to follow these guidelines to study the indexing rules effectively:

- Read each rule carefully. Make sure you understand the meaning of the words used to state the rule.
- Look at the examples. Note that the complete filing segment (the name and other words, such as the title) is given at the left. Then the filing segment is separated into indexing units at the right according to the rule you are studying.
- Be sure you understand why the filing segment has been separated as it has.

RULE 5: Titles and Suffixes

A. Personal Names

A title before a name (Dr., Miss, Mr., Mrs., Ms., Professor, Sir, Sister), a seniority suffix (II, III, Jr., Sr.), or a professional suffix (CRM, DDS, Mayor, M.D., Ph.D., Senator) after a name is the last indexing unit. Numeric suffixes (II, III) are filed before alphabetic suffixes (Jr., Mayor, Senator, Sr.). If a name contains a title and a suffix (Ms. Lucy Wheeler, DVM), the title *Ms* is the last unit.

Royal and religious titles followed by either a given name or a surname only (Princess Anne, Father Leo) are indexed and filed as written.

What are some suffixes for personal names?

Examples of Rule 5A

Filing Segment	Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4
1. Father Paul	Father	Paul		
2. Ms. Noreen Forrest, CPA	<u>F</u> orrest	Noreen	CPA	Ms
3. Dr. Noreen Forrest	Forrest	Noreen	<u>D</u> r	
4. Mr. Huyen Huong	<u>H</u> uong	Huyen	Mr	
5. Bishop Barnard Hyatt	Hyatt	Barnard	Bishop	
6. Benjamin D. Hyatt	Hyatt	<u>B</u> enjamin	D	
7. Benjamin D. Hyatt II	Hyatt	Benjamin	D	<u>II</u>
8. Benjamin D. Hyatt III	Hyatt	Benjamin	D	<u>III</u>
9. Benjamin Hyatt, Jr.	Hyatt	Benjamin	<u>J</u> r	
10. Benjamin Hyatt, Sr.	Hyatt	Benjamin	<u>S</u> r	
11. King Olaf	<u>K</u> ing	Olaf		
12. Ms. Naomi Luu, CRM	<u>L</u> uu	Naomi	CRM	Ms
13. Miss Naomi Luu	Luu	Naomi	<u>M</u> iss	
14. Mrs. Naomi Luu	Luu	Naomi	<u>M</u> rs	
15. Sister Joy Miller	<u>M</u> iller	Joy	Sister	

B. Business Names

Titles in business names (Capt. Hook's Bait Shop) are indexed as written. Remember, the word *The* is considered the last indexing unit when it appears as the first word of a business name.

How are titles in business names indexed?

Examples of Rule 5B

Filing Segment	Indexing Order of Units				
	Name	Key Unit	Unit 2	Unit 3	Unit 4
1.	Capt. Hook's Bait Shop	Capt	Hooks	Bait	Shop
2.	Dr. Pane's Windows	Dr	Panes	Windows	
3.	Grandma's Cookie Shop	Grandmas	Cookie	Shop	
4.	Mister Hulk's Gym	Mister	Hulks	Gym	
5.	Mr. Mom's Day Care	Mr	Moms	Day	Care
6.	Ms. Salon of Beauty	Ms	Salon	of	Beauty
7.	Professor Little's Bookstore	Professor	Littles	Bookstore	
8.	The Prof's Tutorial Service	Prof	Tutorial	Service	The



RULE 5: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column. The first name is shown as an example.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	Father Tom		Father	Tom		
b.	Ms. Rosalie Torres, CRM					
c.	Mrs. Darlene Talbot, DVM					
d.	Doctor Dee's Delivery					
e.	Governor Talbot's Construction Co.					
f.	Father Steven Gerzinski					
g.	Grandfather Ben's Recycling					
h.	Queen Anne II					
i.	Mom's TLC Services					
j.	Ms. Karen Farthing, Ph.D					

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.

3. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank beside the names. If the order is not correct, write No in the blank.

- | | |
|---|--|
| _____ a. The Magic Shop
Maggie's \$ Save | _____ f. Red Hot Tamales
Red Hat Shop |
| _____ b. Robert Norberg, Sr.
Robert Norberg, Jr. | _____ g. LMNO Shipping Co.
L & N Appliance Repair |
| _____ c. Mrs. Carmen Libby
Lady Liberty Realty | _____ h. Sharon's "Of Course"
Miss Sharon Oest |
| _____ d. ABC Rentals, Inc.
Allied Chemical Co. | _____ i. The Office King
The Office Doctor |
| _____ e. MVP Pizza Shop
Mrs. Marvis Miller | _____ j. I-Net, Inc.
I-Freenet Company |

4. Are the names in each group listed in correct order? If the names are in correct order, write Correct in the blank beside the names. If the names are not in correct order, indicate the correct order of the names by writing their numbers in the blank. For example, 3, 1, 2.

- | | |
|--|---|
| _____ a. 1. Closets by Elizabeth
2. Dr. Claudia Carter
3. Admiral Tristan Chandler | _____ d. 1. Mayor Miranda A. Moore
2. Miranda's Hobbies
3. Miranda A. Moore, MD |
| _____ b. 1. Senator Alex Hatfield
2. Hatfield's Department Store
3. Ms. Margaret Hayes | _____ e. 1. Richard Pope, Jr.
2. Theresa Pope
3. Richard Pope, Sr. |
| _____ c. 1. Ms. Linda Podany, CRM
2. Mr. Daniel Potter, CPA
3. Maria Podany, DDS | _____ f. 1. Sen. Carroll Guest
2. Rep. Carroll Guest
3. Ms. Carol Guest |



Data File

5. The answers to this exercise are shown in the *Word file 3 Check Answers* found in the data files. Compare them with your answers.

RULE 6: Prefixes, Articles, and Particles

A foreign article or particle in a personal or business name is combined with the part of the name following it to form a single indexing unit. The indexing order is not affected by a space between a prefix and the rest of the name (Alexander La Guardia), and the space is disregarded when indexing.

Examples of articles and particles are: a la, D', Da, De, Del, De La, Della, Den, Des, Di, Dos, Du, E', El, Fitz, Il, L', La, Las, Le, Les, Lo, Los, M', Mac, Mc, O', Per, Saint, San, Santa, Santo, St., Ste., Te, Ten, Ter, Van, Van de, Van der, Von, Von der.



NewsFoto/University of San Diego/Associated Press

Many business names contain prefixes, articles, or particles.

What are some examples of names with foreign articles and particles?

Examples of Rule 6

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. Michael D'Agostino, DMD	DAgostino	Michael	DMD		
2. D'Angelo's Pizza Parlor	DAngelos	Pizza	Parlor		
3. Ms. Penelope D'Cruz	DCruz	Penelope	Ms		
4. Mario De La Torres, MD	DeLaTorres	Mario	MD		
5. Theresa Del Favero, CPA	DelFavero	Theresa	CPA		
6. La Marte & McCaw Attys	LaMarte	and	McCaw	Attys	
7. Dr. Terrence O'Donald	ODonald	Terrence	Dr		
8. O'Donald's Public House	ODonalds	Public	House		
9. Edward Saint Cyr	SaintCyr	Edward			
10. San Souci Resturant	SanSouci	Restaurant			
11. St. Edwina's Arts & Crafts	StEdwinas	Arts	and	Crafts	
12. Ms. Mayme Ten Eyck	TenEyck	Mayme	Ms		
13. Ms. Lorraine TenPas, Ph.D.	TenPas	Lorraine	PhD	Ms	
14. Lt. Enid Van de Haven	VandeHaven	Enid	Lt		
15. Van der Camp's Hobbies	VanderCamps	Hobbies			
16. Otto Von der Hoff	VonderHoff	Otto			
17. Alice Von Hoff	VonHoff	Alice			



RULE 6: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column. The first name is shown as an example.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	D'Arcy & Davis Consultants		D'Arcy	and	Davis	Consultants
b.	Ms. Syndi LaJoi, RD					
c.	McLean's Web Design					
d.	Mr. James Van Dyke					
e.	Pamela St. John, CPA					
f.	Ms. Maureen O'Boyle					
g.	Eleanor K. DeLacy					
h.	Mr. Mitchell Ste. John					
i.	Gov. Tom McCall					
j.	McAdam's Paving Co					



Data File

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.
3. The answers to this exercise are shown in the *Word file 3 Check Answers* found in the data files. Compare them with your answers.

RULE 7: Numbers in Business Names

Numbers in business names have unique rules.

- Numbers spelled out (Seven Lakes Nursery) in business names are filed alphabetically.
- Numbers written in digits are filed before alphabetic letters or words (B4 Photographers comes before Beale Building and Loan).
- Names with numbers written in digits in the first units are filed in ascending order (lowest to highest number) before alphabetic names (229 Club, 534 Shop, First National Bank of Chicago).
- Arabic numerals are filed before Roman numerals (2 Brothers Deli, 5 Cities Transit, XII Knights Inn).
- Names containing Roman numerals are filed in ascending order according to their Arabic number equivalents. VIII-Ball Club, XL Days & XL Nights Motel, C-Note Lounge (8, 40, 100); Lucky VII Casino, Lucky X Car Wash, Lucky LX Drive-In (7, 10, 60). A chart of Roman numerals is shown in Figure 3.1.
- Names with inclusive numbers (20–39 Singles Club) are arranged by the first digit(s) only (20).

FIGURE 3.1 Table of Roman Numerals

I	1	XX	20
II	2	XXX	30
III	3	XL	40
IV	4	L	50
V	5	LX	60
VI	6	LXX	70
VII	7	LXXX	80
VIII	8	XC	90
IX	9	C	100
X	10	D	500
		M	1000

My Records



Protect Yourself from Identify Theft

Identity theft is a serious problem. What can you do to reduce the chances that you will be a victim?

Although no one can guarantee that you are safe from identity theft, you can reduce your risks by following these guidelines.

- Create passwords and/or personal identification numbers (PINs) to protect your credit card, bank, and phone accounts. (Avoid using your mother's maiden name, your birth date, the last four digits of your Social Security number, your phone number, or a series of consecutive numbers.)
- Change passwords often and include upper- and lowercase letters, numbers, and symbols.
- Secure personal information at home in a locked, fire-resistant box.
- Shred charge receipts, credit records, checks, bank statements, and unwanted credit card offers before throwing them away.
- Update your computer's virus and spyware protection software regularly.
- Review a copy of your credit report each year to make sure no new credit cards or other accounts have been issued in your name without your authorization.
- Remove incoming mail daily from your mailbox and request that your mail be held at the post office until you return from a vacation or other absence from home.
- Mail letters or documents that contain personal data (such as tax forms or checks) at the post office or in an official postal service mailbox.
- React quickly if a creditor or merchant calls about charges you did not make.
- Show only your name and address on printed checks and deposit slips.
- Do not give out personal information on the phone, through the mail, or online unless you know the site is safe and you initiated the call or transaction.
- Do not carry your Social Security card, passport, or birth certificate on your person.

- When hyphens separate three or more numbers written as digits, remove the hyphens as you would when hyphens separate words. (1-2-3 Market would be coded as 123 / Market.)
- Names with numbers appearing in other than the first position (Pier 36 Cafe) are filed alphabetically and immediately before a similar name without a number (Pier 36 Cafe comes before Pier and Port Cafe).
- When indexing names with numbers written in digit form that contain *st*, *d*, and *th* (1st Mortgage Co., 2d Avenue Cinemas, 3d Street Pest Control), ignore the letter endings and consider only the digits (1, 2, 3).
- When indexing names with a number (in figures or words) linked by a hyphen to a letter or word (A-1 Laundry, Fifty-Eight Auto Body, 10-Minute Photo), ignore the hyphen and treat it as a single unit (10Minute, A1, FiftyEight).
- When indexing names with a number plus a symbol (55+ Social Center), treat it as a single unit (55Plus).

Examples of Rule 7

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. 7 Days Market	7	Days	Market		
2. 17th Avenue Fashions	<u>17</u>	Avenue	Fashions		
3. 21 Club, Inc.	<u>21</u>	Club	Inc		
4. 50% Discounters	<u>50</u> Percent	Discounters			
5. 65+ Retirement Village	<u>65</u> Plus	Retirement	Village		
6. 405 Auto Body	<u>405</u>	Auto	Body		
7. 500-510 Princess Court	<u>500</u>	Princess	Court		
8. The 500 Princess Shop	500	Princess	<u>Shop</u>	The	
9. XXI Club	<u>XXI</u>	Club			
10. Fourth Dimension Printing	<u>Fourth</u>	Dimension	Printing		
11. Highway 18 Café	<u>Highway</u>	18	Cafe		
12. I-90 Road Services	<u>I90</u>	Road	Services		
13. #1 Pet Grooming	<u>Number1</u>	Pet	Grooming		
14. One Main Place	<u>One</u>	Main	Place		
15. Pier 99 Imports	<u>Pier</u>	99	Imports		
16. Tea for Two	<u>Tea</u>	for	Two		
17. Three Sisters Wilderness	<u>Three</u>	Sisters	Wilderness		
18. Two Wheels Only	<u>Two</u>	Wheels	Only		



RULE 7: Self-Check

1. Are the names in each group listed in correct order? If the names are in correct order, write Correct in the blank below the names. If the names are not in correct order, indicate the correct order of the names by writing their numbers in the blank. For example, 3, 1, 2.

- a. 1. Lady Bug Enterprises
2. Denise J. LaMonte
3. LaMonte Beauty Shop

- b. 1. 50% Discount Shop
2. V Roman Way
3. 21st Century & Beyond Shop

- c. 1. Labels 4 All, Inc.
2. Lawrence LaBerge, DVM
3. Patricia La Belle

- d. 1. Marsha Mc Beth
2. Marsha McBath
3. 10 Minute Lube Shop

- | | |
|----------------------------|------------------------|
| e. 1. Mackenzie M. Minten | h. 1. One Dollar Store |
| 2. McKenzie 500 Realty | 2. #1 Sports Gear |
| 3. McKenzie and Eft Realty | 3. 5-7-9 Petites 2 Go |

- | | |
|--------------------------|--------------------------|
| f. 1. Ralph DaCosta, Sr. | i. 1. Daniel Van de Bos |
| 2. 10 Minute Delivery | 2. Venture Tours, Inc. |
| 3. Ralph DaCosta, Jr. | 3. Matthew Van der Sluys |

- | | |
|---------------------------|------------------------|
| g. 1. #1 Delivery Express | j. 1. 4-5-6 Nursery |
| 2. A-1 Auto Sales | 2. Four Corners Bistro |
| 3. 10# Line Shop | 3. 4 Movers & A Truck |

2. The answers to this exercise are shown in the *Word* file *3 Check Answers* found in the data files. Compare them with your answers.



Records Management in Action



Important Historic Records Almost Lost

Over 7,000 invaluable 19th-century historical documents dating to when British Columbia was a British Colony were almost accidentally destroyed. The records had resided on a University of Victoria IBM mainframe computer that was about to be de-commissioned when discovered. The records included communications between the governors of the British Columbia and Vancouver Island colonies and the London office.

Dr. Jim Hendrickson, Professor Emeritus at the University, spent almost seven years transcribing the original documents using a computer with dated software. Very fortunately, a former student of Dr. Hendrickson found the records before the computer was destroyed.

After a year of transcribing this work to digital formats, historians and volunteers are now posting the documents on the Colonial Dispatches website as a resource for researchers, lawyers, and the merely curious. A link to the Colonial Dispatches website is provided on the website for this textbook.

Source: Julie Kent, "B. C.'s History, Now Online," *University Affairs/Affaires Universitaires Magazine*, January 12, 2009.

How are names of organizations and other institutions indexed?



RULE 8: Organizations and Institutions

Banks and other financial institutions, clubs, colleges, hospitals, hotels, lodges, magazines, motels, museums, newspapers, religious institutions, schools, unions, universities, and other organizations and institutions are indexed and filed according to the names written on their letterheads.

Examples of Rule 8

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. 1 st National Bank	1	National	Bank		
2. American Quilters Museum	<u>A</u> merican	Quilters	Museum		
3. Associated Auctioneers	<u>A</u> ssociated	Auctioneers			
4. Bank of the West	<u>B</u> ank	of	the	West	
5. Billings Community College	<u>B</u> illings	Community	College		
6. De Long Seaside Motel	<u>D</u> eLong	Seaside	Motel		
7. Disabled American Veterans	<u>D</u> isabled	American	Veterans		
8. Findley Creek Lodge	<u>F</u> indley	Creek	Lodge		
9. First United Methodist Church	<u>F</u> irst	United	Methodist	Church	
10. Freeport Daily News	<u>F</u> reeport	Daily	News		
11. Jewish Historical Society	<u>J</u> ewish	Historical	Society		
12. JFK High School	<u>J</u> FK	High	School		
13. Journal of Photography	<u>J</u> ournal	of	Photography		
14. Public Employees Union	<u>P</u> ublic	Employees	Union		
15. Rotary Club of Denver	<u>R</u> otary	Club	of	Denver	
16. St. Vincent's Medical Center	<u>S</u> tVincent's	Medical	Center		
17. Temple Beth Israel	<u>T</u> emple	Beth	Israel		
18. University of Michigan	<u>U</u> niversity	of	Michigan		
19. Valley Community Center	<u>V</u> alley	Community	Center		
20. Volunteers of America	<u>V</u> olunteers	of	America		
21. Winston State College	<u>W</u> inston	State	College		
22. Young Voters of Salem	<u>Y</u> oung	Voters	of	Salem	



RULE 8: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	National Business Education Association					
b.	Immaculate Heart Catholic Church					
c.	Church of Religious Science					
d.	St. Paul's Episcopal Church					
e.	St. Thomas's Lutheran Church					
f.	Temple Sinai					
g.	Quran Foundation					
h.	ARMA International					
i.	University of Utah Hospital					
j.	New Mexico State University					

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.

3. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank below the names. If the order is not correct, write No in the blank.

a. International Webmasters
Association

International Association of
Organ Donation

b. United Cerebral Palsy

United Four Wheel Drive
Associations

c. Association of American
Publishers

American Society for Training
& Development

d. World Federation of United
Nations Associations

World Federation of Personnel
Management Association

e. Union of Needletrades, Textiles
and Industrial Employees

United Food and Commercial
Workers International Union



4. The answers to this exercise are shown in the *Word file 3 Check Answers* found in the data files. Compare them with your answers.



RULES 5–8: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
a.	1st Methodist Church					
b.	First National Bank					
c.	First Baptist Church					
d.	The St. Paul Chronicle					
e.	The Savannah Union Tribune					
f.	The New York Times					
g.	Sisters of Charity					
h.	The Seattle Post-Intelligencer					
i.	Fountain of Youth Spa					
j.	1 Stop Dry Cleaners					

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column.

3. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank below the names. If the order is not correct, write No in the blank.

_____ a. St. John's Academy
St. John's Church

_____ f. Dr. June DeSimone
Design-A-Weld Inc.

_____ b. 21st Century Gallery
The 21 Club

_____ g. Green Acres Kennels
Ms. Towanda Greco

_____ c. Astor Elementary School
Astoria Community College

_____ h. School of Arts and Crafts
School of the Arts

_____ d. Bai Tong Thai Cuisine
Berbati Restaurant

_____ i. San Carlos Apartments
Mr. Tatsumi Sanada

_____ e. Center-Line Curtains
Center Pointe Mill Works

_____ j. Grisvold McEwen, LLP
Dr. Kevin M. McEvoy

4. The answers to this exercise are shown in the *Word file 3 Check Answers* found in the data files. Compare them with your answers.



Data File

CROSS-REFERENCING BUSINESS NAMES

In Chapter 2 you prepared cross-references for two of the nine types of business names that should be cross-referenced:

- Compound names
- Names that are abbreviations and acronyms

In this chapter, you will learn to prepare cross-references for the following types of business names:

- Popular and coined names
- Hyphenated names
- Divisions and subsidiaries
- Changed names
- Similar names

An explanation of the procedure to be followed in cross-referencing each of these types of names follows. The original record is stored in one place according to the alphabetic rules being used. A cross-reference is made, if necessary, for any of the reasons discussed here and in Chapter 2.

Career Corner



Records Clerk

The following job description is an example of a career opportunity in a law firm.

Principal Duties

- Filing and utilizing automated records management systems to index and maintain legal records
- Retrieving and/or referencing information for users
- Preparing boxes for storage
- Processing incoming information

- Sorting, classifying, and coding material for integration into records management systems
- Performing special projects as assigned

Minimum Qualifications

The ideal candidate will be detail oriented and have legal records management experience or law firm experience. College degree preferred.

How is a company's popular name cross-referenced?

Popular and Coined Names

Often a business is known by its popular and/or coined name. A cross-reference will assist in retrieval. For example, the official name is shown as the coded filing segment. The popular or coined name is the name usually mentioned when retrieving anything for this business; therefore, a cross-reference with the popular name is helpful for retrieving. In the following examples, *Fred Meyer One Stop Shopping* is commonly known as *Freddy's*, and *Smiths Homestyle Eatery* is commonly known as *Smitty's*. *Dixie Lee's Homestyle Restaurant* is commonly known as *Dixie's*.

Coded Filing Segment	Cross-Reference
2 3 4 <u>Fred</u> / Meyer / One / Stop / 5 Shopping	<u>Freddys</u> SEE Fred Meyer One Stop Shopping
2 3 <u>Smiths</u> / Homestyle / Eatery	<u>Smittys</u> SEE Smiths Homestyle Eatery
2 3 <u>Dixie</u> / Lee's / Homestyle / 4 Restaurant	<u>Dixies</u> SEE Dixie Lees Homestyle Restaurant

Hyphenated Names

Many business names include hyphenated surnames. Like hyphenated personal names, business surnames with hyphens need to be cross-referenced for each surname combination. Three examples follow.

Coded Filing Segment	Cross-Reference
2 3 <u>Jolly-Reardon</u> / Consulting / Co.	2 3 <u>ReardonJolly</u> / Consulting / Co. SEE JollyReardon Consulting Co.
2 3 <u>Heckman-O'Connor</u> / Tour / Guides	2 3 <u>OConnorHeckman</u> / Tour / Guides SEE HeckmanOConnor Tour Guides
2 3 <u>Bruss-Podany-Moore</u> / Law / Firm	2 3 <u>PodanyMooreBruss</u> / Law / Firm SEE BrussPodanyMoore Law Firm
	----- 2 3 <u>MooreBrussPodany</u> / Law / Firm SEE BrussPodanyMoore Law Firm

Divisions and Subsidiaries

When one company is a subsidiary or a division or branch of another company, the name appearing on the letterhead of the branch or subsidiary is the one indexed on the original record. A cross-reference is made under the name of the parent company. Two examples follow. Ricoh Business Systems is a division of Ricoh USA, and Micro-Weld Operations is a subsidiary of Kintech Corporation.

Coded Filing Segment	Cross-Reference
2 3 <u>Ricoh</u> / Business / Systems (a div. of Ricoh USA)	2 <u>Ricoh</u> / USA SEE Ricoh Business Systems
2 <u>Micro-Weld</u> / Operations (a subsidiary of Kintech Corporation)	2 <u>Kintech</u> / Corporation SEE MicroWeld Operations

Changed Names

A company may change its name. Records must then be changed to indicate the name change and to ensure that the new name will be used for storage purposes. If only a few records are already in storage, they are usually re-filed under the new name, and the former name is marked as a cross-reference. If many records are filed under the former name, a permanent cross-reference is placed at the beginning of the records for the former name. Any new records are placed under the new name. In the examples, *AT&T Wireless* changed its name to *Cingular Wireless*, and *Hershey Foods Corporation* changed its name to *The Hershey Co.*

Coded Filing Segment	Cross-Reference
2 <u>Cingular</u> / Wireless	2 <u>ATandT</u> / Wireless SEE Cingular Wireless
3 2 The / <u>Hershey</u> / Co.	2 3 <u>Hershey</u> / Foods / Corporation SEE Hershey Co The

Similar Names

A SEE ALSO cross-reference is used to alert the filer to check other possible spellings for a business name. The complete business name is not cross-referenced—only the similar name. Similar names for a business include examples like *Northwest* or *North West*, *Southeast* or

How is a cross-reference for a division of a company prepared?

If an organization changes its name, how is the cross-reference prepared?

When is a SEE ALSO cross-reference used?

South East, Goodwill or *Good Will*, and *All State* or *Allstate*. If a name could be considered either as one unit or as two units, it is a good candidate for a cross-reference. Two examples follow.

Coded Filing Segment			Cross-Reference
2	3		2
<u>Allstate</u> / Insurance / Co.			<u>All</u> / State SEE ALSO Allstate
2	3	4	2
<u>South</u> / East / Distribution / Co.			<u>Southeast</u> SEE ALSO South East

Cross-Referencing Self-Check

1. Identify the units in the filing segments (names). Code the names by underlining the key unit, numbering the other units, and placing diagonal lines between the units.
2. Write cross-references for the names that require them. See the example below.

2	3	4	2	3	4
<u>Lundry</u> / and / Masur / Meats			<u>Masur</u> / and / Lundry / Meats		
			SEE Lundry and Masur Meats		

	Coded Filing Segment	Cross-Reference (if needed)
a.	Napen-Crawford Fishing Gear	
b.	Lettson-Ridgeway Antique Cars	
c.	St. Peter's Episcopal Church	

d.	Woody's Dog and Cat Grooming	
e.	Tech-N-Go Co. (a div. of Systems Solutions Corp.)	
f.	Northwest Computer Systems	
g.	Anchorage Daily News	
h.	Westpark Aquarium	
i.	All State Supply Co.	
j.	Thao Huong Distributing Company (changed its name to Huong Distribution, Inc.)	

3. The answers to this exercise are shown in the *Word file 3 Check Answers* found in the data files. Compare them with your answers.



Data File

Chapter Review and Applications

KEY POINTS

- A title before a personal name or a professional suffix after a personal name becomes the last indexing unit.
- Business names with titles are indexed as written.
- A foreign article or particle in a personal or business name is combined with the part of the name following it to form a single indexing unit.
- Numbers spelled out in business names are filed alphabetically.
- Numbers written in digits are filed before alphabetic letters or words.
- Numbers written as digits are filed in ascending order.
- The name of an organization or institution is indexed and filed according to how its name is shown on its letterhead.
- Cross-reference business names that are popular and/or coined, hyphenated, divisions and subsidiaries, changed names, or similar names.

REVIEW AND DISCUSS

1. Index and code the following names by underlining the key unit, numbering the other units, and placing diagonal lines between the units. Sort the names in alphabetic order for filing. Indicate the order for the names in the blank provided. (Obj. 1)
 - a. Mr. Paul Childers, Jr.
 - b. Ms. Paula Childers
 - c. Mrs. Paul Childers, CRM
 - d. Mr. Paul Childers, Sr.
 - e. Father Paul ChildersOrder: _____

2. Index, code, and sort the following names as instructed in question 1. (Obj. 1)

- a. Sister Ellen
- b. Sister Ellen McSorley
- c. Sister Elena
- d. Sisters of Mercy
- e. Ms. Ellen Mc Sorley

Order: _____

3. Index, code, and sort the following names as instructed in question 1. (Obj. 2)

- a. Frank LaBarre
- b. L-A-B Supply Service
- c. Frank S. LaBarre
- d. Joanna LaBarge
- e. LaBar's Web Design

Order: _____

4. Index, code, and sort the following names as instructed in question 1. (Objs. 1 and 2)

- a. Ms. Colleen McHenry, CRM
- b. Mr. Colin McHenry
- c. Mrs. Colin Mac Henry
- d. Colleen McHenry, M.D.
- e. Dean Colleen Mac Henry

Order: _____

5. Index, code, and sort the following names as instructed in question 1. (Obj. 3)

- a. 3 Rs Study Service
- b. 7 Gnomes Mining Co.
- c. 5 Star Hotels Association
- d. 205 Interstate Inn
- e. 1 Stop Shopping

Order: _____

6. Index, code, and sort the following names as instructed in question 1. (Objs. 1–3)

- a. 1-2-3 Go Store!
- b. 2 B-True Memories, Inc.
- c. 30 McNamara Suites
- d. Cardinal Joseph O'Neill
- e. One Stop Repair Mart

Order: _____

7. Index, code, and sort the following names as instructed in question 1. (Obj. 4)

- a. St. Peter's Orthodox Church
- b. St. Paul First National Bank
- c. The St. Paul Times
- d. St. Peter's Children's Home
- e. Abbot Paul's Chapel

Order: _____

8. Index, code, and sort the following names. (Objs. 1 and 4)
- a. 4 Seasons Hotel
 - b. 4-Fold Way, Inc.
 - c. Mr. Russell Forrett, CPA
 - d. 444 Fountain Court Apts.
 - e. Four Rivers Stadium
- Order: _____

9. Review the names and prepare the necessary cross-references. (Obj. 6)

	Filing Segment	Cross-Reference
a.	Carter-Watters Real Estate	
b.	E'Lan Construction (changed its name to Buildings by E'Lan)	
c.	Southwest Computer Institute	
d.	Modular Housing (a subsidiary of St. Cyr Construction Company, Inc.)	
e.	PJs (a popular name of Pat Jennings Gourmet Bakery)	

10. What is the difference between a regular cross-reference and a SEE ALSO cross-reference? (Obj. 6)

APPLICATIONS

3-1 Index, Code, and Sort Records (Objs. 1–7)

In this activity, you will practice using alphabetic indexing rules 5–8.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
1.	9 to 5 Uniform Shop						
2.	Albany Baptist Church						
3.	All State Packing Co.						
4.	Mr. Elmer Darby, Jr.						
5.	Big Rock Candies (a div. of Heavenly Sweets, Inc.)						
6.	2 B-True Pet Supply						
7.	Akron Foundation for the Blind						
8.	DBB Inc. (DeHart, Brady, & Baldwin, Inc.)						
9.	Abraham Lincoln Museum						
10.	The Astoria Times						
11.	21st Avenue Bistro						
12.	Belleville Hospital						
13.	Elmer Darby, Ph.D.						
14.	The Badger Times						
15.	Mr. Louis DeBois						
16.	Beauty on Broadway						
17.	Albany Brotherhood of Iron Workers						

continued next page

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
18.	Ms. Andrea Adams, CRM						
19.	Abbot & Anderson Law Firm						
20.	All State Shopping, Inc.						

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See the example. Note that three cross-references are needed for DBB, Inc. (DeHart, Brady, & Baldwin, Inc.).
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

2 3

4X Anderson / Jane / Carter
SEE CarterAnderson Jane

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

3-2 Index, Code, and Sort Records (Objs. 1–7)

In this activity, you will practice using alphabetic indexing rules 1–4.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
1.	St. Theresa Lutheran Church					
2.	TTW Trucking (Travis, Trent, and Wilson Trucking)					
3.	Ms. Julia Van der Hay, CRM					
4.	Union Workers Federation					
5.	Simon & Travis Consulting					
6.	Clara St. Ambach, CRM					
7.	Teddy Roosevelt Prep School					
8.	The St. Joseph Foundation					
9.	Ms. Angela Stamp-VandeCamp					
10.	1 Stop Shopping					
11.	#1 Print Shop					
12.	3 Square Meals, Inc.					
13.	100 Points of Light Co.					
14.	Walla Walla Hospital					
15.	5000 King's Court Suites					
16.	Tours, Inc. (a div. of Travel America)					
17.	1-2-3 Lawn Care Co.					
18.	Southwest Airlines					
19.	Salem General Hospital					
20.	The Temple Institute					

continued next page

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
21.	James Ten Eyck, DVM					
22.	Daniel L. Smith Commercial Diving					
23.	St. Genistus Village for Children					
24.	Sam the Clown					
25.	Ms. Wilma Tescher, CPA					

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See the example.
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

2 3 4

5X Travis / and / Wilson / Consulting
SEE Wilson and Travis Consulting

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

3-3 Index, Code, and Sort Records (Objs. 1–7)

In this activity, you will practice using alphabetic indexing rules 1–8 to index, code, and sort names such as those that would be found on paper documents.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
1.	L. M. Kale, CPA					
2.	Sister Doreen Mellman					
3.	Arun Lakra, M. D.					
4.	Keene Baptist Church					
5.	9 to 5 Uniforms					
6.	LaBelle Beauty Shop					
7.	Mr. Santos Mejia, CRM					
8.	Life-Time Gate Company					
9.	Layla's Salon of Beauty					
10.	Leadoff Investment Co.					
11.	The Kelso Times					
12.	Memo (a div. of Mason Office Products)					
13.	Lace-N-Satin Boutique					
14.	Lawson & Mason Attys.					
15.	Lynda Kemper Brokerage					
16.	57 Street Club					
17.	Ms. Colleen McNamara, CPS					

continued next page

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4
18.	Keene Brotherhood of Iron-Workers					
19.	LaBelle Origins, Inc.					
20.	Richard LaBelle, DVM					

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See the example.
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

2 3

4X Anderson / Jane / Carter

SEE CarterAnderson Jane

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

**Access Activity**

3-4 Enter Names into a Database (Objs. 1–7)

In Application 3–2 you practiced using alphabetic indexing rules 5–8 to file names that would appear on physical documents. In this application, you will use the same names in an electronic database. To compare the results of the two methods, you will enter the names as written (the filing segment) and by filing units.

1. Create a new *Access* database file named *3-4 Customers*.
2. Create a table in the database named *Customers*. Create these fields in the table: *ID Number*, *Filing Segment*, *Key Unit*, *Unit 2*, *Unit 3*, *Unit 4*, *Unit 5*. Select *AutoNumber* for the field type for the *ID Number* field. Select *Text* for the field type for all other fields. Set the *ID Number* field as the primary key.
3. Enter the names from Application 3–2 in the *Customer* table. In the *Filing Segment* field, enter the complete name as written. In the other fields, enter the data in all capitals and follow the alphabetic indexing rules 5–8 presented in this chapter. (Do not enter information shown in parentheses after a company name in the *Units* fields.)
4. Sort the records in the *Customer* table in ascending order by the *Key Unit* field. Does the order of the records in the sorted table match the order of the records you sorted manually in Application 3–2? If not, how does the order differ?

3-5 Find Information in Database Records (Obj. 8)

When filing paper documents, cross-references are created to help users find names that might be requested in different ways. In an *Access* database, the Find feature can be used to locate records using any part of a name. This eliminates the need for some types of cross-references. You will practice using the Find feature in this application.

Open the *Access* database file *3-4 Customers* that you created in Application 3-4. Select the Customers table but do not open it. Create an AutoForm based on the Customers table. Use the Find feature to answer the questions that follow. Close the form without saving it after answering the questions.

Hint: When searching, look in the Filing Segment field and match any part of the record.

1. What are the names in the database that are hospitals?
2. What is the name of the consulting company that is included in this database?
3. What are the names of the two people in the database who are Certified Records Managers (CRM)?
4. What is the complete name of the business whose name begins with 1-2-3?
5. What is the name of the church in the database?



Access Activity

3-6 Research Identity Theft Prevention

1. Access a search engine on the Internet. Search using the key words *preventing identity theft*.
2. Follow at least three links in the search results list. Read and summarize the article or other information you find at each of the three sites. Be sure to list each site as a reference.
3. Work as a team with two other students to compile a list of strategies for preventing identity theft. Share your findings as your instructor directs.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 2 Alphabetic Filing Rules 5–8

Continue working with Auric Systems, Inc.
Complete Job 2.

For More Activities Go To:
www.cengage.com/officetech/read

Alphabetic Indexing Rules 9–10

LEARNING OBJECTIVES

1. Index, code, and arrange personal and business names that are identical.
2. Index, code, and arrange government names.
3. Apply alphabetic filing procedures.
4. Prepare and arrange cross-references for foreign business and government names.
5. Sort personal, business, and government names.
6. Select appropriate subject categories to be used within an alphabetic arrangement.
7. Create, sort, and query a database.

ON THE JOB

Tyrene Bada is the Records Coordinator at Portland Community College, Portland, Oregon. Tyrene's duties include creating an integrated records management system for the Pacific Northwest's largest community college with almost 90,000 students. She also deals with security for archival records, trains staff, and sees that programs comply with laws related to records.

Most of PCC's records are in either paper or digital form. A few departments have been imaging their documents. Last year, the imaging software was upgraded; and Tyrene is helping departments integrate this internal process.

Electronic correspondence is used whenever possible. "More people are using electronic records because they realize that electronic records are more efficient, more accurate, and are a faster means of communication than using paper," Tyrene stated. Technology is an accurate way to file and retrieve records. Tyrene uses a simple off-the-shelf database to manage the records in the Records Center.

Tyrene is serving her second year as a member of the Board of Directors for the Oregon chapter of ARMA International. She highly recommends being involved with ARMA to learn more about records management.

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Courtesy of Tyrene Bada

ALPHABETIC INDEXING RULES

In this chapter, you will continue your study of alphabetic storage rules. Follow these guidelines to study the indexing rules effectively:

- Read each rule carefully. Make sure you understand the meaning of the words used to state the rule.
- Look at the examples. Note that the complete filing segment is given at the left. Then the filing segment is separated into indexing units at the right according to the rule you are studying. Be sure you understand why the filing segment has been separated as it has.

RULE 9: Identical Names

Retrieving the correct record when there are identical names of people or businesses is easy when using a computer database. A records management database typically contains a unique field with information specific to a particular person or business name—often a phone number, a special identification number, or an assigned number generated by the database software. Because each person or business has a unique identifier, there is no need to look for other information to determine which person is which.

In correspondence files, determining which person or business is the correct one when there are others with identical names can be a challenge. When personal names and names of businesses, institutions, and organizations are identical (including titles as explained in Rule 5), the filing order is determined by the addresses. Compare addresses in the following order:

1. City names
2. State or province names spelled in full—not abbreviated (if city names are identical)
3. Street names, including *Avenue*, *Boulevard*, *Drive*, and *Street* (if city and state names are identical)
 - a. When the first units of street names are written in digits (18th Street), the names are considered in ascending numeric order (1, 2, 3) and placed together before alphabetic street names (18th Street, 24th Avenue, Academy Circle).
 - b. Street names written as digits are filed before street names written as words (22nd Street, 34th Avenue, First Street, Second Avenue).
 - c. Street names with compass directions (North, South, East, and West) are considered as written (SE Park Avenue, South Park Avenue).
 - d. Street names with numbers written as digits after compass directions are considered before alphabetic names (East 8th Street, East Main Street, Sandusky Drive, South Eighth Avenue).
4. House or building numbers (if city, state, and street names are identical)
 - a. House and building numbers written as digits are considered in ascending numeric order (8 Riverside Terrace, 912 Riverside Terrace) and placed together before spelled-out building names (The Riverside Terrace).

When names are identical, which indexing units are compared next?

- b. House and building numbers written as words are filed after house and building numbers written as digits (11 Park Avenue South, One Park Avenue).
- c. If a street address and a building name are included in an address, disregard the building name.
- d. ZIP Codes are not considered in determining filing order.

Are ZIP codes considered in determining filing order?

Examples of Rule 9

Names of Cities and States Used to Determine Filing Order

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	
1. Seaside Inn Oceanside, California	Seaside	Inn	Oceanside	California	
2. Seaside Inn Oceanside, New Jersey	Seaside	Inn	Oceanside	<u>N</u> ew Jersey	
3. Seaside Inn Oceanside, Washington	Seaside	Inn	Oceanside	<u>W</u> ashington	
4. Seaside Inn Ventura, California	Seaside	Inn	<u>V</u> entura	California	
5. Seaside Inn Walnut, California	Seaside	Inn	<u>W</u> alnut	California	
6. Seaside Inn Westwood, California	Seaside	Inn	<u>W</u> estwood	California	

Examples of Rule 9

Names of States and Provinces Used to Determine Filing Order

Filing Segment		Indexing Order of Units			
Name	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
1. Sam's Restaurant Monticello, Iowa	Sams	Restaurant	Monticello	Iowa	
2. Sam's Restaurant Monticello, Kentucky	Sams	Restaurant	Monticello	<u>K</u> entucky	
3. Anita J. Spencer Fenwick, Ontario	<u>S</u> pencer	Anita	J	Fenwick	Ontario
4. Anita J. Spencer Fenwick, West Virginia	Spencer	Anita	J	Fenwick	<u>W</u> est Virginia
5. Topper's Restaurant Clifton, Arizona	<u>T</u> oppers	Restaurant	Clifton	Arizona	
6. Topper's Restaurant Clifton, Tennessee	Toppers	Restaurant	Clifton	<u>T</u> ennessee	
7. Topper's Restaurant Clifton, Texas	Toppers	Restaurant	Clifton	<u>T</u> exas	
8. Topper's Restaurant Clifton, Wisconsin	Toppers	Restaurant	Clifton	<u>W</u> isconsin	

Examples of Rule 9**Names of Streets and Building Numbers Used to Determine Filing Order**

Filing Segment		Indexing Order of Units				
Name	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
1. Subs-2-Go 6570 8th St. Houston, Texas	Subs2Go	Houston	Texas	8	St	
2. Subs-2-Go 4560 48th St. Houston, Texas	Subs2Go	Houston	Texas	<u>48</u>	St	
3. Subs-2-Go 16450 Carter Ave. Houston, Texas	Subs2Go	Houston	Texas	<u>C</u> arter	Ave	
4. Subs-2-Go 12800 Carter St. Houston, TEXAS	Subs2Go	Houston	Texas	Carter	<u>S</u> t	12800
5. Subs-2-Go 18800 Carter St. Houston, Texas	Subs2Go	Houston	Texas	Carter	St	<u>18800</u>
6. Subs-2-Go 255 SW 15th St. Houston, Texas	Subs2Go	Houston	Texas	<u>S</u> W	15	St
7. Subs-2-Go 576 SW Eighth St. Houston, Texas	Subs2Go	Houston	Texas	SW	<u>E</u> ighth	St
8. Subs-2-Go 6224 SW Pecan Dr. Houston, Texas	Subs2Go	Houston	Texas	SW	<u>P</u> ecan	Dr
9. Subs-2-Go 17 Tyler Way Houston, Texas	Subs2Go	Houston	Texas	<u>T</u> ylor	Way	17
10. Subs-2-Go 296 Tyler Way Houston, Texas	Subs2Go	Houston	Texas	Tyler	Way	<u>296</u>
11. Subs-2-Go 11815 Westheimer Rd. Houston, Texas	Subs2Go	Houston	Texas	<u>W</u> estheimer	Rd	11815
12. Subs-2-Go 13805 Westheimer Rd. Houston, Texas	Subs2Go	Houston	Texas	Westheimer	Rd	<u>13805</u>
13. Subs-2-Go 467 Wyoming Ave. Houston, Texas	Subs2Go	Houston	Texas	<u>W</u> yoming	Ave	



RULE 9: Self-Check

1. Are the two names in each of the following pairs in correct alphabetic order? If the order is correct, write Yes in the blank by the names. If the order is not correct, write No in the blank.

_____ a. 1. United Methodist Church
1250 SE Concord
Salisbury, Massachusetts

2. United Methodist Church
2725 N 48th Street
Salisbury, Vermont

_____ b. 1. Ms. Andrea Moore
4550 SE Flavel St.
Salem, Oregon

2. Ms. Andrea Moore
975 Cedar Street
Salem, Massachusetts

_____ c. 1. The Granite Times
One Martin Street
Granite, Oklahoma

2. The Granite Times
371 Martin Street
Granite, Oklahoma

_____ d. 1. The Burger Barn
1015 17th Street
Pittsburgh, Pennsylvania

2. The Burger Barn
11500 8th Street
Pittsburgh, Pennsylvania

_____ e. 1. Mr. Daniel L. Gerson
8th and Grand Streets
Melbourne, Florida

2. Mr. Daniel L. Gerson
16875 Carnation Way
Madeira Beach, Florida

_____ f. 1. Key West Bank
210 N Elgin Blvd.
St. Louis, Missouri

2. Key West Bank
150 S Elgin Ave.
St. Louis, Missouri

2. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.



Data File

RULE 10: Government Names

As a citizen of a democratic society, you have rights and responsibilities. Governmental rules and regulations define the rights and responsibilities individuals and organizations enjoy. Documents from government entities are often vital records such as your birth certificate, Social Security card, or a marriage certificate. These documents should be organized and retained permanently. You also receive documents asking for payment of taxes or other obligations to the government. These documents should be kept for varying lengths of time. You will learn about records retention in Chapter 7.

The records that an organization may receive from various governmental agencies uphold the rights and responsibilities of an individual or a business. For example, an electronics company doing

My Records



Recovering from Identify Theft

Has your personal information or identity been stolen? What's the next step?

If your personal information has been stolen or if you become a victim of identity theft, you must act quickly to minimize the damage that may result from this theft of your records. Follow these four steps.

1. Notify the fraud units of the three credit reporting companies: Equifax, Experian (formerly known as TRW), and TransUnion.
 - Ask to be placed on fraud alert on your credit report. This alert tells creditors to contact you before opening any new accounts or making any changes to your existing accounts.
 - Ask for a free copy of your credit report. Scrutinize the report. Report any errors by writing to the credit bureaus.
 - Read the online publication, "Take Charge: Fighting Back Against Identity Theft" available on the Federal Trade Commission (FTC) website.
2. Close the accounts that you know or believe have been fraudulently opened.
 - Notify the security or fraud department of each company.
3. Report the identity theft to your local police or sheriff's department.
 - Document the theft.
 - Make sure the police report lists the fraud accounts.
 - Obtain a copy of the police report, which is called an *identity theft report*.
4. Report the crime to the Federal Trade Commission.
 - Include your police report number.
 - Call the FTC's Identity Theft Hotline (877-438-4338).
 - Use the FTC's online identity theft complaint form.

Following the above guidelines will help you recover from identity theft. The best way to beat identity theft is to do all you can to prevent it. (Links to the websites mentioned are available on the website for this textbook.)

business with the city of Philadelphia and the state of Pennsylvania interacts with city, county, state, and federal agencies by:

- Obtaining a business name and/or incorporating.
- Obtaining permits to do business within the city.
- Paying property taxes.
- Paying employer taxes.
- Complying with transportation regulations when shipping products.
- Complying with employment eligibility verification for employees.
- Complying with regulations regarding workers' compensation.
- Complying with other regulations while operating a business.

An understanding of our government’s hierarchy may be helpful when applying alphabetic indexing rules to government names. Open the *Word file 4 Government* found in the data files to review the structure of the U.S. Government and learn how organizations interact with government agencies. You can also find links to federal governmental sites on the website for this textbook.

Government names are indexed first by the name of the governmental unit—city, county, state, or country. Next, index the distinctive name of the department, bureau, office, or board. A discussion of local and regional, state, federal, and foreign government names is provided in this chapter.

A. Local and Regional Government Names

The first indexing unit is the name of the county, city, town, township, or village. *Charlotte Sanitation Department* is an example. *Charlotte* (a city) would be the first indexing unit. Next, index the most distinctive name of the department, board, bureau, office, or government/political division. In this case, *Sanitation* would be the most distinctive name of the department. The words *County of*, *City of*, *Department of*, *Office of*, etc., are retained for clarity and are considered separate indexing units. If *of* is not a part of the official name as written, it is not added as an indexing unit.



Data File

How are city government names indexed?

Examples of Rule 10A

Filing Segment		Indexing Order of Units				
Name	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5	
1. County of Alameda Aquatic Center	Alameda	County	of	Aquatic	Center	
2. City of Arlington Public Library	Arlington	City	of	Public	Library	
3. City of Arlington Senior Center	Arlington	City	of	Senior	Center	
4. Ashley County Department of Elections	Ashley	County	Elections	Department	of	
5. Augusta City Water Works	Augusta	City	Water	Works		
6. Baker County Bureau of Licenses	Baker	County	Licenses	Bureau	of	
7. City of Banks Water Department	Banks	City	of	Water	Department	
8. Barstow Municipal Court	Barstow	Municipal	Court			
9. Benton City Hall Benton, Georgia	Benton	City	Hall	Benton	Georgia	
10. Benton City Hall Benton, Tennessee	Benton	City	Hall	Benton	Tennessee	
11. Benton City Police Department	Benton	City	Police	Department		



RULE 10A: Self-Check

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column. The first name is shown as an example.

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
Ex.	Warren County Sheriff's Department		Warren	County	Sheriffs	Department	
a.	Douglas City Library						
b.	City of Douglas, Water Bureau						
c.	Douglas County Emergency Services						
d.	Douglas City, Human Resources Department						
e.	City of Douglas, Public Library						
f.	Douglas County, Public Works Department						
g.	Douglas City Hall						
h.	Douglas County Circuit Court						
i.	Douglas County, Youth Services Agency						
j.	Douglas County, Welfare Department						



Data File

How are state government names indexed?

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names in the Order column. (Do not include the example name in the order.)
3. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.

B. State Government Names

Similar to local and regional political/governmental agencies, the first indexing unit is the name of the state or province. Then index the most distinctive name of the department, board, bureau, office, or government/political division. The words *State of*, *Province of*, *Department of*, etc., are retained for clarity and are considered separate indexing units. If *of* is not a part of the official name as written, it is not added as an indexing unit.

Examples of Rule 10B

Filing Segment		Indexing Order of Units				
Name	Key Unit	Unit 2	Unit 3	Unit 4	Unit 5	
1. Michigan Office of Attorney General	Michigan	Attorney	General	Office	of	
2. Michigan Department of Civil Service	Michigan	<u>C</u> ivil	Service	Department	of	
3. Michigan Department of Community Health	Michigan	<u>C</u> ommunity	Health	Department	of	
4. Michigan Department of Education	Michigan	<u>E</u> ducation	Department	of		
5. Michigan Department of Environmental Quality	Michigan	<u>E</u> nvironmental	Quality	Department	of	
6. Michigan Lottery Commissioner	Michigan	<u>L</u> ottery	Commissioner			
7. Michigan Department of Natural Resources	Michigan	<u>N</u> atural	Resources	Department	of	
8. Michigan Superintendent of Public Instruction	Michigan	<u>P</u> ublic	Instruction	Superintendent	of	
9. Michigan Department of State	Michigan	<u>S</u> tate	Department	of		
10. Michigan State Police	Michigan	State	<u>P</u> olice			



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In records for states or provinces, the first indexing unit is the name of the state or province.



RULE 10B: Self-Check

1. Index each name in the table. Code the names by writing the units of the filing segment in the appropriate columns. (Note that units 5 and 6 are combined due to space limitations.)

	Filing Segment	Order	Key Unit	Unit 2	Unit 3	Unit 4	Units 5 and 6
a.	State of Hawaii, Department of Health						
b.	Washington State Department of Transportation						
c.	Washington State, Division of Child Support						
d.	Washington State, Office of the Governor						
e.	Washington State Penitentiary						
f.	Washington State Patrol						
g.	Washington State Senate, Judiciary Committee						
h.	Washington State, Department of Veterans' Affairs						
i.	Washington Secretary of State						
j.	State of Hawaii, Human Services Department						
k.	Hawaii State Public Library						
l.	Washington State History Museum						
m.	Washington State Law Library						
n.	Washington State, Office of Attorney General						
o.	Washington State Fire Marshal's Office						

2. Compare the units to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 15 beside the names in the Order column.

3. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.



Data File

C. Federal Government Names

Use three indexing “levels” (rather than units) for the United States federal government. Consider *United States Government* as the first level. The second level is the name of a department or top-level agency that is rearranged to show the most distinctive part first; for example, *Agriculture Department (of)*. Level three is the next most distinctive name; for example, *Forest Service*. The words *of* and *of the* are extraneous and should not be considered when indexing. These words are shown in parentheses for reference only. In the following examples, note that *United States Government* is the first level in all cases.

How are federal government names indexed?

Examples of Rule 10C

Filing Segment		
Level 1 United States Government		
Name	Level 2	Level 3
1. National Weather Service, Department of Commerce	<u>C</u> ommerce Department (of)	National Weather Service
2. Office of Civil Rights, Department of Education	<u>E</u> ducation Department (of)	Civil Rights Office (of)
3. Department of Health and Human Services	<u>H</u> ealth and Human Services Department (of)	
4. Office of Energy Assurance, Department of Homeland Security	<u>H</u> omeland Security Department (of)	Energy Assurance Office (of)
5. Bureau of Reclamation, Department of the Interior	<u>I</u> nterior Department (of the)	Reclamation Bureau (of)
6. Federal Bureau of Investigation, Department of Justice	<u>J</u> ustice Department (of)	Investigation Federal Bureau (of)
7. Federal Bureau of Prisons, Department of Justice	<u>J</u> ustice Department (of)	<u>P</u> risons Federal Bureau (of)
8. Global Affairs, Department of State	<u>S</u> tate Department (of)	Global Affairs
9. Federal Aviation Administration, Department of Transportation	<u>T</u> ransportation Department (of)	Federal Aviation Administration
10. Internal Revenue Service, Department of the Treasury	<u>T</u> reasury Department (of the)	Internal Revenue Service
11. Bureau of Public Debt, Department of the Treasury	<u>T</u> reasury Department (of the)	<u>P</u> ublic Debt Bureau (of)
12. National Cemetery Administration, Department of Veterans Affairs	<u>V</u> eterans Affairs Department (of)	National Cemetery Administration
13. Veterans Benefits Administration, Department of Veterans Affairs	<u>V</u> eterans Affairs Department (of)	<u>V</u> eterans Benefits Administration
14. Veterans Health Administration, Department of Veterans Affairs	<u>V</u> eterans Affairs Department (of)	Veterans <u>H</u> ealth Administration

What sources could you use to find information about the local government where you live?

Resources are available to help you find the correct department, bureau, division, or office of your local, state, or federal government. Several resources are listed here.

- Many cities and states have websites with government information. The city of Pittsburgh and the Commonwealth of Pennsylvania are two examples.
- Telephone directories list local, state, and federal government offices.
- The *United States Government Manual* (USGM) provides the correct hierarchical order of the departments, bureaus, offices, etc., within the government. You can find the link to the main page of the *United States Government Manual* at the website for this textbook.



RULE 10C: Self-Check

1. Index each name in the table. The first level of each name is *United States Government*. Code each name by writing the remaining levels of the filing segment in the appropriate column. The first name is shown as an example.

Filing Segment				
			Level 1 United States Government	
	Name	Order	Level 2	Level 3
Ex.	National Cemetery Administration, Department of Veterans Affairs		Veterans Affairs Department (of)	National Cemetery Administration
a.	National Park Service Department of the Interior			
b.	Marshals Service, Department of Justice			
c.	National Nuclear Security Administration, Department of Energy			
d.	Fish & Wildlife Service, Department of the Interior			
e.	Bureau of Land Management, Department of the Interior			
f.	Federal Bureau of Prisons, Department of Justice			
g.	Southwestern Power Administration, Department of Energy			
h.	Drug Enforcement Administration, Department of Justice			
i.	Bureau of Alcohol, Tobacco, Firearms, and Explosives, Department of Justice			
j.	Office of Fossil Energy, Department of Energy			

2. Compare the levels to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 10 beside the names. Do not include the example name in the order.
3. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.

D. Foreign Government Names

The name of a foreign government and its agencies is often written in a foreign language. When indexing foreign names, begin by writing the English translation of the government name on the document. The English name is the first indexing unit. Then index the balance of the formal name of the government, if needed, or if it is in the official name (China Republic of). Branches, departments, and divisions follow in order by their distinctive names. States, colonies, provinces, cities, and other divisions of foreign governments are followed by their distinctive or official names as spelled in English.

Examples of Rule 10D

Foreign Government Name	English Translation in Indexed Order				
	Name	Unit 1	Unit 2	Unit 3	Unit 4
1. Principat Andorra	Andorra	Principality	of		
2. Republik of Österreich	Austria	Republic	of		
3. Druk-yul	Bhutan	Kingdom	of		
4. Bundesrepublik Deutschland	Germany	Federal	Republic	of	
5. Jamhuri ya Kenya	Kenya	Republic	of		
6. Al-Joumhouriya al-Lubnaniya	Lebanese	Republic			
7. Fuerstentum Liechtenstein	Liechtenstein	Principality	of		
8. Republica Moldova	Moldova	Republic	of		
9. Mongol Uls	Mongolia				
10. Koninkrijk der Nederlanden	Netherlands				
11. Republica de Nicaragua	Nicaragua	Republic	of		
12. Republika ng Pilipinas	Philippines	Republic	of		
13. Dawlat Qatar	Qatar	State	of		
14. Al Jumhuriyah at Tunisiyah	Tunisian	Republic			

The *World Almanac and Book of Facts*, updated annually, includes facts and statistics on many foreign nations, and is helpful as a source for the English spellings of many foreign names. The Central Intelligence Agency (CIA) maintains an online World FactBook. The World Factbook provides information on the history, people, government, economy, geography, communications, transportation, military, and transnational issues for 266 world entities. Maps of the major world regions, as well as flags of the world, a physical map of the world, a political map of the world, and a standard time zones of the world map are provided on the site.¹ A link to this site is provided at the website for this textbook.

¹“The World Factbook,” Central Intelligence Agency, <<https://www.cia.gov/library/publications/the-world-factbook/index.html>> (accessed September 29, 2009).



Data File

How are foreign government names indexed?

What source will help you find the English spelling of a foreign country?



RULE 10D: Self-Check

1. Index the English translation of each name in the table. Code each name by writing the units in the appropriate columns.

Foreign Government Name	English Translation	Order	Key Unit	Unit 2	Unit 3
a. République de Guinée	Republic of Guinea				
b. Lietuvos Respublika	Republic of Lithuania				
c. Republika Hrvatska	Republic of Croatia				
d. República del Ecuador	Republic of Ecuador				
e. Nippon	Japan				
f. Azərbaycan Respublikası	Republic of Azerbaijan				



Data File

2. Compare the key units and the other units, if needed, to determine the correct alphabetic filing order for the names. Indicate the correct filing order by writing numbers 1 through 6 beside the names.
3. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.

Cross-Referencing Business Names

In Chapters 2 and 3, you prepared cross-references for seven of the nine types of business names that should be cross-referenced:

1. Compound names
2. Names that are abbreviations and acronyms
3. Popular and coined names
4. Hyphenated names
5. Divisions and subsidiaries
6. Changed names
7. Similar names

In this chapter, you will learn to prepare cross-references for the last two of the nine types of business names:

8. Foreign business names
9. Foreign government names

An explanation of the procedure to be followed in cross-referencing each of these types of names follows. The original record is stored in one place according to the alphabetic rules being used. A cross-reference is also made, if necessary, for any of the reasons discussed in Chapters 2 and 3.

As discussed earlier, a copy of the document may be stored in the cross-reference location or a cross-reference sheet may be prepared. Cross-reference sheets used with correspondence records are discussed in Chapter 6.

Career Corner



Job Description for Area Assistant (OA)

The following job description is an example of a career opportunity in records management with the U.S. government.

Job Summary

Join the team that is committed to helping improve the economy and quality of life in all of rural America! Through our programs, we touch rural America in many ways. Our financial programs support such essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service. We promote economic development by supporting loans to businesses through banks and community-managed lending pools.

Responsibilities

Incumbent provides clerical assistance such as providing information to applicants and borrowers on eligibility requirements for the various loan and grant programs administered; answering incoming inquiries; and preparing records, reports, and files. No travel is required. This position is not expected to last past one

year and may terminate sooner should funding not be available.

Key Requirements

- U.S. Citizenship is required.
- Relocation expenses will not be paid.
- Must type at least 40 words per minute.
- Good written and personal communication skills are required.
- Must be able to prioritize tasks and meet deadlines.
- Must maintain constructive and cooperative working relationships with others.
- Must be able to enter, store, retrieve, and maintain information effectively in paper and electronic/magnetic form.

Source: This job description was adapted from a posting on USAJOBS, the official job site of the U.S. federal government. A link to this website is provided at the website for this textbook.

Foreign Business Names

The original spelling of a foreign business or organization name is often written in the foreign language, which is then translated into English for coding. For example, *Universiteit van Amsterdam* is translated to *University of Amsterdam*. When working with foreign business names, take special note of the correct spellings and markings because they may differ greatly from the English form.

Write the English translation of the foreign business name on the document to be stored, and store the document under the English spelling. Prepare a cross-reference sheet using the foreign spelling as written in its native language, using the first word as the key unit. When a request for a record is written in the native language, the filer will find that a cross-reference sheet bearing the original spelling is an aid in finding the record. Two examples follow.

In what language is the original record of a foreign business name filed?

In what language is a cross-reference prepared for a foreign government name?

Coded Filing Segment

Cross-Reference

2
Humboldt / University

Humboldt-Universitat
SEE Humboldt University

2
Venezuelan / Line

2 3
Venezolana / de / Navegacion
SEE Venezuelan Line

Foreign Government Names

The name of a foreign government and its agencies, like the name of a foreign business, is often written in a foreign language. Write the English translation of the government name on each document to be stored. Store all documents under the English spelling. Prepare a cross-reference sheet using the foreign spelling as written in its native language, using the first word as the key unit. Two examples follow.

Coded Filing Segment

Cross-Reference

2 3 4
Federal / Republic / of / Brazil

2 3 4
Republica / Federativa / do / Brasil
SEE Brazil Federal Republic of

2 3
Kingdom / of / Bhutan

Druk-yul
SEE Bhutan Kingdom of



Cross-Referencing Self-Check

1. Identify the units in the filing segments (names). Code the English translation of the names by underlining the key unit, numbering the other units, and placing diagonal lines between the units.
2. Write cross-references for the names that require them.

	Foreign Name	English Translation	Cross-Reference
a.	Hotel Vier Jahreszeiten	Four Seasons Hotel	
b.	Repubblika ta' Malta	Republic of Malta	
c.	Socit��t�� Europ��ene des Satellite	European Society of Satellites	

	Foreign Name	English Translation	Cross-Reference
d.	Republica Bolivariana de Venezuela	Bolivarian Republic of Venezuela	
e.	Ristorante do Leoni	The Two Lions Restaurant	
f.	Kongeriket Norge	Kingdom of Norway	

3. The answers to this exercise are shown in the *Word file 4 Check Answers* found in the data files. Compare them with your answers.



Data File

Records Management in Action



Oregon Takes Action to Combat Identity Theft

Identity theft has become a major, widespread crime in the United States. Victims of identity theft suffer both emotionally and financially. They may have multiple unauthorized charges on credit cards and unauthorized withdrawals from their bank accounts. In addition, their credit scores can be adversely affected with related issues taking months or even years to resolve.

To address this growing problem, Oregon, which ranks thirteenth in the nation in identity theft crime, has passed the Identity Theft Protection Act (ITPA) to provide consumers with more tools to protect themselves. Under the new law, personal information includes an individual name combined with a Social Security number, driver's license number, Oregon identification card, financial, credit or debit card number with a security code, access code, or password that would allow access to financial records.

With the passage of the ITPA, Oregon businesses and government now have clear direction and expectations to ensure the safety of personal identifying information they possess. These organizations are required to develop, implement, and maintain safeguards to protect the security and confidentiality of the information. This includes proper disposal of the information.

The law requires any business, organization, or individual who maintains personal information to immediately notify victims or potential victims of a security breach. Victims can also place a security freeze on their credit record so that information cannot be accessed by potential creditors. Unless otherwise required by federal or state law, businesses and government agencies are also prohibited from printing individual Social Security numbers on documents that would be mailed, publicly displayed, or posted.

Source: "The Oregon Identity Theft Protection Act," Oregon.gov, <http://www.oregondfcs.org/id_theft.html> (accessed September 9, 2009).

In what situation would you find records grouped by subject in an alphabetic file?

SUBJECTS WITHIN AN ALPHABETIC ARRANGEMENT

Within an alphabetic arrangement, records may sometimes be stored and retrieved more conveniently by a subject title than by a specific name. Beware, however, of using so many subjects that the arrangement becomes primarily a subject arrangement with alphabetic names as subdivisions. A few typical examples of acceptable subjects to use within an otherwise alphabetic name arrangement are:

- **Applications.** All records pertaining to job openings are kept together under the job title. The job for which individuals are applying is more important than are the names of the applicants.
- **Bids or projects.** All records pertaining to the same bid or the same project are kept together under the project or bid title.
- **Special promotions or celebrations.** All records relating to a specific event are grouped together by subject.

The filing procedure for the subject storage method is explained in detail in Chapter 8. Its application in this chapter consists of writing the subject title on the record if it does not already appear there.

When coding a record, the main subject is the key unit. Subdivisions of the main subject are considered as successive units. The name of the correspondent (individual or company name) is considered last. For example, on all records pertaining to applications, the word *Applications* is written as the key unit. The specific job applied for is a subdivision of that main subject and is the next unit (*Assistant*, for example). The applicant's name is coded last.

Examples of Subject Within an Alphabetic Arrangement

Indexing Order of Units				
Key Unit	Unit 2	Unit 3	Unit 4	Unit 5
1. Applications	Assistant	Bianchi	Jason	
2. Applications	Assistant	Fung	Brenda	
3. Applications	Cashier	Corbett	Lucy	
4. Applications	Cashier	Jennings	Kenneth	
5. Applications	Data	Entry	Neally	Joyce
6. Applications	Data	Entry	Rodriguez	Luis
7. Applications	Records	Clerk	Adamson	Cody
8. Applications	Records	Clerk	Osuna	Jamella
9. Applications	Records	Clerk	Tisio	Angelo
10. Applications	Records	Supervisor	Kakazu	Nancy
11. Applications	Records	Supervisor	Wasserman	Robert
12. Applications	Records	Supervisor	Wu	Vivian
13. Applications	Sales	Representative	Fusilli	Brian
14. Applications	Sales	Representative	Gagliardo	Carmella
15. Applications	Sales	Representative	Gains	Sara

Chapter Review and Applications

KEY POINTS

- When filing identical names of persons, businesses, and organizations, filing is determined by the city names, state or province names, street names, and house or building numbers.
- Index local and regional governments first by the name of the government unit; then index the most distinctive name of the department, board, bureau, or office.
- Index state or province government names first by the name of the state or province. Next, index the descriptive name of the department, division, or office.
- Use three indexing levels for U.S. federal government names. The first level of indexing is *United States Government*. The second level is the department name; and the third level is the name of the bureau, service, administration, or office.
- Index the distinctive English name for foreign government names. Next, index the balance of the formal name of the government.
- Index the English translation of a foreign business name.
- Cross-reference foreign business or government names.
- Within an alphabetic file, subject files are appropriate for applications, bids or projects, and special promotions or celebrations.

REVIEW AND DISCUSS

1. Index and code the following names by underlining the key unit, numbering the other units, and placing diagonal lines between the units. Sort the names in alphabetic order for filing. Indicate the order for the names in the blank provided. (Obj. 1)
 - a. The Longview Times, Longview, Minnesota
 - b. The Longview Times, Longview, Texas
 - c. The Longview Times, Longview, Illinois
 - d. The Longview Times, Longview, North CarolinaOrder: _____
2. Index, code, and sort the following names as instructed in question 1. (Obj. 1)
 - a. Chad Davis, CRM, Ludlow, South Dakota
 - b. Dr. Chad Davis, Ludlow, South Dakota
 - c. Mr. Chad Davis, Ludlow, California
 - d. Chad Davis, CPA, Ludlow, VermontOrder: _____
3. Index, code, and sort the following names as instructed in question 1. (Obj. 1)
 - a. John Miller, 425 Mayberry Street, Independence, Oregon
 - b. John Miller, 145 Lakeshore Dr., Independence, Missouri
 - c. John Miller, 375 E. Washington Street, Independence, Kentucky
 - d. John Miller, 2650 Cedar Street, Independence, MissouriOrder: _____
4. When arranging city, county, province, or state government names, what are the key units? (Obj. 2)

5. Index, code, and sort the following names as instructed in question 1. (Obj. 2)
- City of Rice, City Manager, Rice, Texas
 - City of Rice, Police Department, Rice, Virginia
 - City of Rice, Fire Department, Rice, Minnesota
 - City of Rice, Mayor's Office, Rice, Washington

Order: _____

6. Index each name in the table. Code each name by writing each level of the filing segment in the appropriate column. Then indicate the correct filing order. Level 1 is the same for all names and has been recorded at the top of the table. (Obj. 2)

Level 1 United States Government				
	Name	Order	Level 2	Level 3
a.	Animal and Plant Health Inspection Service, Department of Agriculture			
b.	Oakland Operations Office, Environmental Protection Agency			
c.	Coast Guard, Department of Homeland Security			
d.	Export Administration, Department of Commerce			
e.	Maritime Administration, Department of Transportation			
f.	Bureau of Engraving and Printing, Department of the Treasury			
g.	Bureau of Public Affairs, Department of State			
h.	Department of the Navy, Department of Defense			
i.	Research, Education, and Economics Office, Department of Agriculture			
j.	Office of Vocational and Adult Education, Department of Education			

7. Index, code, and sort the following names as instructed in question 1.
(Obj 2)

- a. Board of Commissioners, Beaver County
- b. Information Technology Department, Beaver County
- c. Department of Emergency Services, Beaver County
- d. Community Services Department, Beaver County

Order: _____

8. Index, code, and sort the following names as instructed in question 1.
(Obj. 2)

- a. Illinois Department on Aging
- b. Office of Management and Budget, State of Illinois
- c. Illinois General Assembly
- d. Department of Labor, State of Illinois

Order: _____

9. Code the English translation and prepare the necessary cross-references for the names below. (Obj. 4)

	Filing Segment	Cross-Reference
a.	Respublika Byelarus' (Republic of Belarus)	
b.	Slovenska Republika (Slovak Republic)	
c.	Latvijas Republika (Republic of Latvia)	
d.	Preahreacheanacha Kampuchea (Kingdom of Cambodia)	

10. Why are subject categories sometimes used in an alphabetically arranged name file? Give two examples of subjects that might be found in an alphabetic file. (Obj. 6)

APPLICATIONS

4-1 Index, Code, and Sort Records (Objs. 1–5)

In this activity, you will practice using alphabetic indexing rules 9–10.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
1.	Royaume de Belgique (French) Koninkrijk Belgie (Dutch) Kingdom of Belgium						
2.	Minority Business Development Agency, Department of Commerce (federal government)						
3.	Emergency Services Department, Allegany County						
4.	Ashland City Hall, Ashland, Wisconsin						
5.	Colorado Commissioner of Education						
6.	Rural Utilities Service, Department of Agriculture (federal government)						
7.	Colorado Community College System						
8.	Ashland City Hall, Ashland, Oregon						
9.	Patent & Trademark Office, Department of Commerce (federal government)						
10.	Board of Commissioners, Allegany County						
11.	Colorado Office of Information Technology						
12.	Ashland City Hall, Ashland, Maine						
13.	Zhonghua Renmin Gongheguo (People's Republic of China)						

continued next page

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
14.	Ashland City Hall, Ashland, Nebraska						
15.	Colorado Department of Revenue						
16.	Environmental Management, Department of Energy (federal government)						
17.	Fiscal Services, Allegany County						
18.	Colorado State Parks						
19.	Ashland City Hall, Ashland, Kentucky						
20.	Centers for Disease Control and Prevention, Department of Health & Human Services (federal government)						

- Determine which names should be cross-referenced. Then complete the cross-reference blanks, numbering each card with its original number plus X. See the example.
- Add the names to the table. Then alphabetize all the names by numbering them in the Order column.

2 3

53X Zhonghua / Renmin / Gongheguo
SEE China Peoples Republic of

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

4-2 Index, Code, and Sort Records (Objs. 1–5)

In this activity, you will practice using alphabetic indexing rules 9–10.

1. Index each name in the table. Code each name by writing each unit or level of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
1.	Al Mamlakah al Arabiyah as Suudiyah (Kingdom of Saudi Arabia)						
2.	Texas Department of Criminal Justice						
3.	Shelby Fire Department, Shelby, Alabama						
4.	Records Clerk Applications, Heather Zane						
5.	Board of Supervisors, Washington County						
6.	Office of Disability Employment Policy, Department of Labor (federal government)						
7.	Records Clerk Applications, Tom Snell						
8.	Shelby Fire Department, Shelby, North Carolina						
9.	Texas Courts of Appeals						
10.	Department of Elections, Washington County						
11.	Konungariket Sverige (Kingdom of Sweden)						
12.	Political Affairs, Department of State (federal government)						
13.	Records Clerk Applications, Angela Berg						

continued next page

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
14.	Shelby Fire Department, Shelby, Indiana						
15.	Office of the Governor, Texas						
16.	Emergency Services, Washington County						
17.	Records Clerk Applications, Elias Boljuncic						
18.	Texas Educator Certification						
19.	Bureau of Public Debt, Department of the Treasury (federal government)						
20.	Records Clerk Applications, Pei-Fang Hung						
21.	Shelby Fire Department, Shelby, Mississippi						
22.	Research & Innovative Technology Administration, Department of Transportation (federal government)						
23.	Records Clerk Applications, Leslie Strickland						
24.	Community Development Program, Department of Agriculture (federal government)						
25.	Shelby Police Department, Shelby, Ohio						

2. Determine which names should have cross-references. Using the cross-reference blanks, write the number of the original name plus an X. Then write the cross-reference.

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

3. Add the names you prepared as cross-references to the bottom of the table with the other names. Code the cross-reference names by writing each unit/level in the appropriate column.
4. Compare the key units/levels and the other units/levels, if needed, to determine the correct alphabetic filing order for the names, including the cross-references. Indicate the correct filing order by writing numbers beside the names in the Order column.

4-3 Index and Sort Records For Rule 10 (Obj. 2)

In this exercise, the foreign government names are followed by the English translation in parentheses. Are the names in each of the pairs in correct alphabetic order according to the English translation? If the order is correct, write Yes in the blank by the names. If the order is not correct, write No in the blank.

- _____ 1. a. Reino de Espana
(Kingdom of Spain)
- b. Confederation Suisse
(Swiss Confederation)
- _____ 2. a. Qazaqstan Respublikasy
(Republic of Kazakhstan)
- b. Ozbekiston Respublikasi
(Republic of Uzbekistan)
- _____ 3. a. Konungariket Sverige
(Kingdom of Sweden)
- b. Repubblica Italiana
(Italian Republic)
- _____ 4. a. Suomen Tasavalta
(Republic of Finland)
- b. Republica del Paraguay
(Republic of Paraguay)
- _____ 5. a. Magyar Koztarsasag
(Republic of Hungary)
- b. Mr. Daniel L. Gerson
(Republic of Chile)
- _____ 6. a. Republica de Guatemala
(Republic of Guatemala)
- b. Jumhuriyat al-Iraq
(Republic of Iraq)

4-4 Index, Code, and Sort Records for Rules 1–10 (Objs. 1–5)

In this activity, you will practice using alphabetic indexing rules 1–10 to index, code, and sort names such as those that would be found on paper documents.

1. Index each name in the table. Code each name by writing each unit of the filing segment in the appropriate column.

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
1.	Mr. Bruce Unger Springfield, Oregon						
2.	Rev. Charles Rodgers						
3.	Quisenberry's Department Store						
4.	St. John Police Department						
5.	Tunes 2 Go						
6.	1 Stop Quik-Lube						
7.	Department of Homeland Security (federal government)						
8.	Tennessee Supreme Court						
9.	Resource One, Inc. Pembroke, Maine						
10.	Southwest Christian Church						
11.	Ms. Shannon Quezada-San Carlos						
12.	Mr. Bruce Unger Springfield, Illinois						
13.	Mr. Albert Tunno, CRM						
14.	Dr. Charles Rogers						
15.	Stewart & Tunno Insurance Agency						
16.	Queen Noor						

continued next page

	Filing Segment	Order	Key Unit or Level 1	Unit 2 or Level 2	Unit 3 or Level 3	Unit 4	Unit 5
17.	Department of Agriculture Forest Service (federal government)						
18.	Tennessee State University						
19.	Ms. Shannon SanCarlos, CPA						
20.	Resource One, Inc. Pembroke, Kentucky						
21.	Xiao-Guang Qi						
22.	South Carolina State Police						
23.	State of Tennessee, Governor						
24.	Department of the Interior Bureau of Indian Affairs (federal government)						
25.	Rogers Machinery, Inc.						

2. Determine which names should have cross-references. Using the cross-reference blanks, write the number of the original name plus an X. Then write the cross-reference.

Cross-Reference

Cross-Reference

Cross-Reference

Cross-Reference

3. Add the names you prepared as cross-references to the bottom of the table with the other names. Code the cross-reference names by writing each unit/level in the appropriate column.
4. Compare the key units/levels and the other units/levels, if needed, to determine the correct alphabetic filing order for the names, including the cross-references. Indicate the correct filing order by writing numbers beside the names in the Order column.

4-5 Create and Query a Database (Obj. 6–7)

You have been hired as records clerk for a new Catchy-Containers store scheduled for opening in the spring. The store owner has asked you to create a database table to keep track of all the people who have applied for jobs.



Access Activity

1. Open *Access* and create a new database named *4-4 Applicants*.
2. Create a table named *Applicants* with the following fields: *Date*, *Position*, *First Name*, *Last Name*, *Phone*. Select *Date* as the field type for the *Date* field. Select *Text* as the field type for the other fields. Select the *Phone* field as the primary key.
3. Enter the following information into the table. Enter the current year in the dates (instead of 20--).

Date	Position	First Name	Last Name	Phone
1/3/20--	Cashier	Jennifer	Smith	541-555-0101
1/4/20--	Stocker	Forrest	Bayly	541-555-0122
1/4/20--	Cashier	Susan	Mcintyre	541-555-0131
1/5/20--	Manager	Barry	Gamble	541-555-0125
1/5/20--	Cashier	Joshua	Neslund	541-555-0030
1/6/20--	Stocker	Erin	Gonzales	541-555-0127
1/6/20--	Manager	Laura	Reynolds	541-555-0129
1/7/20--	Cashier	Amy	Pederson	541-555-0124
1/7/20--	Cashier	Serena	Worcester	541-555-0126
1/7/20--	Stocker	Philip	Raymond	541-555-0133
1/8/20--	Cashier	Bryan	Crider	541-555-0108
1/8/20--	Manager	Sara	Reyes	541-555-0115
1/8/20--	Stocker	Lauren	Hurst	541-555-0128
1/9/20--	Manager	Jennifer	Smith	541-555-0154
1/9/20--	Stocker	Tom	Reitz	541-555-0114
1/9/20--	Cashier	Kelly	Tumpane	541-555-0111

4. Even when a database contains identical names, retrieving the correct record is easy when a unique field is used to identify records. In this database, the *Phone* field is the unique field/primary key. The store owner said to you, “I need to return a call from an applicant, but the message has only her first name and phone number: 541-555-0154. What is the applicant’s full name and for what position did she apply?” Use the *Find* feature with the *Applicants* table to find this information.
5. The owner has asked you to create a list of applicants sorted in ascending order first by the position and then by the last name. Create a query based on the *Applicants* table. In the query results, display all fields and sort the data as requested. Save the query as *Position Sort Query*. Run the query and print the results table.

4-6 Research the Federal Executive Branch

Earlier in this chapter, you reviewed the *Word* file *4 Government* found in the data files. You learned that the three branches of state and federal government are Executive, Legislative, and Judicial. In this activity, you will research one aspect of the executive branch of the federal government.

1. Access the Internet and go to the website for this textbook. Find the links for this chapter. Follow the link to the Federal Executive Branch site.
2. Work as a team with another student to answer the following questions:
 - a. What is one of the principal purposes of the President's Cabinet?
 - b. How many members does the current Cabinet include?
 - c. What are the names of the executive departments within the Cabinet? What are the names of the current secretaries of those departments?
 - d. What is the primary responsibility of the Secretary of Defense? Of the Secretary of Transportation?
3. Share your findings as your instructor directs.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 3 Alphabetic Filing Rules 9-10

Continue working with Auric Systems, Inc.
Complete Job 3.

For More Activities Go To:
www.cengage.com/officetech/read

Electronic File Management

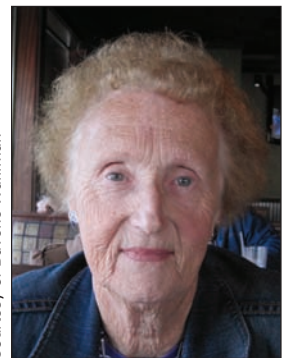
LEARNING OBJECTIVES

1. Describe elements found in an electronic database.
2. Find and sort data in an electronic database.
3. Describe how databases can be used in records management and e-commerce.
4. Describe the differences in how records are sorted manually and by computers.
5. Describe the life cycle for electronic records.
6. Describe and apply electronic file management.

ON THE JOB

Davene Walliman is a retired temporary clerical employee who works part time for Oregon's Employment Department. During her career spanning almost fifty years, Davene has seen changes in the filing systems from paper and punch cards to microfiche and then to electronic and image files. Her advice to students studying records management is to "eliminate paper."

Courtesy of Davene Walliman



Davene's first job with the State of Oregon was data entry. She converted paper records to punch cards. The punch cards were then processed by a main frame computer to print checks. In the next phase of her career, Davene transferred magnetic tape to magnetic disk, part of data migration so the data could be read by new technology.

When Davene was an executive assistant, she learned to use a personal computer. Documents were then electronic, although the paper records were still filed. The filing system used subject codes. She followed the retention schedule and disposed of records when needed.

Currently, Davene's job duties include the scanning of documents into images. The images are part of an enterprise content management (ECM) system. Other workers can access the images to look up information, and the images are authentic. Davene's reputation as a fast, accurate, and timely worker is a result of her strong work ethic.

Printed with permission of Davene Walliman.

ELECTRONIC DATABASES

Sorting data and records in electronic files and organizing electronic files and folders are important aspects of managing electronic records. Electronic files, also called records, can be created using many software applications. You have probably created electronic files using word processing, spreadsheet, and presentation programs. If you completed the applications for Chapters 2, 3, and 4, you have created or edited electronic files using a database program, *Microsoft Access*[®]. As with paper records, electronic files should be managed so the data can be retrieved quickly when needed. In Chapters 2, 3, and 4, you focused on learning alphabetic indexing rules for use in indexing, coding, sorting, and storing paper records. In this chapter, you will learn about how computers sort electronic data and how to organize electronic files.

An electronic **database** is a collection of related data stored on a computer system. The data can be used with various applications but managed independently of them. For example, records in a database that contain names and addresses can be used to create personalized letters with a word processing program. Databases are organized especially for rapid search and retrieval of specific data. People have been using databases on large mainframe computers for over 50 years. A variety of database programs are available for personal computers as well. *Microsoft Access* is a popular database program and is typical of modern database programs.

Database Elements

A database contains **tables** that hold the data. Data in a table is organized in fields and records. A **field** is a set of one or more characters treated as a unit of information. The combination of characters forms words, numbers, or a meaningful code. For example, your first name, middle name, and last name could each be entered in a separate field. Your date of birth, Social Security number, telephone number, the year you started school, and the month and year you finished high school are all examples of facts about you. Each fact could be entered in a separate field.

All the fields related to one person or organization make up a **record** (sometimes called a *computer record* to distinguish it from a paper record). Records related to one subject or topic (customers, students, orders) are usually stored in one or more related tables. A database can also contain several other objects such as forms and reports. Figure 5.1 shows a database created with *Microsoft Access*.

A field has a unique name and a specified number of characters, and it contains a defined type of information. Commonly used field types are text fields (sometimes called alphanumeric fields for letters, numbers, symbols, and punctuation) and number fields (for numbers, punctuation characters, and symbols). Other typical field types are date fields, logical fields, and memo fields.



database: a collection of related data stored on a computer system

table: a database object that contains fields that hold data

field: a set of one or more characters treated as a unit of information

record (computer record): a set of fields in a database table that relate to one person, object, or organization

FIGURE 5.1 Access Database Table

Fields are arranged in columns

Records are arranged in rows

First Name	Last Name	Student ID	Class
Mary	Roberts	123456789	Records Management
Kim	Yung	321654987	Records Management
Dan	Waterbury	456123789	Records Management
Roberto	Tomas	556421378	Records Management
Janet	Worley	654987321	Records Management
Robert	Smith	789456123	Records Management
▶ Andrea	Wilson	987654321	Records Management
*			

Record: 7 of 7

When using database software, the user can assign a field as a primary key. The database will not allow the same data to be entered in the primary key field for two or more records. The primary key creates a unique identifier for each record. For example, when you change a service to your telephone, the person making the change asks for your phone number (which is unique to you). Your phone number is entered as the search criteria in the database. The database then finds and displays your personal information.

Word processing and spreadsheet software can contain simple databases. A relational database program such as *Microsoft Access*, *MySQL*[®], or *Oracle*[®] allows more flexibility in working with the information in the database. When a document is set up in database form with fields (whether the document is in a word processing, spreadsheet, or database program) sorting on any field is possible. The procedures vary depending on the software. Usually a field or column is selected. The type of sort is defined: ascending (A–Z, 1–10) or descending (Z–A, 10–1). The sort command is carried out, and the list is placed in alphabetic or numeric order by the chosen field. Several words can be entered in the same field and the correct alphabetic order is maintained.

Finding Information in a Database

Finding a specific piece of information in a database is easy. Use the Find feature to enter the data you want to find such as a name, address, or phone number. Tell the database to search all fields or selected fields, give the command to start the search, and the information will display on the screen within seconds. What if you don't know the exact name you wish to find? In this case, you can enter the first few letters of the last name. When that information displays on the screen, scroll through the records until you find the correct one. You may need other information to validate that the name is the correct one.

Can you use a word processing program to create a database?

On which field can you sort data?

A database is useful for sorting various fields alphabetically. As you learned in Chapters 2, 3, and 4, an alphabetic listing of customer names makes it much easier to look up a particular customer. Database software can sort records using fields in a database. If you want to sort the database by the city in which customers live, simply sort on the City field. If you want to sort the database by the Postal Code for a large customer mailing, sort on the Postal Code field. If you want to sort the database by the city then alphabetically by customer, the database will return this information with the proper query. Remember that the purpose of sorting data is for retrieval—finding and using information again. A **query** is a database object used to instruct the program to find specific information. For example, Figure 5.2 shows the design view of a query in *Microsoft Access* and the resulting query table.

Figure 5.3 on page 133 shows a portion of a report based on the query shown in Figure 5.2. Customers are grouped alphabetically by city, and then sorted by name. Queries also help a user summarize information. For example, a video store has a database of customer names, addresses, phone numbers, video rentals organized by types of movies, and the dates of rentals. The store manager wants to know which category of movies had the most rentals last month. The query would ask the database to sort the Movie Category field, and then identify the beginning and ending dates of the last month in the Date Rented field. The database would return a list of customers in sorted order by the Movie Category field for the last month.

.....
query: a database object used to instruct the program to find specific information

FIGURE 5.2 Query in Design View

The screenshot displays two windows from Microsoft Access. The top window, titled 'City Sort : Select Query', shows a 'Query Results Table' with the following data:

City	First Name	Last Name	Title
Aloha	Kelly	Arnold	Mrs.
Aloha	Denise	Little	Ms.
Aloha	Basil	Rathbone	Mr.
Beaverton	Bonnie	Bowlsby	Ms.
Beaverton	Evelyn	Deetz	Mrs.
Beaverton	Ed	Kale	Mr.
Beaverton	Rebecca	Kimsey	Ms.
Beaverton	Timothy	Read	Mr.
Gladstone	William	Clarkson	Mr.
Gladstone	Darlene	Manning	Mrs.
Gladstone	Janet	Nelson	Ms.
Portland	Camille	Lily	Ms.
Portland	Barbara	Rodriquez	Mrs.
Tigard	Todd	Miller	Mr.
Tigard	Rodney	Simmons	Mr.

The bottom window, also titled 'City Sort : Select Query', shows the 'Query in Design View' for the 'Mailing List' table. The design grid is as follows:

Field:	City	FirstName	LastName	Title
Table:	Mailing List	Mailing List	Mailing List	Mailing List
Sort:	Ascending		Ascending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

Query in Design View

FIGURE 5.3 Access Report

City Sort			
City	Last Name	First Name	Title
Aloha	Arnold	Kelly	Mrs.
Aloha	Little	Denise	Ms.
Aloha	Rathbone	Basil	Mr.
Beaverton	Bowlsby	Bonnie	Ms.
Beaverton	Deetz	Evelyn	Mrs.
Beaverton	Kale	Ed	Mr.
Beaverton	Kimsey	Rebecca	Ms.
Beaverton	Read	Timothy	Mr.
Gladstone	Clarkson	William	Mr.
Gladstone	Manning	Darlene	Mrs.
Gladstone	Nelson	Janet	Ms.
Portland	Lily	Camille	Ms.
Portland	Rodriquez	Barbara	Mrs.
Tigard	Miller	Todd	Mr.
Tigard	Simmons	Rodney	Mr.

How could this information be used? The store manager could count the number of rentals for a specific category of movie. If comedies were rented more often than dramatic movies, the manager could obtain more comedies. Keeping track of the rental dates will help the store manager know which days are the busiest. Would you guess Fridays and Saturdays? The database will return a listing of days of the week so that the store manager has solid data to use in making decisions.

Using Databases in Records Management and E-Commerce

Many records departments create a database index of their paper and/or non-paper records. For example, a database is created that contains the names, addresses, and telephone numbers of customers of the symphony. An electronic database allows rapid creation of mailing labels to notify customers of special concerts or other events to help generate more sales.

In Chapter 1 you learned about e-commerce and how RIM professionals work with IT professionals to manage electronic records created via the Internet. E-commerce is another way of doing business using electronic resources. Most large organizations have a web presence and many allow some type of dynamic interaction with the visitors to their websites. The dynamic interaction usually involves filling out a form, clicking the Send button, and receiving some type of response on the web page.

HTML (HyperText Markup Language) is the language that Internet browsers (such as *Microsoft® Internet Explorer* or *Mozilla Firefox®*) interpret

What is the relationship between a form on a web page and an organization's database?

Career Corner



Certified Records Manager

CRM Exam

The Certified Records Manager (CRM) professional designation is conferred on candidates who have passed the six-part test administered by the Institute of Certified Records Managers. The examination is offered twice a year, and candidates must apply to take the exam. A candidate's educational background and professional work experience is also taken into consideration for the CRM.

Exam Parts

Parts 1–5 of the examination include 100 multiple choice questions on each part. The passing score for each part is 70 percent. Each part contains different subject matter and the broad categories are listed here.

- Management principles and the records and information program
- Records creation and use
- Records systems, storage, and retrieval
- Records appraisal, retention, protection, and disposition
- Facilities, supplies, and technology

The last part, Part 6 Case Studies, is taken after the candidate has passed the first five parts.

Benefits

Earning the right to use CRM as a professional title is a respected and professional accomplishment. People with a CRM designation usually have a higher salary than those in similar jobs who do not. The Institute of Certified Records Managers website lists jobs for which the CRM designation is required.

and display. The server computer that houses the web pages sends instructions from the HTML document to web server application software which in turn queries or displays the database.

The application server software acts as a translator between the form on the web page and the data in the database. Filling out a form and clicking the Send button causes the server application software to create a new record in the database. If you signed up for an electronic newsletter, for example, a record is created indicating your e-mail address. When the newsletter is sent the next time, you will receive a copy in your e-mail inbox. If you change your e-mail address, you fill out another form on the web page. Clicking on the Send button updates your record in the database.

If you were to contact the organization in person or over the phone, the customer service representative would access the same database. Your record would be found by searching using a unique field. In the case of the newsletter example, the unique field would be your e-mail address.

A bigger role for databases in e-commerce is played when the actual transaction for services or merchandise is completed. The dynamic form on the web page not only accesses the database, but also starts the procedure for products to be “picked” off the warehouse floor, sent to shipping, and then

sent to the customer. The payment part of the transaction is completed via electronic fund transfer (EFT). The customer receives the product and a credit card is charged for the amount of the product. The customer receives a credit card statement showing the bill for this product.

HOW COMPUTERS SORT DATA

A computer performs sorting operations quickly and can store a great amount of data in a small space. It pays great attention to detail and can retrieve information faster and more accurately than humans if the input is accurate. You should be aware, however, that computers sort data differently than you would sort records manually. When you sort records manually, you look at each letter, number, or symbol. You understand each one to have a different meaning. When sorting, for example, you know that key indexing units that begin with numbers are placed before key indexing units that begin with letters. You know that the letter *A* comes before the *E*. Computers understand only numbers. Computer programs use character codes to represent the symbols, numbers, and letters in the data you enter.

Character Standards

In Chapter 1 you learned about the International Organization for Standardization (ISO). The American National Standards Institute (ANSI) is a member of the ISO. Remember that the volume of information is growing. Standards help all computers interpret data in the same way. Data standards work on the computer so that it is readable on all machines using the English language or any other language. As more information is displayed on the Internet, standardization is even more important to global communication.

For the United States, ANSI uses the American Standard Code for Information Interchange (**ASCII**, pronounced “Ask E”) for compliance to the ISO standard. ASCII is a character code that was developed as a standard and logical way to recognize character data on computers. ASCII assigns specific numeric values to the first 128 characters of the 256 possible character combinations. ANSI, an expanded version of the code, is used for other characters. Notice the order of the decimal numbers and the ASCII characters in Figure 5.4 on page 136.

Each character you enter in an electronic record is represented by a unique number in the character code. For example, in ASCII, the code number for letter *C* is 67. The code number for letter *W* is 87. When a computer program sorts data, it uses the character code numbers assigned to the symbols, numbers, and letters you have entered. The resulting sort order may be quite different from the way you would sort the same records manually.

The Company Name Computer Sort column of Figure 5.5 on page 137 shows a computer sort of example names. The names were keyed into the computer as they were written. The Indexing Order Manual Sort column shows the same list of names (with no punctuation) keyed in indexing order (as would be used for manual filing) and sorted. Notice the difference in the

According to the ASCII values, which comes first—an uppercase *A* or a lowercase *a*?



ASCII: a character code that was developed as a standard and logical way to recognize character data on computers

FIGURE 5.4 ASCII Values Chart

Decimal Number	ASCII Character	Decimal Number	ASCII Character	Decimal Number	ASCII Character
*32	Space	64	@	96	`
33	!	65	A	97	a
34	"	66	B	98	b
35	#	67	C	99	c
36	\$	68	D	100	d
37	%	69	E	101	e
38	&	70	F	102	f
39	'	71	G	103	g
40	(	72	H	104	h
41	)	73	I	105	i
42	*	74	J	106	j
43	+	75	K	107	k
44	,	76	L	108	l
45	-	77	M	109	m
46	.	78	N	110	n
47	/	79	O	111	o
48	0	80	P	112	p
49	1	81	Q	113	q
50	2	82	R	114	r
51	3	83	S	115	s
52	4	84	T	116	t
53	5	85	U	117	u
54	6	86	V	118	v
55	7	87	W	119	w
56	8	88	X	120	x
57	9	89	Y	121	y
58	:	90	Z	122	z
59	;	91	[	123	{
60	<	92	\	124	|
61	=	93	]	125	}
62	>	94	^	126	~
63	?	95	_	127	DEL

*The first 31 decimal numbers are reserved for non-printing characters, sometimes known as control characters.

order of the examples. What causes the difference? Part of the difference is due to placing the names in indexing order. Part of the difference is due to the way computers sort data.

FIGURE 5.5 Comparison of Sort Orders

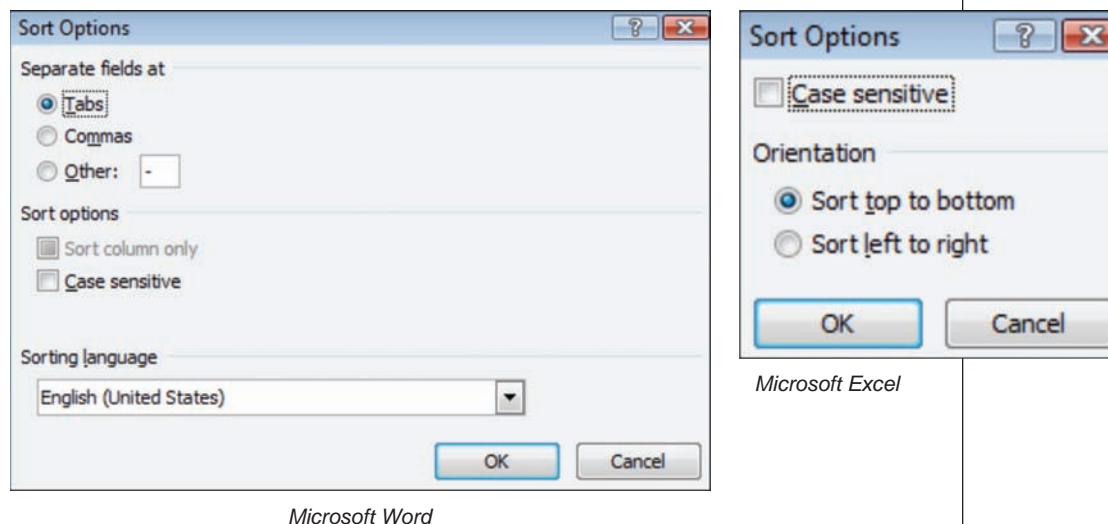
Company Name	Computer Sort	Indexing Order	Manual Sort
# Off Diet Center		3 Rs Nursery School	
\$ Value Store		26 Highway Service	
"A-OK" Smart Shop		405 Shopping Center	
26 Highway Service		AOK Smart Shop	
3 Rs Nursery School		Dollar Value Store	
405 Shopping Center		Labelle Fashion Boutique	
LaBelle Fashion Boutique		Larrys Restaurant	
Larry's Restaurant		Pounds Off Diet Center	

Sort Order

When you manually sort a list of names, you look at the letters to determine the order. When a computer sorts data, it reads each character as a value in the character code. Because these values are numbers, the computer places the lowest value, or number, first. The sort order will depend on the character code used by the computer and possibly on other settings that have been selected. For example, some computer applications ignore the case of letters when sorting. *Microsoft Word* and *Microsoft Excel*[®] have options the user can set to determine whether the sort is case sensitive. The default setting is no checkmark in the case sensitive box. Figure 5.6 shows the options for selecting *Case Sensitive* for sorting in *Word* and in *Excel*. *Access* ignores the case when sorting on a particular field. If *Access* encounters two identical values, for example, one uppercase and the other lowercase, *Access* lists them in the order in which they were entered. For example, if a record with the value **jones** in the Last Name field was entered before a record with the value **Jones** in the same field, the record containing **jones** will be displayed before the record containing **Jones**.

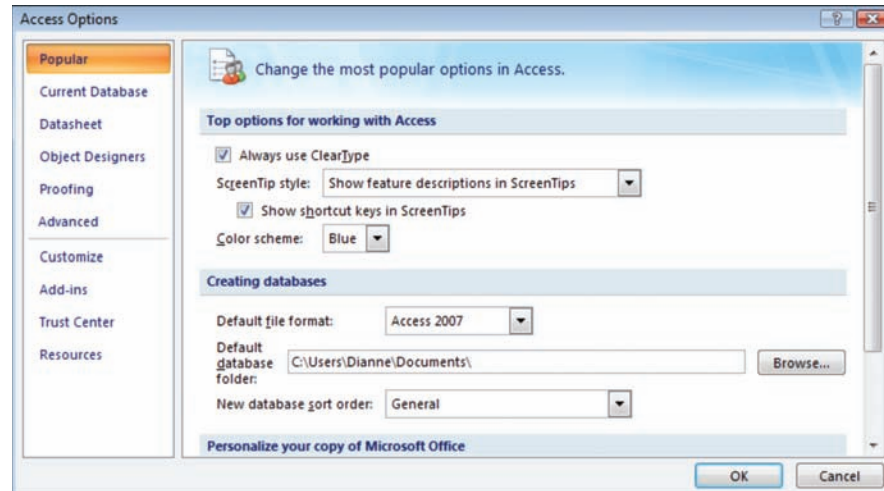
Why is Case Sensitive not checked in either *Word* or *Excel*?

FIGURE 5.6 Word and Excel Provide an Option to Make a Sort Case Sensitive.



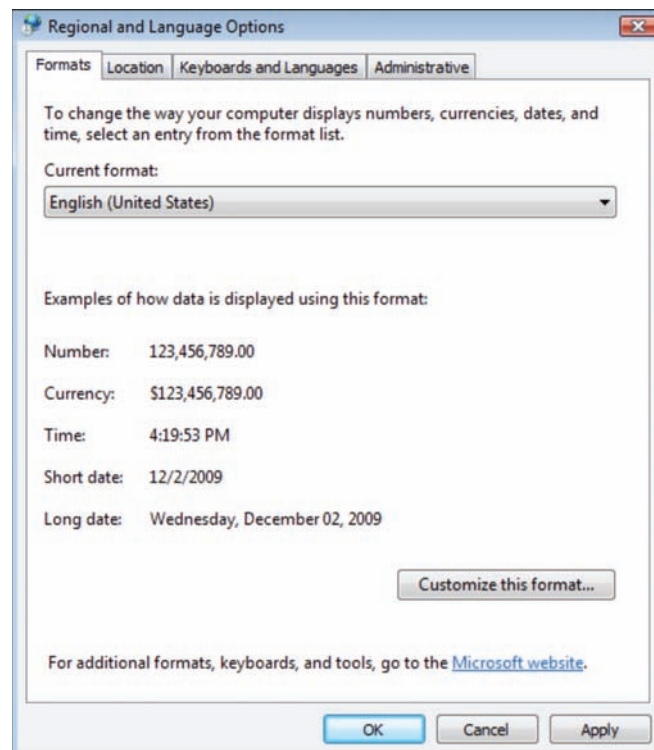
In *Access*, the user can select a default sort order for a new database. The option selected will affect how data is sorted. The *General* option, shown in Figure 5.7, is appropriate for a variety of languages, including English.

FIGURE 5.7 New Database Sort Option in Access



The sort order of electronic data can be affected by general settings selected for the computer. For example, for computers that use the *Microsoft Windows*® operating system, settings can be selected on the Regional and Language Options in the Control Panel as shown in Figure 5.8.

FIGURE 5.8 Regional and Language Options Tab



Other Sorting Differences

When you are entering records for computerized storage, careful attention to detail and knowledge of how a computer processes data are important points to remember. You have learned that computers sort records in a particular way depending on the character code used and other settings specified by the user. This section points out some other specific differences you may find between how a computer sorts records and how the records would be sorted for manual filing.

Titles and Suffixes

Names with titles and suffixes are indexed for paper records according to Rule 5, Chapter 3. Numeric suffixes (I, II) are filed before alphabetic suffixes (CPA, Jr., Sr.). The computer reads Roman numerals as letters and sorts them after numbers. Figure 5.9 shows examples of names with suffixes sorted by a computer and sorted for manual filing. Note the differences in the sort order. In Example 1, CPA is filed before Roman numeral II.

FIGURE 5.9 Comparison of Sort Order for Suffixes

Example 1 Computer Order			Example 2 Manual Order		
Last Name	First Name	Title/Suffix	Last Name	First Name	Title/Suffix
Jones	Allen	CPA	Jones	Allen	II
Jones	Allen	II	Jones	Allen	III
Jones	Allen	III	Jones	Allen	CPA
Jones	Allen	Jr	Jones	Allen	Jr
Jones	Allen	Mayor	Jones	Allen	Mayor
Jones	Allen	Mr	Jones	Allen	Mr
Jones	Allen	Sr	Jones	Allen	Sr

Numbers in Business Names

As mentioned earlier, a computer program may not sort numbers in a text field in consecutive order. Most people know that 2 comes before 10 in a listing of numbers. To a computer, which reads from left to right, 1 comes first, then 10 through 19, then 2, followed by 20 through 29, continuing to 99. Be aware that numbers in text fields may not sort in consecutive order. However, numbers in a database number field can be sorted in consecutive order.

Numbers in a database such as customer IDs, invoice numbers, or product numbers are sometimes keyed with **leading zeros** so that all numbers are the same number of digits and can be sorted consecutively even in a text field. This works well with numbers a company can control or assign. Figure 5.10 on page 140 shows examples of numbers with and without leading zeros.

How does a computer sort Roman numerals?

How many leading zeros are entered for the number 7 in a list containing numbers 10, 505, and 1330?



leading zeros: zeros keyed at the beginning of a number so that all numbers in a group are the same number of digits

FIGURE 5.10 Comparison of Sorted Numbers with and without Leading Zeros

Example 1 Without Leading Zeros		Example 2 With Leading Zeros	
Customer ID (Text field)	Last Name	Customer ID (Text field)	Last Name
1	Allen	001	Allen
11	Jones	002	Thomas
111	Perez	011	Jones
2	Thomas	022	Leon
22	Leon	111	Perez
222	Chin	222	Chin

Spacing and Punctuation

When filing paper records, spaces are disregarded in some situations. For example, in last names such as *De La Torres* or *Van de Hoef*, the spaces are disregarded when filing paper records. When keying these names in computer records, the spaces will be considered and the filing order will be different than it would be for paper records.

When filing paper records, punctuation is disregarded in determining filing order. When records are keyed in a database, punctuation is not ignored. Therefore, the same names will sort in a different order than that used for manual filing of paper records.

When filing paper records, the word *The* at the beginning of a business name is considered the last indexing unit. When keying such a name in a computer database, the name stays in its original order with *The* as the first word. Therefore, the same names will sort in a different order than that used for manual filing of paper records.

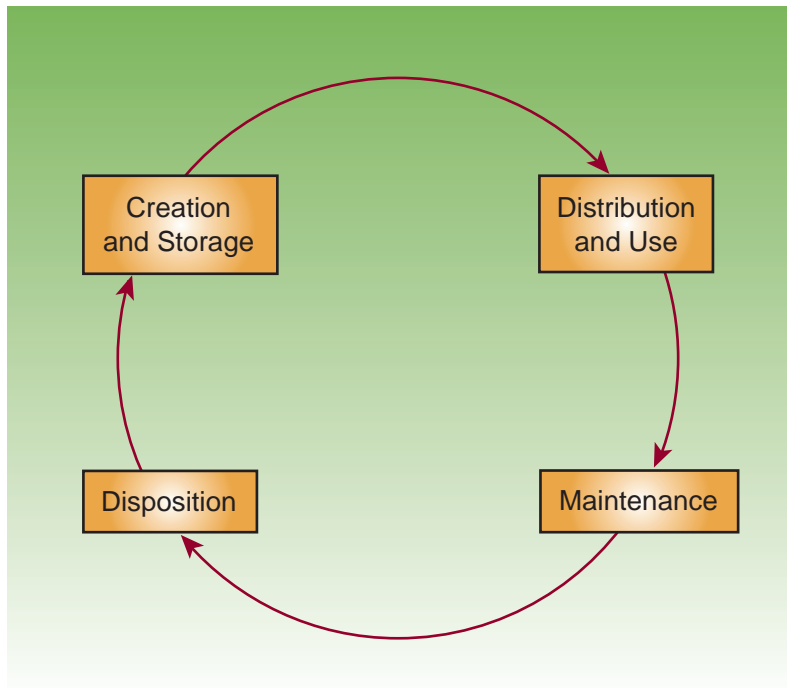
Indexes for Paper Records

In some cases, you may want to change the way you enter records into a computer to achieve the same sorted order as when related paper records are sorted. For example, you might have an index of company names in an electronic database that corresponds to paper records. In this case, you might want the electronic index to show the same sort order as that used for the paper records. An easy way to achieve this would be to add an Indexing Order field to the database table. The company name would be entered in the Company Name field as it is written. This field would be used for tasks such as creating mailing labels where the name should appear as written. In the Indexing Order field, the name would be keyed in indexing order according to manual filing rules. When sorted electronic records are needed to match sorted paper records, the Indexing Order field can be used for the sort.

ELECTRONIC RECORD LIFE CYCLE

Electronic records are being created at an increasing rate. As the number of computer files increases, the need to organize these files is more important than ever. In this section, you will learn how the record life cycle is applied to electronic file management. Figure 5.11 shows the record life cycle for electronic files. Notice the distribution and use phases are shown as one for electronic records. Each phase of the electronic record life cycle is described below.

FIGURE 5.11 Electronic Record Life Cycle



Creation and Storage

Electronic files are created in specific software applications such as *Word*, *Excel*, *Access*, and many others. When the application is opened, the user starts keying the needed information in a new document. Creating and storing (saving) the document is the first step in the records life cycle. One way to save a document the first time is to choose Save or Save As from the File menu. When the Save As dialog box opens, navigate to the proper drive and folder. Then, key a filename that is meaningful to the task you are performing. A **filename** is a unique name given to a file stored for computer use that must follow the computer's operating system rules. If the user doesn't change the drive or folder, many programs will automatically save a new document to the Documents folder on the hard drive for computers that use *Microsoft Windows*.

How are electronic files created?

filename: a unique name given to a file stored for computer use that must follow the computer's operating system rules

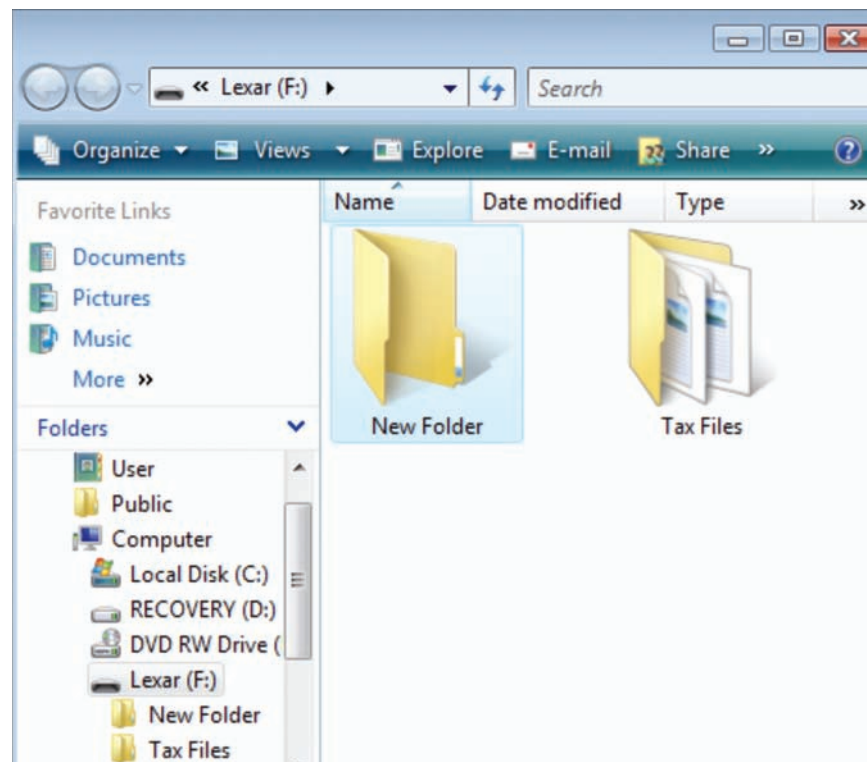
Electronic documents are stored as bytes on some type of computer storage device. Chapter 11 goes into more detail about storage devices and their media. In many offices, electronic files are stored on a stand-alone computer's hard drive or on shared drives on a local area network (LAN). Some workers might use external storage devices. Removable external storage devices include devices such as CDs, tape drives, magnetic hard drives, and USB flash drives. These devices are removable; thus, the user can take a device from one computer and use it on another computer. You will learn more about external storage devices in Chapter 11. Whatever type of storage device is used, the data should be stored using meaningful filenames and in a logical structure of folders or directories to facilitate retrieving the data.

Folder Structure

Dividing storage space into folders is an important part of managing electronic information. A **folder** or **directory** is a subdivision of storage space created by the operating system of a computer. An **operating system** is an organized collection of software that controls the overall operations of a computer. A folder can contain many files. For example, you might have a folder for this class named *Records Management*. You might save a file in the folder named *Chapter 4 Review Questions*. The full path to this document would be *C:\Records Management\Chapter 4 Review Questions*. Notice that a backward diagonal (\) is used to separate the drive, the folder, and filename. This notation, called the **path**, indicates where the file is stored.

Creating folders on any storage device is easy. As with many operations on a computer, different procedures can be used to achieve the same result. Figure 5.12 shows the *Windows Explorer* application that comes with the

FIGURE 5.12 New Folder in Windows Explorer



folder or directory: a subdivision of storage space created by the operating system of a computer

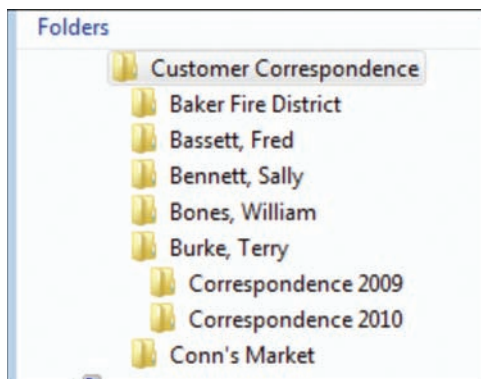
operating system: an organized collection of software that controls the overall operations of a computer

path: a notation that includes the drive, the folder, and filename where a file is stored

Microsoft Windows operating system. To create a new folder using this program, the user can choose Organize from the menu bar and select New Folder. The new folder appears with the name *New Folder*. The user can change the name of the folder to a meaningful name.

Folders (sometimes called subfolders) can be created within other folders. This allows the user to create a folder structure. For example, suppose you work for Safety First, a company that sells smoke alarms, fire extinguishers, and other fire prevention products. You handle routine correspondence to customers who regularly buy Safety First products. Safety First has a LAN where shared folders are available for any of the office workers. Figure 5.13 shows a partial listing of customer folders.

FIGURE 5.13 Partial List of Customer Correspondence Folders



Using the example in Figure 5.13, if you wanted to retrieve a letter you sent to Fred Bassett, you would open the *Customer Correspondence* folder, the *Bassett, Fred* subfolder, and then the appropriate file. Correspondence for a new customer would necessitate creating a folder for the customer name. Correspondence such as letters to the new customer would be stored in the customer's folder. When many files are stored in one customer's folder, it may be helpful to create subfolders to organize the files by dates such as by year. These subfolders are shown in Figure 5.13 in the *Burke, Terry* folder.

Folder structure should be designed to facilitate finding files quickly. A shallow folder structure has many folders at the same level. This may mean that the user has to look through a long list of folders to find the one needed. A deep folder structure has folders within folders within folders. Seeing the logic of the folder structure can be difficult when too many levels of folders are used. A folder structure that is neither too shallow nor too deep is ideal. The structure should have enough levels of folders to organize files in a meaningful way, but not so many levels that the structure is hard to understand. Choose meaningful names for folders and files for quick retrieval of files.

Filenames

Using meaningful filenames is an important part of managing electronic files. An organization may have procedures in place for naming files and folders. If no procedures or guidelines exist, think about how the data might be

Which is the most effective type of folder structure?

My Records



Backing Up Data

*What back-up operations are needed for your computer records?
Do you know how to restore data on the computer system?*

Storage disk failure is a matter of when rather than if. The software loaded on your computer can be re-installed if the hard drive fails; thus, backing up the software applications is usually not necessary. Three types of back-up operations are needed on your personal computer (PC).

Windows System Restore

The purpose of this utility is to allow you to undo harmful changes to your computer. For example, suppose you loaded some software that is not as compatible with your system as you thought it would be. Restoring the system through *Microsoft Windows* allows you to go back to an earlier time (called a restore point) and restore the settings in effect at that time. *Windows* will automatically set restore points. You can also create a restore point before you install a new hardware device or a new program. Make sure the Windows System Restore is turned on.

Specific Program and Data Back-up

Some financial programs such as *Microsoft Money*® or *Quicken*® allow users to create a

back-up of the data used in the program. For example, *Quicken* requests a back-up when you close the program. *Quicken* stores your data in its own folder on your hard drive and provides instructions to make a back-up on another drive or folder. Make the back-up copy on removable storage such as a rewritable compact disk or a flash drive. This type of back-up ensures that the data is safe even if the hard drive on the computer fails. For these types of programs, plan and schedule back-ups at least once a week. Store the back-up copy in another location so it will be safe from fire or other disasters that may occur at your office.

Back Up Data

Regularly schedule and back up data on your hard drive. For example, suppose you are in college and are completing homework assignments using software on your computer. Make a back-up copy of the homework assignments on removable storage devices. When the hard drive fails, you will be able to read your data from removable storage.

requested when you need to retrieve it later. Using the earlier Safety First example, suppose you write to Conn's Market to answer a question about changing the company's credit terms. You might name the document *Conn's Market credit terms 5-6-10*. The document would be stored in the customer's folder. The complete path would be *F:\Customer Correspondence\Conn's Market\Conn's Market credit terms 5-6-10*. Using a date in the filename will help distinguish different files about the same topic within the customer's folder.

In Chapters 8, 9, and 10 you will learn about subject, numeric, and geographic order. Any of these methods are appropriate for organizing your electronic files and folders.

Use and Distribution

The next phase of the record cycle is distributing and using the information contained in the electronic folders and files. Distribution can be through electronic channels described below; or files can be printed and sent by regular mail, by facsimile, or by courier.

E-Mail

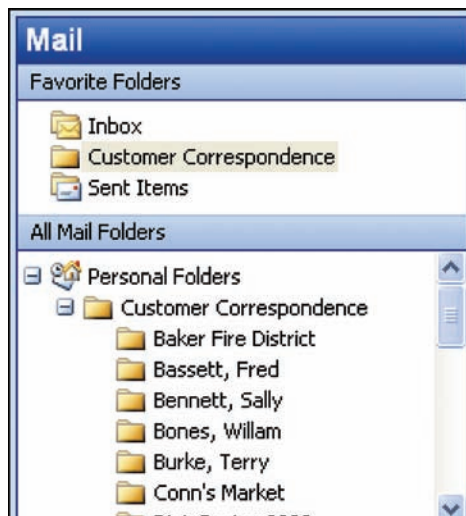
Documents can be created in *Word*, *Excel*, *Access*, and other programs and then attached to an e-mail message for distribution. The user can also key the information in a program such as *Word* and copy and paste the information into an e-mail. Electronic mail is the most common type of internal communication for large companies. Depending on the e-mail software used, folders can be created to help organize messages. Using the example of the Safety First business, you could send correspondence within the company via e-mail to communicate with people in other departments such as the Shipping or Accounting Department. If you receive an inquiry from a customer, you could access the order number from the company database and know which stage of processing has been completed. You could then send an e-mail to the department that is currently working on the order. When your inquiry is answered, you could forward the information to the customer.

For customers who order many products from the company, create a customer name folder into which you store all e-mails to and from the customer. If you have a few customers who only order once or twice a year, you can create a folder named *A* for all customers whose names begins with an *A*. The procedures for setting up files to hold paper correspondence are given in Chapter 6. With a little adaptation, the same procedures can be followed for e-mail folders.

All the phases of the record life cycle can be completed using e-mail software. For example, Figure 5.14 shows a folder structure in *Microsoft*

Outlook[®] organized by customer names. In this program, folders can be created by right-clicking on the Inbox icon and then keying the name you want the folder to have.

FIGURE 5.14 Folders List



Other Digital Communications

Text messages, tweets, and instant messages are electronic communications. These three media are most like telephone messages because they are useful for only a short period of time. These media are used in social situations, and they can be using in business settings.

What is the most common type of written internal communication for businesses?

Records Management in Action



Is it okay to Twitter or update your Facebook page at work?

Tweets are usually 140 words or less, but the major players in sports, media, business, the courts, the military, and other fields are feeling anxious about them. Regulating tweets at work, at school, or on government time is growing because of fines, lawsuits, scolding, and shame.

Some employers are restricting Twitter use by making policies that describe or ban what employees can say on such sites and when they can say it. Some policies say that the employees are personally liable for what they write and are banned from sharing sales numbers and proprietary information.

- Tweets are responsible for mistrials in Arkansas and Pennsylvania.
- A renter was sued for \$50,000 for mentioning her Chicago landlord's name in connection with a moldy apartment.
- The Marine Corps banned the use of social media sites on government computers, and the military is considering wider restrictions even as recruiters acknowledge the tool's usefulness.

Twitter's strength is its timeliness. Will that strength balance its usefulness? Social media experts advise, "Even short sentences can have long-lasting effects."* Know what the social networking rules are for school and work before you use them.

*Source: Matthew T. Hall, "Twitter Policies Come to Workplace," *The San Diego Union-Tribune*, September 8, 2009, <<http://www.allbusiness.com/sports-recreation/sports-games-outdoor-recreation/12876065-1.html>> (accessed December 3, 2009).

What is the main advantage of using an intranet site?

names. Some companies do not allow access to the intranet site unless you are using a company computer on the premises of the business. Many companies do not print and distribute manuals to everyone in the organization but, instead, post the information on an intranet site. Because the information is available on the intranet and updated regularly, the documents are not made available in printed form, and the company saves the cost of printing. An individual could print the data from the intranet site if desired.

An intranet site is usually organized by the subject method of storage which you will learn about in Chapter 8. Search engines are available on most large company intranets so the user can find the appropriate information. An IT Department is usually in charge of a company intranet site. However, IT

Blogs, wikis, Internet forums, webinars, and podcasts are used for evaluation, review, and discussion in business and social settings. All five of these media can be archived and referenced for additional review or research.

Intranets

Many organizations post internal documents such as procedure manuals, reference documents, a personnel directory, and correspondence on a secure intranet site where employees see and use distributed information. Browser software, such as *Internet Explorer*, interprets and displays HTML documents. Users may also be allowed to download documents to their computers. The Information Technology (IT) Department may work with RIM professionals to update and manage the intranet site. An intranet site allows employees access through password-protected user

works with a team of workers from all departments of the company to help test the site and help guide its evolution.

Shared Folders on a LAN

Another place for distribution and use of electronic documents is on shared drives or folders on the company's local area network. The LAN may be set up so that certain departments have use of a particular shared drive. For example, department workers have the right to create, save, edit, modify, and delete files and folders on the shared drive. Some shared drives are available to everyone in the company. Confidential information is usually on a restricted drive available only to employees who are cleared to access confidential information.

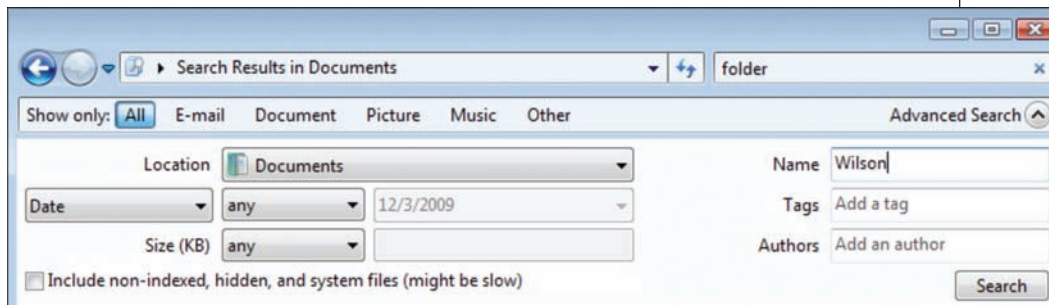
Cooperation and coordination between IT and RIM professionals determine the procedures for creating, maintaining, and disposing of folders and files on shared drives.

Search Features

Programs or features that allow users to search for files on a computer drive, LAN drives, or intranet are important tools for electronic records management. On a computer that uses *Microsoft Windows*, for example, users can search by filename, date, or text on any drive on the computer and/or any drives to which the computer connects. Advanced search options for *Windows Explorer* are shown in Figure 5.15.

Which *Windows* function can help you find a file?

FIGURE 5.15 Advanced Search Options in Windows Explorer



Maintenance

The next phase of the record life cycle is maintenance of the files. In Chapter 1, you learned that a records retention schedule is used to specify how long to keep the records in an organization. Based on retention schedules, maintenance of electronic files follows regularly scheduled times to keep or dispose of the files.

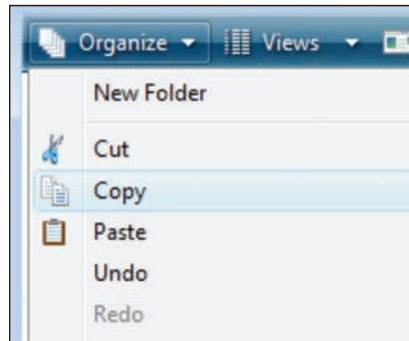
Moving Files and Folders

Files and folders can be moved from one folder to another as part of managing electronic records. Moving electronic files that are over a year old, for example, to a different folder leaves fewer files in the original folder so that the more active files are easier to find. At the Safety First business, customer files older than a year are moved to removable storage devices. On the removable drive, the same alphabetic system with the customer name for the folder is used. The dates are noted in the folder name also.

Copying Files and Folders

The Copy command in programs such as *Windows Explorer* is used to create a duplicate of a file or a folder. The copy may have a different name than the original file or folder or it may have the same name if it is stored in a different folder. Copying allows files to be available in two or more locations. For example, a worker can copy a file to a removable storage device and then edit the file on his or her home computer. When the worker returns to work, the updated file is copied to the work computer. Having files readily available can be a convenience to the worker. However, keeping unnecessary copies of files should be avoided to make the best use of storage capacity on hard drives or other devices. Figure 5.16 shows the Copy option in *Windows Explorer*. To copy a file, select it in the current folder and choose Copy. Move to the folder for the duplicate file and choose Paste. To move a file, select it in the current folder and choose Cut. Move to the folder for the new location and select Paste.

FIGURE 5.16 Cut, Copy, and Paste Options in Windows Explorer



Backing Up and Restoring Data

A **back-up** is a copy of electronic files and/or folders as a precaution against the loss or damage of the original data. Users should follow a regular schedule to back up vital and important electronic records. Many LANs use software that automatically makes copies of some or all of the data on the network on a regular schedule.

If data is lost or damaged, it can be restored using back-up copies. The process of restoring back-up copies ensures that the electronic files can be used again without interruption to the flow of business.

• • • • •

back-up: a copy of electronic files and/or folders as a precaution against the loss or damage of the original data

information management (PIM) software already loaded. The programs or features allow users to do tasks such as those listed below. Some of the tasks, such as connecting to the Internet, may require subscription services or special features such as a wireless connection to implement.

- Store names, addresses, phone numbers, e-mail addresses
- Make to-do lists
- Take notes
- Track appointments using a calendar feature
- Set reminders for appointments
- Perform calculations
- Synchronize with personal computers
- Connect to the Internet
- Send and receive e-mails

Synchronization with Personal Computers


Synchronization is the process of bringing items into agreement, usually in relation to time or rates. In the case of PDAs and personal computers, this means updating the data on the PC and the PDA so that both contain the same data. For example, suppose you use *Microsoft Outlook* on your desktop computer to enter contact data for business associates and to schedule appointments. While at a meeting, you use your PDA to take notes, enter data for a new business contact, and schedule an appointment. Once the meeting is over and you return to your desktop PC, you need to upload the information from your PDA to *Outlook* on your PC.

Synchronization software on the PDA works with software that you install on your PC when you purchase a PDA. On your PC, you also need an application similar to *Microsoft Outlook* that stores information on your computer.

Most PDAs have a cable that connects the PDA to a USB port on a PC. Many PDAs can send data to another PDA or to a PC through wireless transmissions. Once the PDA and PC are connected, select the synchronization button or command on the PDA. Follow the instructions to upload and download information from one device to the other. An advantage of synchronizing regularly is that you always have a back-up copy of your data on the PDA or on your desktop or notebook computer. Plan to synchronize your PDA and your PC at least once daily.

Device Information Security

Businesses and governments realize the importance of securing electronic data. Confidential information can now be removed from the workplace on computer laptops, flash drives, cell phones, smartphones, or other portable data devices (PDDs). A major focus within businesses and governments is the use of security controls to protect against theft of PDDs



How often should you synchronize your PDA and PC?

synchronization: the process of bringing items into agreement, such as updating the data on a laptop computer to match the data on a PDA

and the unauthorized disclosure of confidential information that resides upon them. Security policies being implemented may include:

- Encryption on employer-owned laptops and other PDDs that store confidential information
- Clear guidelines for reporting loss of equipment and repercussions for failure to do so in a timely manner
- Prohibition against personal PDDs being connected to the computer network
- Regular scanning for viruses and spyware using programs such as *Norton AntiVirus* or *AVG Anti-Virus* (shown in Figure 5.17)

For more information about records safety and security, see Chapter 11.

FIGURE 5.17 AVG Anti-Virus Software



Chapter Review and Applications

KEY POINTS

- Sorting data and records in electronic files and organizing electronic files and folders are important aspects of managing electronic records.
- An electronic database is a collection of related data stored on a computer system. In a database, data is stored in tables containing fields and records.
- The Find or Query feature of database software can be used to find information. Reports can be made from the data in a table or query results.
- Databases are an integral part of e-commerce. Web server and web application software use a form on a web page to create or append records.
- In an e-commerce transaction for services or merchandise, the dynamic form on a web page not only accesses the database but also starts the procedure for products to be sent to the customer. The payment part of the transaction is completed via electronic fund transfer (EFT).
- Computers sort data by using standard character code values such as ASCII values. The sort order may be different than the sort order that would be used for the same records in a manual filing system.
- General settings selected for a computer (such as language) and options chosen in a particular program may affect the sort order for electronic data.
- Electronic records have a life cycle as do paper records. The stages of the electronic record cycle include creation and storage, use and distribution, maintenance, and disposition.
- Tools (such as *Windows Explorer*) are available on computers to manage all phases of the record life cycle.
- Using meaningful filenames is an important part of managing electronic files.
- Electronic file management is necessary for smaller digital devices such as cell phones and personal digital assistants.

TERMS

ASCII	operating system
back-up	path
database	personal digital assistant (PDA)
field	query
filename	record
folder or directory	synchronization
leading zeros	table

REVIEW AND DISCUSS

1. Describe the relationship among a database and its tables, records, and fields. (Obj. 1)
2. What is the purpose of a database query? (Obj. 1)
3. Describe how a database is used during an e-commerce transaction. (Obj. 3)
4. How does a character code used by a computer, such as ASCII, affect how the computer sorts data? (Obj. 4)

8. You are taking the following classes: WR 121 English Composition, SOC 104 Introduction to Sociology, HST 201 History of Western Civilization, and BA 244 Records Management. List the folder names you will create for your disk to store files for each of your classes. (Obj. 6)

9. How can you assure that confidential data deleted from a computer hard drive or from a CD or DVD cannot be recovered?

10. What is synchronization as it applies to PDAs and desktop or laptop computers? (Obj. 6)

APPLICATIONS



Data File

5-1 Create a Logical Folder Structure (Obj. 6)

1. Copy the folder named *Sheraden Investment Services* found in the data files to your hard drive or other storage device.
2. Study the list of files contained in the folder. The files are also listed below. Open some of the files to see the type of data they contain. Determine how to organize the files into a meaningful folder structure.
3. Create a logical folder structure with appropriate folders and subfolders. Move appropriate files to their folders. Submit your work as your instructor directs.

Filenames	
Abbott Kenneth 2009	McAllister Vicky Annual
Abbott Kenneth 2010	Reston Brenda 2009
Abbott Kenneth Annual	Reston Brenda 2010
Abbott Paul 2009	Reston Brenda Annual
Abbott Paul 2010	St Amand Dennis 2009
Abbott Paul Annual	St Amand Dennis 2010
Annual Appointment Letter	St Amand Dennis Annual
Demarco David 2009	TenPass Margaret 2009
Demarco David 2010	TenPass Margaret 2010
Demarco David Annual	TenPass Margaret Annual
Investment Summary	Thatcher Linda 2009
McAllister Vicky 2009	Thatcher Linda 2010
McAllister Vicky 2010	Thatcher Linda Annual

5-2 Input and Sort Records (Obj. 2)

1. Open *Access* and create a new database named *5-2 Customers*.
2. Create a table named **Customers** with the following fields: Customer ID, Business, First Name, Middle Name, Last Name, Title, and Suffix. Select **Number** as the field type for the Customer ID field. Select **Text** as the field type for all other fields. Select the **Customer ID** field as the primary key.
3. Enter the following data into the table.



Access Activity

Customer ID	Name
4114	“Demand the Best” Co.
1122	1 Way Direct
3163	180 Stations, Inc.
1159	2001 Net Works
4135	360 Dish, Inc.
3149	99 TV & Appliance
4108	B-N Handy Company
4122	Catch-A-Dish, Inc.
2115	Early Bird Installers
3109	Earnest Satellite Installations
2107	K. A. Abbott III
2690	KATZ Communications
3127	KBOS Television Station
2980	Keep It Beaming!
1102	KPDX Radio Station
4970	Miss Elena A’Breau
1101	Mr. Archie Abbott
3119	Mr. Daniel De La Torres

4. Create a query to list only the customers that are businesses. Show the Business and the Customer ID fields in the query results. Sort in ascending order using the Business field. Remember to enter an asterisk (*) in the Criteria row for the Business field so that only records with data in this field will display. Print the query results table.
5. You need to locate the customer name for the company or person with customer ID 2115. Use the Find feature with the Customers table to locate this record. What is the company or person’s name?

5-3 Research Personal Digital Assistants (Obj. 4)

You’ve just been given a \$300 scholarship for purchasing a PDA. Your benefactor will give you the money when you have justified your choice of PDA.

1. Make a list of the features or programs you want on your PDA.
2. Access a search engine on the Internet. Search using the key words *personal digital assistant*.

3. Choose three PDA devices that match your list of features. Compare and contrast the brands and models of the PDAs. Recommend a device to purchase.
4. Send the summary of your findings in an e-mail to your instructor.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 4 Alphabetic Filing Rules 1–10

Continue working with Auric Systems, Inc.
Complete Job 4.

For More Activities Go To:
www.cengage.com/officetech/read

Alphabetic Records Management, Equipment, and Procedures

LEARNING OBJECTIVES

1. Explain terms used in correspondence records management systems.
2. Identify the basic types of equipment and supplies for correspondence records storage.
3. Explain considerations for selecting storage equipment and supplies.
4. Discuss the advantages and disadvantages of the alphabetic method of records storage.
5. Describe types of information that should be determined before selection and design of an alphabetic records system.
6. Explain how color can be used in correspondence records storage.
7. Apply procedures for storing correspondence.

ON THE JOB

John Littler is the western regional sales manager for SmeadSoft. The biggest customers of SmeadSoft applications are governments—city, police, county, and state. The software notes chain of custody in evidence gathering and retention. Some police cars are equipped with video capture. These videos become part of an incident or routine traffic ticket report.

When asked how RIM will change during the next 5 years John commented, “Things may not change too much—we’ll still have paper. Paper is selling more than ever.” John notes that the medical field has a large percentage of electronic records. X-rays and other digital images started ten years ago as electronic records. Medical professionals often use computers to make notations in patients’ charts. With the software, many people can access the same record at the same time. A growth trend is for more documents to be scanned, creating electronic records. However, microfiche is still one of the largest forms for records storage.

Color coding can be helpful to show records that are out of order. When US Air and America West merged, there were 35,000 employee files. The folder labels were black on white. When one record was moved in a three-foot shelf, the workers could not find it. They converted to color coding and numeric filing, and finding results were much better.

John offers this advice to students: “More potential and growth—more organizations have records managers than in the past. Technological advances mirror business process; however, a background in manual filing is important to understand how to manage electronic records.”

Printed with permission of John Littler.



Courtesy of John Littler

What is business correspondence?

CORRESPONDENCE RECORDS STORAGE

As you studied earlier chapters of this textbook, you learned to index, code, and cross-reference names and addresses. Beginning with this chapter, you will learn other considerations for working with correspondence—the type of records found in all kinds of businesses. Business letters, forms, reports, and memorandums are all part of the daily correspondence that businesses transact.

As noted in an article for *HR Magazine*, “Despite cost and environmental reasons to reduce paper use, for most the completely paperless office has yet to arrive. In 2007, according to research firm IDC, U.S. companies printed 1.5 trillion pages.”¹ Business offices continue to use paper as a medium for all or part of their records. Thus, the discussion in this chapter focuses on the use of equipment and supplies for paper records. Chapter 11 discusses electronic systems used in records management.

As you complete this chapter, you will apply the ten alphabetic indexing rules learned from Chapters 2, 3, and 4 to indexing, coding, and cross-referencing correspondence. In addition, you will learn three other steps in alphabetic storage procedures: inspecting, sorting, and storing.

Information requirements make systematic storage and retrieval of records increasingly important. Businesses use records to complete transactions, to communicate with customers or clients, and to document compliance with laws and regulations. You have discovered that a set of written rules for alphabetic indexing provides consistency for storing and retrieving records. Consistent application of the alphabetic indexing rules is only one part of an efficient records management program. Using effective, appropriate equipment and supplies is another. This chapter introduces a variety of available records storage equipment and supplies and describes selection criteria.

You are familiar with some of the specific terms and meanings pertaining to the storage and retrieval of records. The following terms and definitions will help you understand the information in this chapter:

- Records management is the systematic control of all records from their creation, or receipt, through their processing, distribution, organization, storage, and retrieval to their ultimate disposition. The goal of records management is to get the right record to the right person at the right time at the lowest possible cost.
- **Storage** or storing is the actual placement of records, according to a plan, on a shelf or in a file drawer. Also, storage can be electronically saving a record to a medium readable by a computer. The term *filing* may be used to mean storage, but filing is usually associated with paper records only.
- A **storage method** is a systematic way of storing records according to an alphabetic, subject, numeric, geographic, or chronologic plan. A specific system for organizing and arranging records can be referred to as a records management system or filing system. Often these terms are used synonymously.



storage: the placement of records, according to a plan, on a shelf or in a file drawer or saving an electronic record

storage method: a systematic way of storing records according to an alphabetic, subject, numeric, geographic, or chronologic plan

¹James Thelen, “On and Off the Paperless Train,” *HR Magazine*, March 2009, Vol. 54 Issue 3, pp. 75-77.

- **Alphabetic records management** is a method of storing and arranging records according to the letters of the alphabet.
- Storage procedures are a series of steps for the orderly arrangement of records as required by a specific storage method or records management system.

The storage method or system discussed here and in previous chapters is alphabetic. Records and information management (RIM) professionals do not agree on the number of records storage methods. Some professionals say there are just two: alphabetic and numeric. Subject and geographic methods are not considered separate methods because the subjects and geographic names are filed alphabetically. Other records professionals add alphanumeric as a third method. Still others add a fourth—chronologic. In this text, alphabetic, subject, numeric, and geographic are considered as four RIM methods. With the exception of chronologic storage, each of these methods uses alphabetic concepts in its operation. Subject, numeric, and geographic records are described in detail in Chapters 8, 9, and 10.

RECORDS STORAGE EQUIPMENT AND SUPPLIES

You have probably heard the adage, “A place for everything, and everything in its place.” The records manager or person in charge of purchasing the equipment and supplies for the records center must certainly heed this advice. To have a proper place for various types of records requires knowledge of equipment for records processing and storage. What type of equipment and supplies are used most often in offices? What is the specific vocabulary for RIM equipment and supplies? To help answer these questions, you can use an Internet search engine to locate websites for vendors of filing equipment and supplies. Viewing information on these websites can help familiarize you with the array of available RIM equipment and supply products. This section of the chapter describes characteristics of these different types of products and their uses.

Storage Equipment

Types of storage equipment commonly used for paper records are: (1) vertical file cabinets, (2) lateral file cabinets, (3) shelf files, and (4) mobile shelving. Other types of storage equipment and their special uses for RIM are discussed in later chapters.

Vertical File Cabinets

A vertical file cabinet is storage equipment that is deeper than it is wide. Generally, the arrangement of folders in the file drawers is from front to back. A folder is a container used to hold and protect the contents of a file together and separate from other files. Vertical file cabinets are the conventional storage cabinets in one- to five-drawer designs. Two rows of vertical file cabinets may be placed back to back in a large central storage area with aisle space on either side. The type and volume of records to be stored will determine the

How many storage methods are used to file records?



alphabetic records management: a method of storing and arranging records according to the letters of the alphabet

How do vertical and lateral file cabinets differ?

width, depth, number, and size of drawers. The two-drawer file is desk height and sometimes used beside a desk for additional workspace, as well as for ready access to frequently used records. The most common widths of vertical file cabinet drawers are appropriate for letters or legal-size documents.

Lateral File Cabinets

A lateral file cabinet is storage equipment that is wider than it is deep—records are accessed from the side (horizontally). Records can be arranged in the drawers from front to back or side to side. Because the long (narrow) side opens, lateral file cabinets are particularly well suited to narrow aisle spaces. They are available in a variety of sizes, depending on the number and depth of the drawers. The photo on this page shows a lateral file cabinet with roll-back drawer fronts and one with pull-out drawers.



The HON Company

Vertical and lateral file cabinets are common storage devices for physical records.

Shelf Files

A shelf file is open-shelving equipment in which records are accessed horizontally from the open side. Shelf files may be an open style or have roll-back or roll-down fronts. They may be stationary shelves or have shelves arranged in rotary form. Rotary shelf files have a rotating bank of shelves so that records can be stored and accessed from both sides of the shelves.



A shelf file provides easy access to records.

Mobile Shelving

Areas with limited space may use mobile banks of shelves that can be moved as needed for storage and retrieval. Mobile shelving is a series of shelving units that move on tracks attached to the floor for access to files. In some movable shelving equipment, the shelves slide from side to side. The records on shelves behind the moved shelves are then exposed for use. The units may operate with electric power or may be moved manually by the operator. Because aisle space is not constantly maintained between each unit, mobile shelving can approximately double the storage capacity of an area.

Motorized rotary storage is a unit that rotates shelves in the unit around a central hub to bring the files to the operator. Such systems may have an automated keypad-driven retrieval system. This system uses overhead storage with the rotation of the files moving horizontally around a central core to bring files to the operator, and it provides access at a height that can accommodate persons with a disability requiring a wheelchair. A rotary shelf file is shown in the photo on page 164.

File Capacity and Space Requirements

When choosing storage cabinets or shelves, a comparison of file capacity and floor space requirements helps determine cost effectiveness. An estimated capacity for a standard four-drawer file cabinet is about 10,000 records (calculated at about 100 sheets per linear inch including guides and folders). Three to four inches of space should be left as working space at the end of a file drawer or shelf section to allow easy removal and replacement of file folders. A letter-size vertical cabinet drawer measures 15 by 28 inches and, therefore, holds about 25 linear inches of records. A lateral file drawer is 18 by 36 inches with a file capacity of 33 linear inches. Pull-out drawer space for vertical files requires about two feet; lateral file drawers use approximately one foot

How does a motorized rotary storage unit operate?



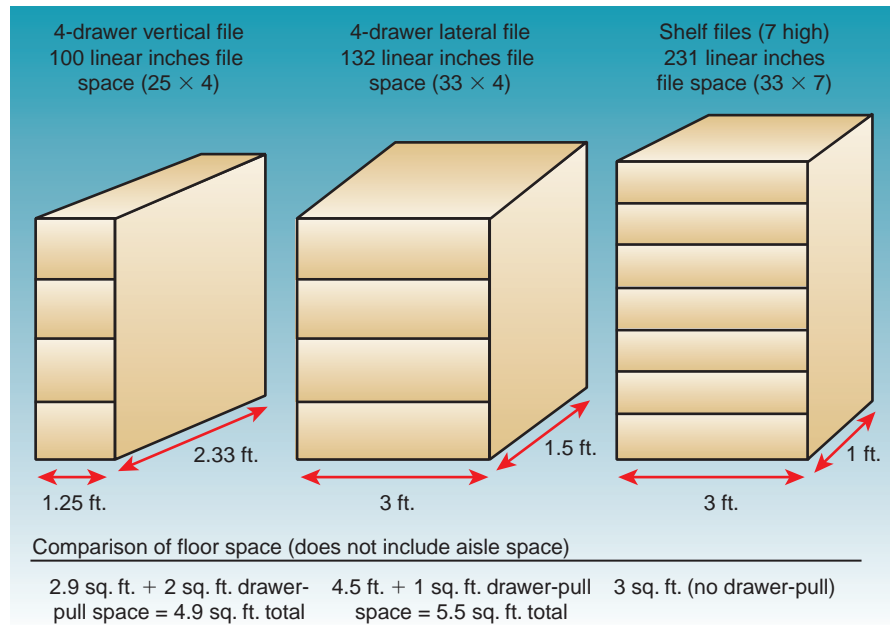
Courtesy of KarDEXRemstar

This rotary shelf file has a system of no-walk carousels with banks of vertical shelves rotating for access by an operator.

Which type of cabinet requires the least amount of aisle space?

of pull-out space. Shelf files require less floor space because they need no drawer-pull space, are not as deep as file cabinets, and hold records that can be readily accessed up to seven shelves high. Figure 6.1 illustrates the capacity and floor space requirements for these three types of storage equipment.

FIGURE 6.1 Files Cabinets are Available in Several Sizes



Shelf files save filer time as well as floor space because there are no drawers to open before records can be accessed; however, open-shelf filing for confidential or vital records must be placed in a records vault for security. File drawers and closed-front cabinets can be purchased with locks. Fire protection is a safety consideration. Vital records can be duplicated and kept in off-site storage. Fireproof storage cabinets can be purchased for important records; these cabinets are heavier and higher in cost than standard file cabinets.

Storage Supplies

Efficient storage and retrieval requires the use of the right equipment and the right supplies. The principal supplies used in manual storage of paper records are discussed briefly in this section.

Guides

A **guide** is a rigid divider used to identify a section in a file and to facilitate reference to a particular record location. Guides are made of heavy material such as pressboard, manila, or plastic. A **tab** is a projection for a caption on a folder or guide that extends above the regular height or beyond the regular width of the folder or guide. Some guides have reinforced tabs of metal or acetate to give added strength for long wear. Tabs and tab cuts are discussed in detail later in this chapter.

The proper placement of guides eliminates the need to spend time searching through similar names to find the part of the alphabet needed. The same set of guides may be used year after year with no change, or they may be added to or changed as the quantity of records increases. Because of their thickness and sturdy construction, guides also serve to keep the contents of a container (drawer or box) upright. Keeping contents upright promotes efficient storage and retrieval. Guides serve as signposts and speed location of records. Too few guides result in unnecessary time spent looking for the correct place to store or find a record. Too many guides that are unevenly distributed throughout the files can slow storage and retrieval because the eye must look at so many tabs to find the right storage section. Using about 20 guides for each file drawer or for each 28 linear inches of stored records will facilitate efficient storage and retrieval in a typical system.

Primary Guides

A **primary guide** is a divider that identifies a main division or section of a file and always precedes all other material in a section. In Figure 6.2 on page 166, the NAMES WITH NUMBERS, A, and B guides in first position (at the left) are primary guides. Remember Rule 7 about business names beginning with numbers? Numbers are filed before letters of the alphabet; the NAMES WITH NUMBERS guide and NAMES WITH NUMBERS folder are filed before the A guide.

A small volume of stored correspondence with many individuals or firms requires only primary guides to indicate the alphabetic sections. Systems that use color extensively may use only primary guides with the letters of the alphabet because blocks of colored folders act as a visual guide to a section of the alphabet.

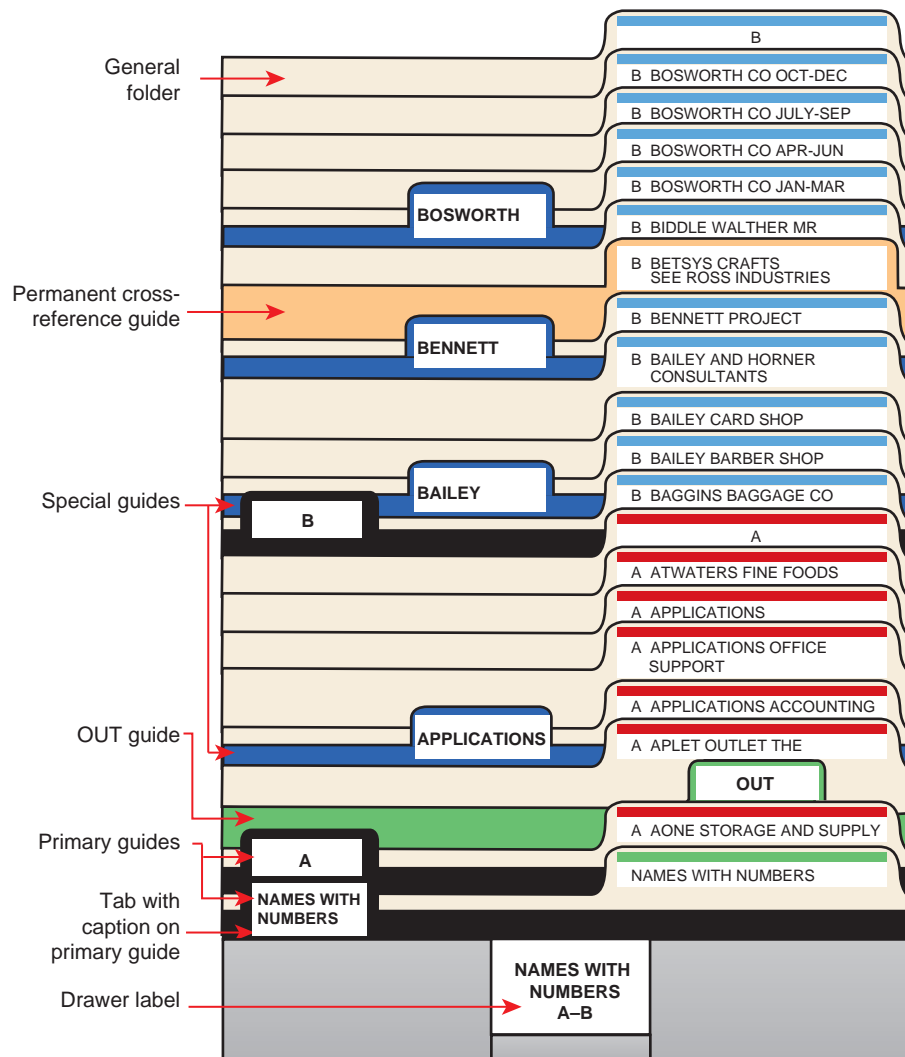


guide: a rigid divider used to identify a section in a file and to facilitate reference to a particular record location

tab: a projection for a caption on a folder or guide that extends above the regular height or beyond the regular width of the folder or guide

primary guide: a divider that identifies a main division or section of a file and always precedes all other material in a section

FIGURE 6.2 One Section of an Alphabetic Arrangement



Guide sets that divide the alphabet into many different segments are available from manufacturers of filing supplies. The simplest set is a 23- or 25-division set, the latter having a tab for each letter from A to W, a tab labeled *Mc*, and a last tab with the combination XYZ. Figure 6.3 on page 167 compares an 80-division and a 120-division breakdown of guides printed by manufacturers.

The number of alphabetic guides furnished by different manufacturers can vary even though each plan may divide the alphabet into 40 subdivisions. Manufacturers may elect to omit *Mc*, subdivide letters differently, or combine different letters. Before purchasing a set of guides, the records manager should examine the manufacturer's alphabetic subdivisions to see if the subdivisions fit specific office requirements. Alphabetic guides can be purchased with preprinted tabs or tabs with slotted holders for the insertion of labels. Records managers can also create their own subdivisions using guides with blank tabs. Plain or color-coded labels can be applied to the guide tabs.

FIGURE 6.3 Comparison of Guide Sets for A to Z Indexes

80 Div. A to Z				120 Div. A to Z					
A	1	L	41	A	1	Gr	41	Pe	81
An	2	Le	42	Al	2	H	42	Pi	82
B	3	Li	43	An	3	Han	43	Pl	83
Be	4	Lo	44	As	4	Has	44	Pr	84
Bi	5	M	45	B	5	He	45	Pu	85
Bo	6	Map	46	Bar	6	Hen	46	Q	86
Br	7	McA	47	Bas	7	Hi	47	R	87
Bro	8	McH	48	Be	8	Ho	48	Re	88
Bu	9	McN	49	Ber	9	Hon	49	Ri	89
C	10	Me	50	Bi	10	Hu	50	Ro	90
Ce	11	Mi	51	Bo	11	I	51	Rog	91
Co	12	Mo	52	Br	12	J	52	Ru	92
Coo	13	N	53	Bre	13	Jo	53	S	93
Cr	14	O	54	Bro	14	K	54	Sch	94
D	15	P	55	Bu	15	Ke	55	Scho	95
De	16	PL	56	C	16	Ki	56	Se	96
Do	17	Q	57	Car	17	Kl	57	Sh	97
Dr	18	R	58	Ce	18	Kr	58	Shi	98
E	19	Re	59	Ci	19	L	59	Si	99
En	20	Ro	60	Co	20	Lar	60	Sm	100
F	21	S	61	Corn	21	Le	61	Sn	101
Fi	22	Sch	62	Cop	22	Len	62	Sp	102
Fo	23	Se	63	Cr	23	Li	63	St	103
G	24	Sh	64	Cu	24	Lo	64	Sti	104
Ge	25	Si	65	D	25	M	65	Su	105
Gi	26	Sm	66	De	26	Map	66	T	106
Gr	27	St	67	Di	27	McA	67	Th	107
H	28	Sti	68	Do	28	McD	68	Tr	108
Har	29	Su	69	Du	29	McH	69	U	109
Has	30	T	70	E	30	McN	70	V	110
He	31	To	71	El	31	Me	71	W	111
Her	32	U	72	Er	32	Mi	72	Wam	112
Hi	33	V	73	F	33	Mo	73	We	113
Ho	34	W	74	Fi	34	Mu	74	Wh	114
Hu	35	We	75	Fo	35	N	75	Wi	115
I	36	Wh	76	Fr	36	Ne	76	Wil	116
J	37	Wi	77	G	37	No	77	Wim	117
K	38	Wo	78	Ge	38	O	78	Wo	118
Ki	39	X-Y	79	Gi	39	On	79	X-Y	119
Kr	40	Z	80	Go	40	P	80	Z	120

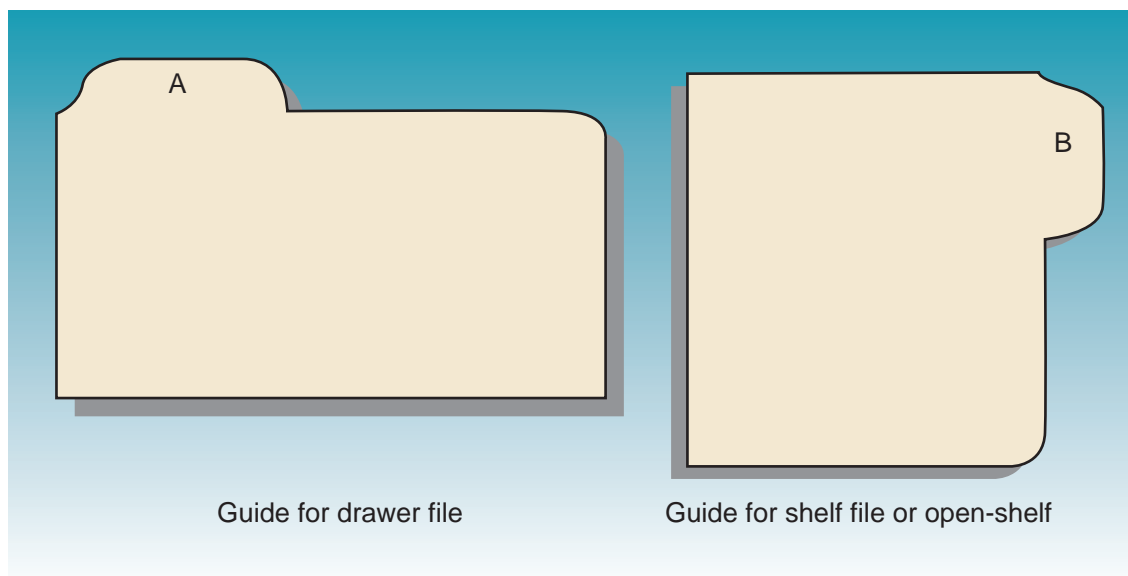
Special Guides

A **special (auxiliary) guide** is a divider used to lead the eye quickly to a specific place in a file. Use special guides to:

1. Indicate the location of an individual or a company folder with a high volume of correspondence. In Figure 6.2 on page 166, the guides labeled *BENNETT* and *BOSWORTH* are special (auxiliary) name guides.
2. Introduce a special section of subjects, such as Applications, Bids, Conferences, Exhibits, Projects, or Speeches. Figure 6.2 shows a special subject guide, *APPLICATIONS*, placed in alphabetic order in the A section. Correspondence concerning applications for positions in accounting and office support is stored behind *APPLICATIONS*, in properly labeled folders.
3. Identify a section reserved for names with the same first indexing unit. In Figure 6.2, the *BAILEY* special name guide leads the eye to the section with numerous folders labeled with *BAILEY* as the first indexing unit.

The tabs on guides for open-shelf equipment are at the side as shown in Figure 6.4. Because materials stored in open-shelf equipment are visible at one edge instead of across the top (as is true in drawer files), the alphabetic or other divisions must extend from the side of the guide so that they can be seen easily. The printing on these side-guide tabs may be read from either side.

FIGURE 6.4 Guides Used in Cabinets and Open-Shelf Files



special (auxiliary)

guide: a divider used to lead the eye quickly to a specific place in a file

Folders

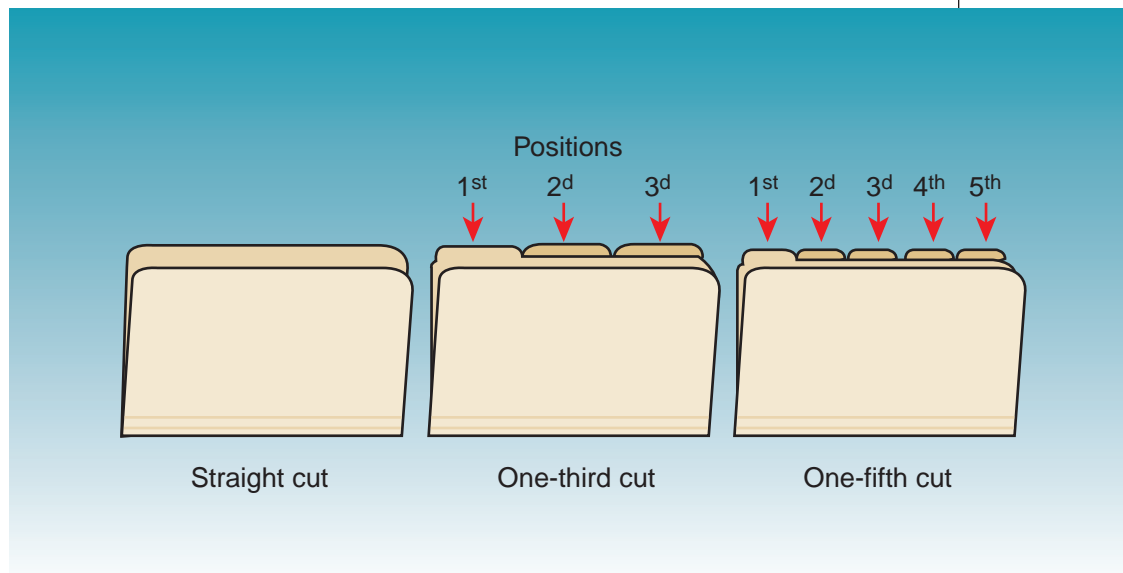
Folders are containers used to hold and protect the records in a file. Folders are usually made of heavy material such as manila, plastic, or press-board and can have either top or side tabs in varying sizes. Folders are

creased approximately in half; the back is slightly higher than the front. A folder may be reinforced across the top of the back edge because that is the place receiving the greatest wear, as a folder is usually grasped by that edge.

Folder and guide tabs are available in different sizes or cuts. A tab cut is the length of the tab expressed as a proportion of the width or height of the folder or guide. A straight cut tab extends across the complete width of a folder. A one-third cut tab extends only one-third the width of a folder and may be in any of three positions as shown in Figure 6.5.

Position refers to the location of the tab across the top or down one side of a guide or folder. First position means the tab is at the left; second position means the tab is second from the left; and so on. Straight-line arrangement is a system that aligns folder tabs in one position; for example, all folder tabs are third position (see Figure 6.5).

FIGURE 6.5 Folder Cuts and Tab Positions



Guide and folder tabs may be arranged in different ways. In a staggered arrangement, tabs are placed in a series of several different positions from left to right according to a set pattern. Straight-line position is preferred because of ease in reading label captions; the eye travels faster in a straight line than when it jumps back and forth from left to right. The most efficient position for folders is third, with third-cut tabs; and the most efficient position for guides is either first or second with fifth-cut tabs as shown in Figure 6.2 on page 166.

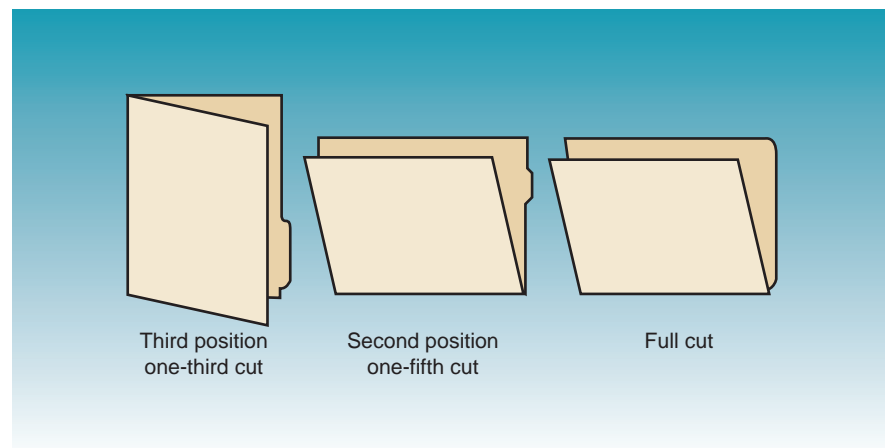
Tabs on folders for open-shelf equipment are on the side edge (Figure 6.6 on page 170) in various positions according to the manufacturer's system or the customer's preference.

Folders behind every guide are used to keep like records together. The three main types of folders used in alphabetic storage are general folders, individual folders, and special folders.



position: the location of the tab across the top or down one side of a guide or folder

FIGURE 6.6 Folder Cuts and Positions for Open-Shelf Files

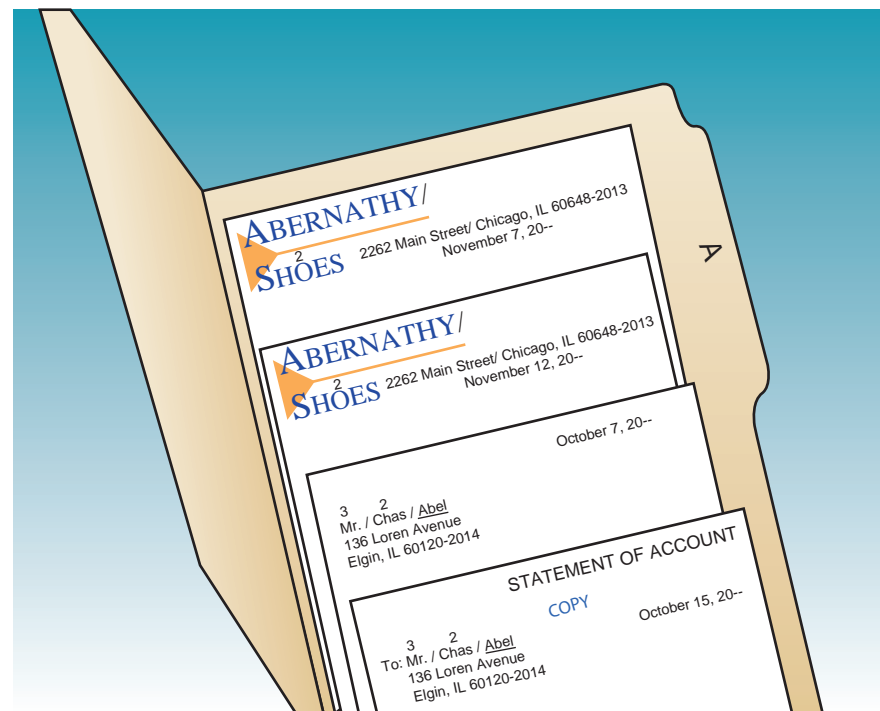


General Folders

Every primary guide has a corresponding general folder, bearing the same caption as that on the guide. A **general folder** is a folder for records to and from correspondents with a small volume of records that does not require an individual folder or folders. In Figure 6.2 on page 166, the A folder is a general folder and is the last folder in that section. General folders often are color coded for greater visibility.

Records are arranged inside a general folder alphabetically by the correspondents' names. Then, the most recently dated record is placed on top within each correspondent's records as shown in Figure 6.7.

FIGURE 6.7 Arrangement of Records in a General Folder



.....

general folder: a folder for records to and from correspondents with a small volume of records that does not require an individual folder

Individual Folders

An **individual folder** is a folder used to store the records of an individual correspondent with enough records to warrant a separate folder. Records are arranged chronologically within an individual folder with the most recently dated record on top. In Figure 6.2 on page 166, all individual folders are one-third cut, third position. Records pertaining to one correspondent are removed from the general folder and placed in an individual folder when the number of records accumulates to a predetermined number. Individual folders are placed in alphabetic order between the primary guide and its general folder.

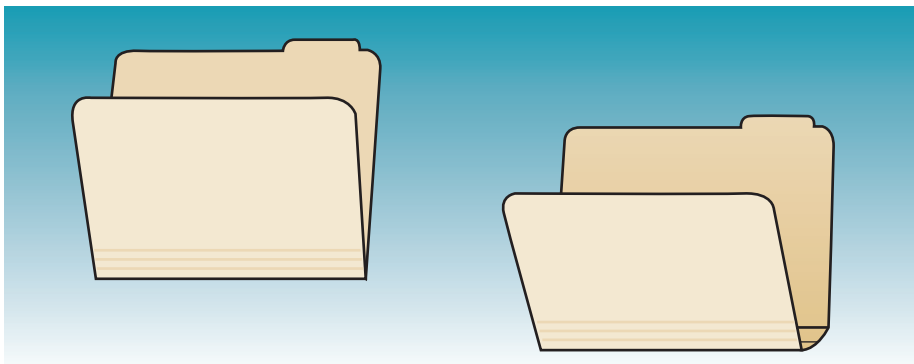
Special Folders

A **special folder** is a folder that follows a special guide in an alphabetic arrangement. In Figure 6.2, three special folders are shown: two behind APPLICATIONS and one behind BENNETT. Within the APPLICATIONS ACCOUNTING folder, all records pertaining to accounting positions are arranged first by the names of the applicants. If an applicant has more than one record in the folder, those records are arranged by date with the most recent date on top. Within the BENNETT PROJECT folder, records are arranged by date, the most recent one on top.

Care of Folders

Proper care of folders will help make stored records readily accessible. When records start to “ride up” in any folder, too many papers are in the folder. The number of records that will fit into one folder obviously depends on the thickness of the papers. Records should never protrude from the folder edges and should always be inserted with their tops to the left. The most useful folders have score marks. Score marks are indented or raised lines or series of marks along the bottom edge of a folder to allow for expansion (Figure 6.8). As it becomes filled, the folder is refolded along a score mark and expanded to give it a flat base on which to rest. Most folders can be expanded from 3/4 to 1 inch. Refolding a folder at the score marks reduces the danger of folders bending and sliding under others, avoids curling papers, and results in a neater file.

FIGURE 6.8 Flat Folder and Expanded Folder



Why are score marks on file folders?

.....
individual folder: a folder used to store the records of an individual correspondent with enough records to warrant a separate folder

special folder: a folder that follows a special guide in an alphabetic arrangement

When are new folders needed?

A folder lasts longer and is easier to use if it is not stuffed beyond its capacity. If too many papers are in an individual folder, prepare a second folder for that correspondent. Then label the folders to show that the records are arranged chronologically in them (see the four BOSWORTH CO folders in Figure 6.2 on page 166). Sometimes papers in a folder are redistributed by adding subject folders instead of subdividing by dates, as is the case with APPLICATIONS in Figure 6.2.

New folders may be needed because:

- A new group of names is to be added to a file.
- Older folders have become full, and additional ones must be added to take care of the overload.
- Enough records have accumulated for certain correspondents so that their records can be removed from the general folders and put into individual folders.
- Folders have worn out from heavy use and must be replaced.
- The scheduled time has arrived for replacing folders and transferring infrequently used folders to inactive storage. Chapter 7 further explains records transfer.

Types of Folders

Other folders frequently used in offices are a suspension or hanging folder, a bellows folder, and a pocket folder. These folder types can be useful for particular types of records within a RIM system.

A **suspension (hanging) folder** is a folder with built-in hooks on each side that hang from parallel metal rails on each side of a file drawer or other storage equipment. The main advantage of hanging folders over conventional folders is their added support for holding records in a neat, upright position due to support of both the front and back of the folder with hooks on the drawer rails. If your file cabinet does not have built-in rails for hanging folders, you can purchase drawer frames with rails that adjust for letter or legal-size files. Hanging folders have up to ten slots across the upper edge for placement of insertable plastic tabs and can hold several interior folders to subdivide a file.

suspension (hanging)

folder: a folder with built-in hooks on each side that hang from parallel metal rails on each side of a file drawer or other storage equipment

Hanging folders are convenient for storing records.



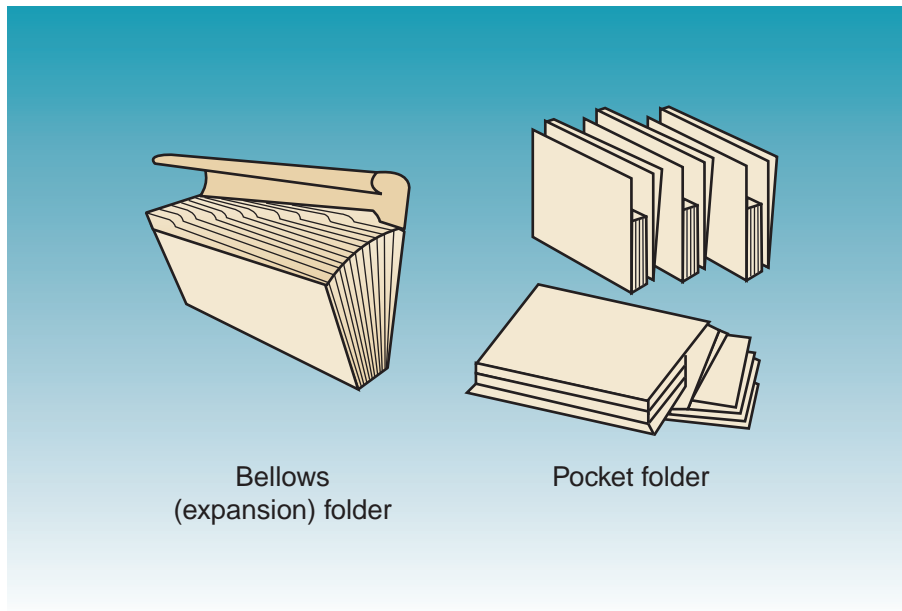
Esselte Corporation

Generally, hanging folders should not leave a file drawer. Placing the contents of these folders in interior conventional-type folders or interior folders that are shorter than traditional file folders provides records protection and facilitates removal or placement of records. In addition, some hanging folders have a pocket for small items like computer disks, notes, or receipts.

A bellows (expansion) folder is a folder that has a top flap and sides to enclose records in a case with creases along its bottom and sides that allow it to expand. These folders usually come with dividers inside for subdividing the records and are used when the volume of stored records is small. In Figure 6.9, the bellows folder is on the left.

A pocket folder is a folder with partially enclosed sides and more expansion at the bottom than an ordinary folder. A pocket folder (Figure 6.9) is useful for transporting as well as for storing records. Also, these folders can be used to store records such as bound reports or other records media with more bulk than can be easily fitted into a traditional file folder.

FIGURE 6.9 Special Folders for Storing Paper Records



Bellows
(expansion) folder

Pocket folder

Follower Blocks or Compressors

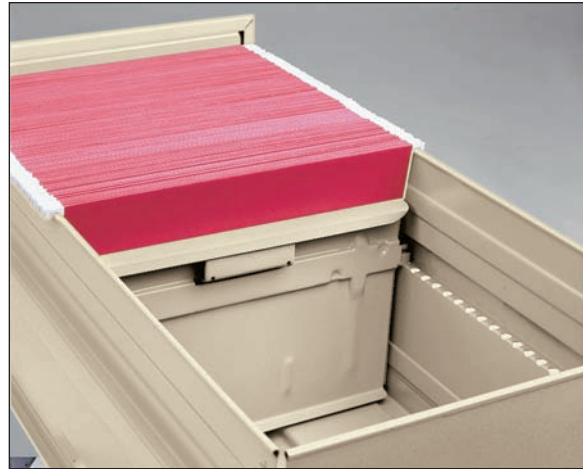
Failing to use proper means to hold drawer contents upright causes folders to bend and slide under one another. The proper number of guides and correct use of a follower block behind the guides and folders keeps folders upright. A **follower block (compressor)** is a device at the back of a file drawer that can be moved to allow contraction or expansion of the drawer contents as shown in the photo on page 174. A follower block that is too loose will allow the drawer contents to sag; one that is too tight will make filing and retrieving a folder difficult. In an over-compressed drawer, as in an overcrowded drawer, locating and removing a single sheet of paper is difficult. Instead of follower blocks, some file drawers have slim steel upright dividers placed permanently throughout the file drawer to keep the contents vertical. Also, shelf files use a series of metal upright dividers to hold records

How is a bellows folder different from a pocket folder?



follower block

(compressor): a device at the back of a file drawer that can be moved to allow contraction or expansion of the drawer contents



The HON Company

A follower block (compressor) helps keep files upright in a file drawer.

upright. A lateral or vertical file with metal rails and hanging folders does not require the use of a follower block; the suspension of each folder on the drawer rack holds records upright.

OUT Indicators

An **OUT indicator** is a control device, such as a guide, sheet, or folder, that shows the location of borrowed records. These indicators contain a form for recording the name of the person borrowing the record, the date it was borrowed, a brief statement of the contents of the record, and the due date for return to storage. When a borrowed record is returned to storage, the OUT indicator is removed, to be reused, thrown away, or saved and later used to check the activity at the files or to determine which records are active or inactive. Commonly used indicators are OUT guides, OUT folders, and OUT sheets.

OUT Guides

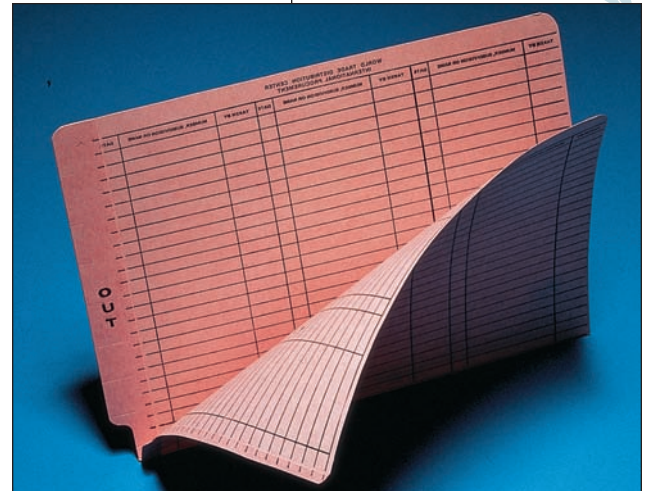
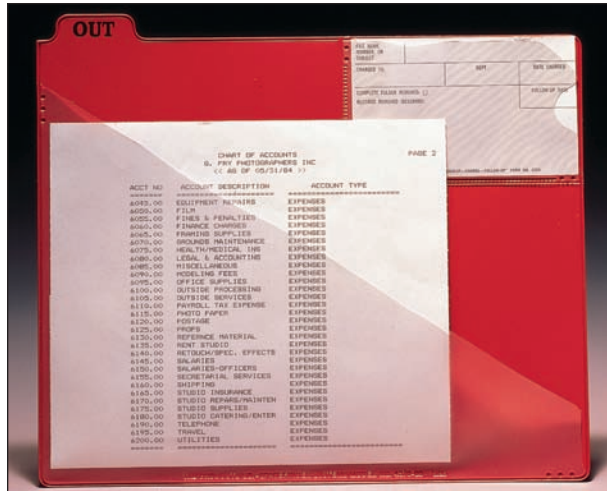
An OUT guide is a special guide used to replace any record that has been removed from storage and to indicate what was taken and by whom. When the borrowed record is returned, the filer can quickly find the exact place from which the record was taken. An OUT guide is made of the same sturdy material as other guides with the word OUT printed on its tab in large letters and a distinctive color. In Figure 6.2 on page 166 an OUT guide is located between the AONE STORAGE AND SUPPLY and the APLET OUTLET THE individual folders. The guides can have preprinted charge-out forms on both sides or a plastic insert pocket to hold a charge-out form. Some OUT guides have a pocket for temporarily holding documents to be replaced in the folder when it is returned to the file.

OUT Folders

An OUT folder is a special folder used to replace a complete folder that has been removed from storage. This folder has a pocket or slot into which a small card is placed bearing the same information concerning who took the folder, the date it was taken, its contents, and the date the folder should be



OUT indicator: a control device, such as a guide, sheet, or folder, that shows the location of borrowed records



An OUT folder indicates the location of records that have been removed from the files.

returned to storage. The OUT folder remains in the file as a temporary storage place for records that will be transferred to the permanent folder when it is returned to storage.

OUT Sheets

An OUT sheet is a form that is inserted in place of a record removed from a folder. An OUT sheet is often the same size and color as an OUT guide, but its thickness is that of a sheet of paper. An OUT sheet remains in the file folder until replaced with the returned record.

Labels

Containers, guides, and folders that help filers store records efficiently must be labeled to guide the eye to the appropriate storage location. A **label** is a device that contains the name of the subject or number assigned to the file folder or section contents. It may have other pertinent information, be color-coded to denote its place in an overall filing system, or have a bar code. A **caption** is a title, heading, short explanation, or description of a document or records.

Container Labels

The labels on drawers, shelf files, or other storage containers should be clearly but briefly worded and inclusive enough to represent the contents. The containers usually have holders on the outside where card stock labels can be inserted. Various colors are available on perforated card stock sheets. ARMA guidelines recommend centering information for the container label in all caps with no punctuation. The caption on the drawer illustrated in Figure 6.2 on page 166 reads *NAMES WITH NUMBERS A–B*, indicating that records of correspondents whose names are within the A and B sections of the alphabet



label: a device that contains the name of the subject or number assigned to the file folder or section contents

caption: a title, heading, short explanation, or description of a document or records

are stored in that drawer. Names in which the key units are numbers written as digits are filed before all alphabetic names. For example, *123 Builders* comes before *Albany Builders*.

Guide Labels

Labels on guides consist of words, letters, or numbers (or some combination of these items). In Figure 6.2 on page 166, the guides shown have window tabs into which keyed captions have been inserted (NAMES WITH NUMBERS, A, APPLICATIONS, B, BAILEY, BENNETT, BOSWORTH). Some guides (alphabetic or numeric guides) are available with preprinted information. ARMA guidelines recommend placing guide captions near the left margin of the label and as near as possible to the top. Print captions in all capital letters with no punctuation. Single letters of the alphabet may be centered on guide labels if preferred.

Folder Labels

Folder labels come as pressure-sensitive adhesive labels in continuous folded strips or on sheets that can be prepared with computer software and affixed to folders. A colored stripe across the top is often used on a white or buff-colored label. Sheets of labels for computer generation usually have columns of labels across an 8 1/2 by 11-inch sheet. Most word processing software has settings for different label sizes that match common label product numbers. Also, packaging that comes with the labels often has instructions for required software settings. Many vendors have computer software programs that generate labels, or they provide a service for custom-printed labels. Some vendors have printers that print durable laminated labels.

Bar codes can be generated along with a name on a label. Use of a bar code tracking system keeps a record of a file location at all times. When a file is checked out, a scanner reads the bar code. Information about the file and who checked it out is then updated and recorded in a computer program. Sometimes another label strip is generated for OUT indicators. Use of a bar code tracking system can greatly improve retrieval rates. Refer to Chapter 7 for more on bar code tracking.

How do bar codes on labels aid in locating records?

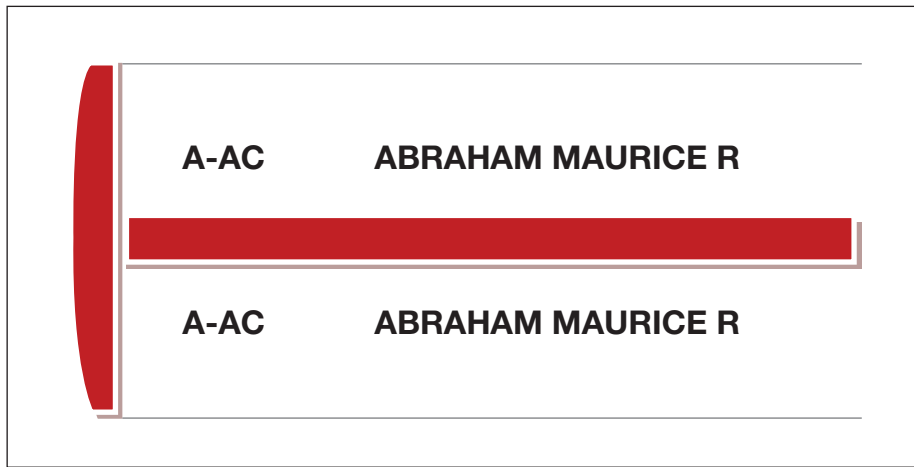


Color-coded labels are available in a variety of styles.

Courtesy of Ames Color-File, www.amescolorfile.com

Place folder labels near the left edge and as near the top of the label or the bottom of the color bar as possible. Wrap-around side-tab labels for open-sided lateral file cabinets or shelf filing are placed both above and below the color bar separator so that the information is readable from both sides of the folder. Word processing software with automatic label settings places information in the proper location on the label. For alphabetic filing, the letter of the alphabet is keyed first, followed by about 1/2 inch of blank space, then the filing segment. In all cases, the label is keyed in capital letters with no punctuation as shown in Figure 6.10.

FIGURE 6.10 Labels for Shelf Files Have a Caption on Both Sides of the Label



When new folders are prepared, make sure the placement of the labels and the caption format are the same as those on other folders. Consistency in the placement and format of labels helps achieve faster retrieval of a required folder. One way to achieve uniform placement of labels is as follows: When a new box of folders is opened, remove all the folders, hold them tightly together, and stand them upright on a flat surface. Place a ruler or stiff card over the tab edges at the spot where all the labels are to be affixed. Make a pencil mark across the top edge of all the tabs. A very small pencil mark will show on each of the tabs at the same place and will serve as a guide for attaching all the labels.

Sorters

A sorter is a device used to arrange records into alphabetic or numeric categories and to hold records temporarily prior to storage. The records are organized alphabetically (or numerically for a numeric system) in the order they will be stored to improve the speed and accuracy of actual storage in the records system. The type of sorter used depends on the volume of records in the office. The photo on page 178 shows one sorter that accommodates records such as checks, sales slips, time cards, and correspondence. Placing documents in a sorter prior to storing them makes finding a document easy if the document is called for before it is stored.

Other specialized supplies are discussed in later chapters of the text, as their use becomes necessary. The supplies just explained and illustrated are basic ones and applicable to all storage methods.

What format should be used for folder labels?

How is a sorter used?



South-Western/Cengage Learning

A sorter is used to arrange files in preparation for storage.

Selection of Storage Equipment and Supplies

Every office has its own RIM system; and the right equipment, supplies, and filing accessories can improve document-handling efficiency. Proper selection of equipment can result in saving space and time, both factors that can reduce operating costs. Records managers should keep updated on new and improved products by reading business periodicals and trade magazines; viewing vendor catalogs, brochures, and websites; attending business shows; and participating in professional RIM association meetings.

Appropriate selection of storage equipment and supplies requires consideration of the following factors:

1. *Type and volume of records to be stored and retrieved.* An inventory of what is to be stored is a basic step in making the best choice of storage equipment and supplies. Records in different formats or media such as papers, cards, books, computer disks, microfilm, videos, architectural drawings, or computer printouts have special storage needs. A records inventory also shows the current volume of stored records. Future volume and needs must be forecast. Chapter 7 presents more detailed information about the records inventory.
2. *Degree of required protection of records.* Confidential or classified records require equipment with locks or location in a records vault. Records vital to the operation of the business need fireproof or fire-resistant storage equipment.
3. *Efficiency and ease of use of equipment and systems.* The ease with which records can be found is a major consideration. The simpler the system is to understand, the easier it is to use. Also, less training of new employees is needed when the system is a simple one. Time saved by personnel who store and retrieve records means dollars saved. The ease of expansion or modification of a system or the addition of compatible equipment will be important to meet the changing needs of an organization.

What are the benefits of using the right type and quality of storage equipment and supplies?

4. *Space considerations.* Floor-weight restrictions, use of space to the ceiling (air space), or the advisability of counter-type equipment or something in between, and the possibility of transferring part of the records to off-site storage facilities affect space which, in an office, is costly. Lateral, shelf, or rotary equipment can house more square feet of records than can conventional drawer file cabinets in the same square footage of floor space. The effect of new equipment on present layout and workflow should also be considered.
5. *Cost.* After all other criteria have been examined, cost and the company budget may be the final determinants as to which equipment and supplies may be acquired. The astute records manager realizes that the least expensive equipment and supplies may not provide the most economical records storage. Quality in construction and materials is important. Inferior materials or lightweight stock may need frequent and costly replacement. In determining costs, keep in mind the points given in Figure 6.11.

Special needs of your organization could add other factors to your list of considerations. Also, consult users of equipment under consideration for purchase to learn about benefits, problems, or special considerations associated with the equipment.

CORRESPONDENCE STORAGE PROCEDURES

This last section of the chapter looks at the advantages and disadvantages of alphabetic records management, some criteria for selecting an alphabetic storage system, and procedures for storing correspondence alphabetically.

FIGURE 6.11 Cost Considerations for Selecting Equipment

COST CONSIDERATIONS

- Cost of personnel needed to work with the records
- Compatibility of supplies and equipment
- Benefits of using the right type and quality of storage equipment and supplies
- Cost of new storage equipment and supplies that must be purchased
- Advisability of using local vendors rather than purchasing from out-of-town vendors
- Possibility of discounts for quantity purchases
- Feasibility of choosing used rather than new equipment
- Volume of records that can be stored within the equipment
- Credit terms available from the vendor
- Cost of assembling equipment
- Cost of delivery for equipment and supplies

What factors need to be considered when choosing a storage system?

My Records



Storing Records

How and where should you store your records? What types of storage containers are needed for storing your records?

Vital Records

Vital records are usually not replaceable and require the highest degree of protection. Property deeds and wills are examples of vital records. Follow these guidelines for storing vital records:

- Store vital records in a bank safe deposit box.
- Keep the safe deposit key in a safe place accessible to you and your closest family members.
- Store copies of vital records at home in a fireproof box. Generally the more hours that records will remain below the flash point (which is 450 degrees Fahrenheit [F] for paper documents) in the container, the more the container will cost. Fireproof boxes are tested at 1700°F for 1, 2, or 3 hours. The inside temperature cannot rise above 350°F to be considered fireproof. Look for a box that meets these standards.

Important Records

Important records are usually replaceable but at considerable cost. They require a high degree of protection. Bills and receipts are examples of important records. Follow these guidelines for storing important records:

- Use a secure location near where you pay your bills to store unpaid bills. When you pay the bills, write the date and amount that you paid on your copy of the bill. Store this copy with other copies of paid bills and receipts in an alphabetic file.
- If you have a small file cabinet or a banker's box, create folders for your major bills such as your rent or mortgage, car, utilities, and so on. Store copies of paid bills and receipts in this container.

- If any of the bills you pay are tax deductible, store those receipts in a separate folder by date, with the most recent at the front. When you complete your tax return, you can find the receipts for deductions in this folder.
- If you use money management software, use the tax deduction portion of the software. Create backup copies of your data at least once a month and store the backups in a secure container.
- Consider using a bellows file to store all of the information used to file your tax return, including a copy of the return itself. Date the outside of the file and retain this container and records until it is time to dispose of the records.

Useful Records

Useful records are usually replaceable at slight cost and require a low degree of protection. Product manuals, warranties, and routine correspondence are examples of useful records. Follow these guidelines for storing useful records:

- Create separate folders to store records such as product manuals, warranties, and routine correspondence.
- Store the folders in a safe place that is readily accessible.
- When products are replaced or discarded, remove the product manuals and replace them with the manuals for the new products.
- Periodically, review warranties and note their expiration dates. Remove warranties that have expired and destroy them or place them in a folder marked "Expired Warranties."

Advantages and Disadvantages of Alphabetic Records Management

The advantages of using alphabetic records management are as follows:

- Alphabetic storage does not require an index and is, therefore, a direct access storage method. **Direct access** is a method of accessing records by going directly to the file without first referring to an index or a list of names for location in the files.
- All records for correspondent names that begin with numbers written as digits are filed before all alphabetic names according to alphabetic indexing Rule 7. Knowing this rule facilitates storage and retrieval.
- The alphabetic dictionary (A to Z) order of arrangement is simple to understand.
- Storage is easy if standard procedures are followed.
- Misfiles are easily checked by examining alphabetic sequence.
- The direct access feature can save time and, thus, reduce costs of operation.
- Related records from one name, either a company or an individual, are grouped together.

The disadvantages of alphabetic records management are as follows:

- Misfiling is prevalent if rules for alphabetic storage are not established and followed.
- Similar names may cause confusion, especially when spellings are not precise.
- Transposition of some letters of the alphabet is easy, causing filing sequence to be out of order.
- Filing under the wrong name can result in lost records.
- Names on folders are seen instantly by anyone who happens to glance at an open storage container. Consequently, confidential or classified records are not secure.
- Related records with different correspondent names are filed in more than one place.

Selection and Design of an Alphabetic Records Management System


At the time a new office is opened, managers must decide on the kind of storage system to be selected or designed. For established offices, the system in use may prove to be ineffective because it no longer serves the needs of those who request records. If records are requested by names of individuals, businesses, and organizations with few subjects, then an alphabetic system is best for that office.

When selecting the alphabetic storage method, utmost care should be exercised in the selection or design because, once installed, it is likely to be

What information does a records manager need to know before talking to a manufacturer of storage systems?

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

direct access: a method of accessing records by going directly to the file without first referring to an index or a list of names for location in the files



How is color used in storage systems?

• • • • • • • • • • • • • • • •

color coding: using color as an identifying aid in a filing system to divide the alphabetic sections in the storage system

color accenting: the consistent use of different colors for different supplies in the storage system, such as guides, folders, OUT indicators, and labels

used for a long time. To select an alphabetic system, or to redesign one, the records manager should know:

- The total volume of records to be stored.
- The number of records in each alphabetic section and which letters of the alphabet contain a large number of records.
- The expected activity in the files—an estimate of how many times records may be requested.
- The length of time records are to be kept.
- The efficiency of the filing personnel.
- The time and resources available for training personnel.

In some cases, the person in charge of the records may seek the help of a RIM consultant or a representative of a filing system manufacturer to determine the best records storage system. These people study the information needs of the office, consult with the person in charge of the records, and make recommendations.

The person in charge of the records must keep the needs of the office in mind and not be swayed by the beauty of a system, the expert sales techniques of a representative, or the apparent low cost of a system. The ultimate test of any successful storage system (alphabetic or any other) is whether records that have been stored within the system can be found quickly when needed.

Examples of Records Storage Systems

Many different manufacturers create storage supplies and systems. The use of color enhances the effectiveness of a records storage system. For instance, all key units that begin with A are stored in white folders with red labels. If you see a yellow folder among the white folders, you know that something is misfiled, and you can immediately place the yellow folder with other yellow folders.

The use of color has two meanings: color coding and color accenting. **Color coding** is using color as an identifying aid in a filing system (for example, different colors might be used to divide the alphabetic sections in the storage system). **Color accenting** is the consistent use of different colors for different supplies in the storage system—one color for guides, various colors for folders, one color for OUT indicators, and specific colors of labels or stripes on labels. Color coding is used in the system illustrated in the photo on page 183. Blocks of colored folders act as a visual guide to lead you quickly to a section of the alphabet. Use of a contrasting color for special folders such as key customers, current projects, or unpaid bills makes them easy to locate.

For an alphabetic system, color bars can correspond to the first letters of the correspondent's name to create blocks of colors. Another use of color shows the same first color for alphabetic letter guides and a different second color on the label for secondary guides. The use of color speeds retrieval because it eliminates the need to stop and read letters. Misfiles stand out visually when the color pattern is broken.

Many manufacturers produce trade-named alphabetic systems with special characteristics intended to speed records storage and retrieval and to provide a double check against misfiling. These systems use color extensively. Other trade-named alphabetic systems are available; the ones discussed here are only representative of the many systems available.



Esselte Corporation

The use of color aids in storing and locating records.

TAB Products

TAB Products is a company that provides equipment, supplies, and services for filing systems using color coding and color accenting in a variety of records systems ranging from simple to complex. *TABQUIK*[®] products allow you to produce and apply color-coded file folder labels. You can produce labels to color code file folders and other items, such as backup tapes, videos, books, and binders. This software can be used with a variety of printers. TAB's *File-Tracker*[®] software package allows you to track document location through use of bar codes and bar code readers. Bar code readers enable you to check items in or out or transfer them to a new location without manual data entry.

Smead Manufacturing Company

Smead Manufacturing Company uses color in its filing systems and products. Smead's color-coded top tab or end tab folders have a large wrap-around color bar printed on the top or end tab of each folder. Smead also offers software such as *ColorBar*[®]. This software can be used for creating labels that include file headings, color-coded indexing, bar codes, text, images, and graphics.

ColorBar Express[™] is an online labeling system offered by Smead Manufacturing Company. This service allows users to print color labels without the expense of purchasing labeling software. Users simply access the *ColorBar Express* website where they can design and print labels using the onscreen instructions and illustrations. The service is available for an annual subscription fee.

Procedures for Storing Correspondence Records

The storing operation is an exacting responsibility that must be done with concentration and the knowledge that a mistake can be costly. No matter whether records storage is centralized or decentralized, the filing procedures remain the same: Records must be (1) inspected, (2) indexed, (3) coded, (4) cross-referenced if necessary, (5) sorted, and (6) stored. Therefore, the filer must enjoy detailed work, be dexterous, have a good memory, be willing to follow procedures consistently, be interested in developing new and better procedures, and realize the importance of correctly storing all records so that they may be found immediately when needed. The following sections give details about each of these steps.

Inspecting

Checking a record to determine whether it is ready to be filed is known as **inspecting**. A business record must not be stored until someone with authority marks it to be released for filing. Whatever action the record requires must be taken or noted prior to storage. Anyone storing records must be certain that action has been taken or noted in a reminder system. Notation in a reminder system assures that the record will be brought to the attention of the proper person at a future date. Storing records before their contents are noted and before appropriate action has been taken can sometimes cause embarrassment to a business and can directly or indirectly result in financial loss or loss of goodwill.

The copy of an outgoing letter or other communication would appear ready to be stored when it is received by the filer for storage. However, in most offices, every original (or incoming) record to be stored must bear a release mark. A **release mark** is an agreed-upon mark such as initials or a symbol placed on a record to show that the record is ready for storage (see “JJ” on Figure 6.12 on page 185). The person who prepared the reply or otherwise handled the matter usually puts this release mark on the letter.

Types of marks used are initials, a code or check mark, a punched symbol, a stamped notation, or some other agreed-upon mark. A missing mark is a signal to the filer to inquire why the release mark is missing. A date/time stamp (see OCT 23, 20– 10:30 AM in Figure 6.12) is not a release mark. The person who opens mail often stamps the correspondence for reference purposes with a date/time stamp showing the date and time received. All filers must observe the following cardinal rule: Be sure the record to be stored has been released for storage.

Indexing

Because you indexed filing segments in applications for Chapters 2, 3, and 4, you know that indexing is a mental process. On correspondence, the name (filing segment) may appear in various places. As you know, the selection of the right name by which to store the record means that the record will be found quickly when it is needed. If the wrong name is selected, much time will be wasted trying to locate the record when it is

.....
inspecting: checking a record to determine whether it is ready to be filed

release mark: an agreed-upon mark such as initials or a symbol placed on a record to show that the record is ready for storage

FIGURE 6.12 Letter Released and Coded for Filing

<p><u>Investment</u> / ² <u>Strategies,</u>/³ <u>Inc.</u></p>	<p>150 Salmon Ave. Portland, OR 97202-0015 (503) 555-0192 (503) 555-0191 FAX</p>
--	---

October 21, 20--

Ms. Joan Jensen, Manager
1040 Tax Express
1500 SW Cedar Ave.
Portland, OR 97204-1500

JJ

Oct. 23, 20-- 10:30 A.M.

Dear Ms. Jensen

Thank you for your interest in offering investment advice to your customers. We are happy you have asked us to work with you on this new program.

We have hired the ¹Trotter/²Poll/³Company to conduct a survey to help us gather information X about your customers. In the near future, Trotter Poll Company will send to each of your customers a questionnaire that will provide spaces for the listing of annual income, approximate annual expenses, amount available for saving and investment, financial objectives, and other pertinent information.

We will analyze the data received from all those who return the questionnaire and then make recommendations for types of investments your customers should consider.

Sincerely yours

James Washington
James Washington
Investment Counselor

psm

How do you index incoming and outgoing correspondence?

eventually requested. Keep these rules in mind when indexing incoming correspondence:

- On incoming correspondence, the name for storage purposes is usually in the letterhead.
- If a letterhead has no relationship with the contents of the letter, the writer's name or the writer's business connection is used. The letterhead name is disregarded for filing purposes. An example is a letter written on hotel stationery by a person who is out of town on a business trip.
- Incoming correspondence on plain paper (paper without a letterhead—usually personal) most likely will be called for by the name in the signature line, so this name is the one used for storage.
- When both the company name and the name of the writer seem to be of equal importance, the company name is used.

Keep these rules in mind when indexing outgoing correspondence:

- On the file copy of an outgoing letter, the most important name is usually the one contained in the letter address.
- When both the company name and the name of an individual are contained in the letter address of the file copy of an outgoing letter, the company name is used for filing unless the letter is personal or unless a name in the body is the correct name to index.
- On a copy of a personal letter, the writer's name is usually the most important and should be used for storage.

If a special subject is used in an alphabetic arrangement (such as Applications), the subject is given precedence over both company and individual names appearing in the correspondence. Often, the subject name is written on the correspondence at the top right.

Sometimes two names seem equally important. One name is selected as the name by which the record is to be stored and the other name is cross-referenced according to the rules learned in Chapters 2, 3, and 4. In case of real doubt about the most important name, request clarification from the records supervisor or the department from which the record came. Consult a RIM manual if one is in use in the office.

How are special subjects used in an alphabetic storage arrangement?

Coding

Often the filer is responsible for coding the record. The filing segment can be coded in any one of several ways. Figure 6.12 on page 185 shows diagonals placed between the units, the key unit underlined, and the remaining units numbered. In some offices, a colored pencil is used for coding to make the code stand out. In other offices, coding is done with a pencil to keep distracting marks at a minimum. Coding saves time when refileing is necessary. An uncoded record removed from storage and returned at a later date to be refiled must be indexed and coded.

What are the advantages to coding records?

Cross-Referencing

The same cross-reference rules learned in Chapters 2, 3, and 4 apply for storing correspondence. For example, assume that the letter shown in Figure 6.12 on page 185 comes to the filer for storage. The record is indexed and

Career Corner



Management Analyst - Records Officer, GS-0343-14

The following job description is an example of a career opportunity in records management with the U.S. government.

Job Summary

The Department of the Interior is devoted to protecting and preserving the natural resources of this great nation, including National Parks, Landmarks, and the well-being of communities, including those of Native American, Alaska Natives, and affiliated Islanders.

The incumbent will serve as a Senior Records Officer with responsibility for leading, planning and managing the bureau's records management program for both core mission and administrative resources. If selected for this position, you will be working for the U.S. Department of the Interior, Minerals Management Service, Office of Administration

and Budget, Information Management Division, Capital Planning and Information Policy Branch, located in Herndon, VA.

Key Requirements

- Applicants must be U.S. Citizens.
- This position is subject to a pre-employment background investigation.
- Relocation expenses are not authorized.
- Travel is not required.
- You will be required to have federal payments made by Direct Deposit.

Source: This job description was adapted from a posting on USAJOBS, the official job site of the U.S. federal government. A link to this website is provided at the website for this textbook.

coded for Investment Strategies, Inc., by placing diagonals between the units, underlining the key unit, and numbering the other units. The letter is then coded for cross-referencing because it is likely to be called for by Trotter Poll Company. A line is drawn under Trotter Poll Company, diagonals are placed between the units, all units are numbered, and an X is written in the margin.

A separate cross-reference sheet, as shown in Figure 6.13 on page 188, may be prepared for an alternative name, or a photocopy of the original record can be coded for cross-reference purposes. Note that the name at the top of the cross-reference sheet is coded for storage in exactly the same way as for any record—diagonals are placed between the units, the key unit is underlined, and succeeding units are numbered. The date of the record and a brief statement regarding the contents of the record should be recorded on the cross-reference sheet. The name or subject of the original record is recorded in the SEE section in as-written order. Entering the date the record is filed and your name completes the cross-reference sheet.

FIGURE 6.13 Cross-Reference for Letter Shown in Figure 6.12

CROSS-REFERENCE SHEET	
Name or Subject	
2	3
<u>Trotter / Poll / Company</u>	

Date of Record	
<u>October 21, 20--</u>	

Regarding	
<u>Survey of customers regarding investment objectives</u>	

SEE	
Name or Subject	
<u>Investment Strategies, Inc.</u>	

Date Filed	<u>10/23/20--</u>
By	<u>J. Phelps</u>

What is a permanent cross-reference?

At times, a permanent cross-reference replaces an individual folder to direct the filer to the correct storage place. A permanent cross-reference is a guide with a tab in the same position as the tabs on the individual folders and is placed in a location that is frequently assumed to be the location of that folder. The caption on the tab of the permanent cross-reference consists of the name by which the cross-reference is filed, the word *SEE*, and the name by which the correspondence folder may be found. In Figure 6.2 on page 166, a permanent cross-reference guide (BETSY'S CRAFTS SEE ROSS INDUSTRIES) appears in proper alphabetic sequence in the file drawer.

A permanent cross-reference can be used, for instance, when a company changes its name. The company's folder is removed from the file, the name is changed on the folder, and the folder is refiled under the new name.

A permanent cross-reference guide is prepared under the original name and is placed in the position of the original folder in the file. For example, assume that *Emory and Phillips* changes its name to *Riverside Distribution Co.* The EMORY AND PHILLIPS folder is removed from the file, the name on the folder is changed to RIVERSIDE DISTRIBUTION CO, and the folder is filed under the new name. A permanent cross-reference guide is made and filed in the E section of the file: EMORY AND PHILLIPS SEE RIVERSIDE DISTRIBUTION CO.

Sorting

Sorting is arranging records in the sequence in which they are to be filed or stored. In most instances, a sorting step precedes the actual storing. Sorting should be done as soon as possible after coding and cross-referencing, especially if storage must be delayed. Sometimes coding and rough sorting are done in sequence. Rough sorting is arranging records in approximately the same order as the filing system in which they will be placed. After each record has been coded, it should be rough sorted into a pile of like pieces—all As, Bs, Cs are together, all Ds, Es, Fs are together, and so on. Records having filing segments that are numbers written as digits are rough sorted into 100s, 200s, and so on. Coordination of inspecting, indexing, coding, and sorting means handling each record only once. If a record is needed before it has been filed, it can be found with less delay if records have been rough sorted instead of being put in a stack on a desk or in a

Records Management in Action



Businesses Save Money by Going Paperless

A study by PricewaterhouseCoopers, a major accounting firm, estimated the cost of paper management to be about \$50 per document. Factors included in the estimate were:

- Cost of paper
- Printing costs
- Fax/copier equipment and supplies
- Distribution
- Mailing costs
- Courier services
- Filing supplies and cabinets
- Storage space
- Staff time handling, managing, and filing paper

Fifty to 70 percent of office space is still dedicated to filing and storage of records. The bad news is that studies are showing more than 45 percent of those files in cabinets are duplicate information, and 80 percent of those files are usually never accessed again.

One of the ways to save money on paper costs is to create clear record and data guidelines. Two primary methods are the use of shared drives on servers or document management software. A logical file structure including record retention and parameters of how, where, and for how long data should be stored helps employees feel more secure with maintaining electronic data and thus printing less.

Removing individual and desktop printers is another way to reduce paper use. Workers will then consider alternatives to printed paper especially if they have to “walk down the hall” to retrieve paper from the printer. Printers can also be set to “automatic duplexing,” which means that the print will be on both sides of the paper. The Bank of America reduced paper use by 50 percent and saved \$1 million in total paper and printing costs.

Source: K. J. McCorry, “How to Save Money Going Paperless,” *ColoradoBIZ Magazine*, September 2009, page 52.



sorting: arranging records in the sequence in which they are to be filed or stored

What is the difference between rough sorting and fine sorting?

What preparation is needed before a record is stored?

What steps should be taken before placing the record into its storage location?

.....
storing: placing records into storage containers

“to-be-filed” basket. Sorting can be done on a desk or table top, with the records placed in separate piles. Use of a desktop sorter that has holders or pockets for various sections of the alphabet makes sorting easier.

After rough sorting the records according to alphabetic sections, the filer removes them section by section, alphabetizes them properly within each section, and replaces them in order in the sorter for temporary storage. This step is often called fine sorting. Fine sorting is arranging records in exact order of the filing system in which they will be placed. This alphabetizing of records in all sections makes them ready to be stored. Fine sorting records with numeric key units arranges them in numeric order prior to storing. Then the records are removed in sequence from all divisions of the sorter and taken to the files for storage.

Storing

Storing is placing records into storage containers. Storing records correctly is very important. A misfiled record is often a lost record; and a lost record means loss of time, money, and peace of mind while searching for the record.

The time at which records are actually put into the storage containers depends on the workload during the day. In some offices, storing is the job performed first in the morning; in others, all storing is done in the early afternoon; in others, storing is the last task performed each day. In still other offices, storing is done when records are ready and when a lull in other work occurs. In a centralized filing department, storage takes place routinely throughout the day every day—along with retrieving, and re-storing.

Prior to storing records, the filer must remember to:

1. Remove paper clips from records to be stored.
2. Staple records together (if they belong together) in the upper right corner so that other records kept in the folder will not be inserted between them by mistake.
3. Mend torn records.
4. Unfold folded records to conserve storage space unless the folded records fit the container better than when unfolded.

Before placing the record into its storage location, the filer should:

1. Glance quickly at the container label to locate the place to begin storage.
2. Scan the guides until the proper file section is located.
3. Pull the guides forward with one hand, while searching for the correct folder.
4. Check for an individual or a special folder for the filing segment. If none of these folders is in the file, locate the general folder.
5. Slightly raise the folder into which the record is to be placed. Avoid pulling the folder up by its tab, however, as continual pulling will separate the tab from its folder. Raising the folder ensures that the record will be inserted into the folder and not in front of or behind it.

6. Determine the correct placement of the document in the folder because all records in the folder will bear the same coded name.
7. Place each record into the folder with its top to the left. When the folder is removed from storage and placed on a desk to be used, the folder is opened like a book with the tab edge to the right. All records in it are then in proper reading position.
8. Jog the folder to straighten the records if they are uneven before replacing the folder.

Special points to remember include:

- Never open more than one drawer in a cabinet at a time. A cabinet can fall forward when overbalanced by having two or three loaded drawers open.
- The most recently dated record in an individual folder is always placed at the front and, therefore, is on top when the folder is opened. The record bearing the oldest date is the one at the back of the folder.
- Records that are removed from a folder and later refiled must be placed in their correct chronologic sequence, not on top of the contents of the folder.
- Records within a general folder are arranged first alphabetically by correspondents' names and then by date within each correspondent's records. The most recently dated record is, therefore, on top of each group (see Figure 6.7 on page 170).

Using a Tickler File

A **tickler file** is a date-sequenced file by which matters pending are flagged for attention on the proper date. This chronologic arrangement of information “tickles” the memory and serves as a reminder that specific action must be taken on a specific date. Other names sometimes used to describe such a file are *suspense file* and *pending file*. The basic arrangement of a tickler file is always the same: chronologic by current month and day. A manual arrangement usually takes the form of a series of 12 guides with the names of the months of the year printed on their tabs. One set of guides or folders with tabs printed with 1 through 31 for the days of the month is also used. A computer tickler file is usually in the form of entries in a database with a reminder list showing on the screen or printed in sort order by action date. Figure 6.14 on page 192 shows a list of due dates for OUT files from a database. An example of a manual tickler file would be one for holding correspondence that requires specific action to be taken before being placed into the alphabetic correspondence file.

Many office workers use a tickler system to remind them of events that happen yearly such as birthdays and anniversaries; membership expiration dates and dues payments; insurance premium payments; weekly, monthly, or annual meetings; subscription expiration dates; and the dates on which certificates of deposit or bonds are due. In records and information management, tickler files can be used to keep track of due dates for records that are borrowed or to keep track of records that do not have a release mark.

How might a tickler file be used in a records management system?



tickler file: a date-sequenced file by which matters pending are flagged for attention on the proper date

FIGURE 6.14 Tickler Database OUT Log

OUT Log Tickler File: Table

REQUEST ID	DATE DUE	REQUESTED BY	PHONE EXT	DEPARTMENT	RECORD TYPE	CORRESPONDENT NAME	RECORD DATE
1	10/6/2010	Thomas Logan	8966	Administration	Record	Miles Law Office	1/30/2009
2	10/9/2010	Margarita Shelby	9912	Advertising	Record	WAXI Radio	5/15/2010
3	10/10/2010	Mary Neismith	8999	Accounting	Folder	Martin Auto Parts	
4	10/12/2010	David Smelson	8875	Marketing	Record	Margaret Jackson	3/17/2007
5	10/12/2010	Juan Carlos	9986	Advertising	Record	ADVO Systems	7/18/2008
6	10/13/2010	Sue Bell	3264	Accounting	Record	Mid-Atlantic Boxes Inc.	5/16/2009
7	10/17/2010	Mary Jane Hilton	7792	Purchasing	Record	Jones Supply Co.	9/16/2010
8	10/19/2010	Jack Kline	8865	Marketing	Folder	Ikohoto Trade Center	
9	10/19/2010	Wanda Adams	8921	Training	Record	Misty Waters	2/17/2008
10	10/22/2010	John Frymire	8632	Purchasing	Record	J. P. Smith	1/10/2010

On the last day of each month, the person in charge of the tickler file checks through the date cards/folders to be certain that nothing has been inadvertently overlooked during the month. Then, all papers from behind the next month's guide are removed and redistributed behind the daily guides (numbered 1 through 31). At the end of October, for instance, the spaces behind all the daily guides would be checked, the October guide would be moved to the back of the file, and the November guide would be put in the front. All reminders that were filed behind November would then be redistributed behind the daily guides according to the dates on the reminders.

The tickler file must be the first item checked each day by the person in charge of it. Information on the notes found in the tickler file serves as a reminder to act or follow through on specific instructions.

Misfiled and Lost Records

A lost or misplaced record can delay or affect the work of employees. If storage is done haphazardly or without following consistent procedures, lost records will be numerous. Lack of attention to spelling, careless insertion of records into the storage equipment, and distractions often cause records to be misfiled and, therefore, "lost."

Experienced filers use the following techniques in trying to find missing records:

- Look in the folders immediately in front of and behind the correct folder.
- Look between folders and under all folders in the drawer or shelf.
- Look completely through the correct folder because alphabetic or other order of sequence may have been neglected due to carelessness or haste.
- Look in the general folder in addition to searching in the individual folder.
- Check for transposition of names (DAVID MILLER instead of MILLER DAVID) and alternate spellings (JON, JOHN).
- Look for the second, third, or succeeding units of a filing segment rather than for the key unit.
- Check for transposition of numbers (35 instead of 53).
- Look in the year preceding or following the one in question.
- Look in a related subject if the subject method is used.
- Look in the sorter or other places that have records en route to storage.
- Ask employees who might logically have the record to look for it in their desks or folders.

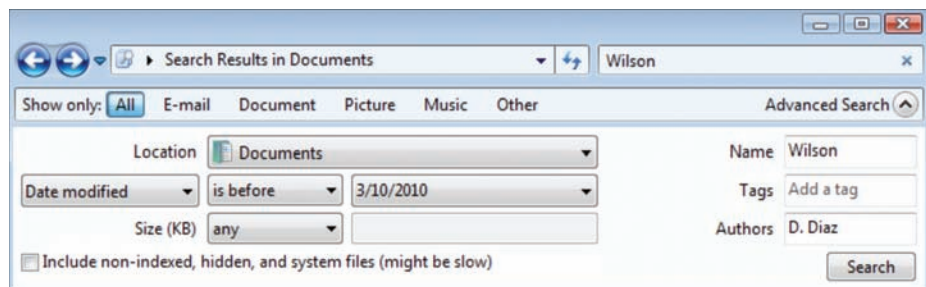
If every search fails to produce the missing record, some records managers try to reconstruct the record from memory, rekeying as much as is known. This information is placed in a folder labeled LOST along with the name on the original folder. This new folder is stored in its correct place as a constant reminder to the filer to be on the alert for the missing record.

What techniques are used to locate lost or misfiled records?

Electronic records can also be difficult to locate if they are not stored according to proper procedures. For example, an application for a job might be stored under the applicant's name in a general folder rather than in an Applications folder. Mistakes in keying a filename can also make a file difficult to find.

To locate electronic records, use the Search feature of your computer's operating system. You can search in one or more folders by entering all or part of a filename. Indicating a date of file creation and the author will further refine the search. An Advanced Search screen for *Microsoft Windows* is shown in Figure 6.15.

FIGURE 6.15 Advanced Search Screen



Efficient correspondence records storage is the result of:

- Good planning to choose the right equipment, supplies, and system.
- Proper training of personnel who recognize the value of the release mark, know and consistently apply the rules for alphabetic indexing, code papers carefully, prepare cross-references skillfully, invariably sort papers before storing, and carefully store records in their proper location.
- Constant concerned supervision by records managers or others responsible for the storage and retrieval functions.

Chapter Review and Applications

KEY POINTS

- The volume of recorded information is rapidly increasing. More electronic records are being created, but paper records still make up a significant portion of all records.
- The four most common types of filing equipment are vertical files, lateral files, shelf files, and mobile shelf files.
- Types of supplies used for correspondence storage include guides, folders, labels, and OUT indicators.
- When selecting filing equipment and supplies, consider the type and volume of records to be stored, degree of protection required, efficiency and ease of use of equipment, space requirements, and cost.
- Alphabetic records management is appropriate for correspondence files with a low to moderate volume of records when records are requested by names of individuals, businesses, and organizations.
- Color can be used to visually separate sections of the file or to call attention to special folders.
- Filing procedures for storing correspondence records include inspecting, indexing, coding, cross-referencing, sorting, and storing.
- Tickler files can be manual or computer based and are used as a reminder for tasks to be done daily.
- Systematic search strategies should be used for finding lost or misfiled records.

TERMS

alphabetic records management
caption
color accenting
color coding
direct access
follower block (compressor)
general folder
guide
individual folder
inspecting
label
OUT indicator

position
primary guide
release mark
sorting
special (auxiliary) guide
special folder
storage (storing)
storage method
suspension (hanging) folder
tab
tickler file

REVIEW AND DISCUSS

1. Compare and contrast the terms *storage*, *filing*, *storage method*, and *records management*. (Obj. 1)

2. List and briefly describe four kinds of commonly used storage equipment for correspondence records. (Obj. 2)

6. Discuss the advantages and disadvantages of the alphabetic storage method. (Obj. 4)
7. What types of information should be gathered before selecting and designing an alphabetic storage system? (Obj. 5)
8. Explain how color can be used in correspondence records storage. (Obj. 6)

12. What is a tickler file and how is one arranged? (Obj. 7)

APPLICATIONS

6-1 Code Correspondence (Obj. 7)

Correctly index and code the names and addresses for outgoing letters shown below to be filed in an alphabetic system. Place a diagonal between units in the filing segment. Underline the key unit and number other units in the filing segment.

Dr. Joyce Phosgene, President 1-2-3 Tailor-made Publications

Callous Records Equipment, Inc. 87 West Second Street

Coney Towers #47 Sacramento, CA 95801-9985

Dallas, TX 75202-1847

Jaymire Communications Systems Oney Jasmine

1812 Roswell Avenue 205 First Street, NE

Albuquerque, NM 87201-1254 Brenham, TX 77833-5415

J. C. Wilshire, Advertising Director

Johnson Office Supplies

100 Black Street

Yuma, AZ 88364-6943

6-2 Changing Storage Equipment (Obj. 2, 3, and 5)

You and one or two of your classmates have formed a records and information management consulting company. The Wilson Charter Co. has asked your company for a consultation about their storage equipment. You and your team visited the Wilson office and noted the following:

- Correspondence is stored alphabetically in traditional four-drawer vertical file cabinets.
 - Everyone in the office has access to the file cabinets.
 - Ten to 20 stored records are retrieved daily, one paper at a time.
1. Along with your team members, analyze the Wilson Charter Co.'s current equipment and determine whether anything should be changed. Would open-shelf files work better? Why do you think so? What factors would contribute to your decision? What other resources are available to help your team assemble the facts needed to propose a solution for Wilson Charter Co.?
 2. Create a proposal for the Wilson Charter Co. giving your team's recommendations for changing the company's filing equipment or procedures.

6-3 Prepare Folder Labels (Obj. 7)

In this application, you will use *Access* to create folder labels for records to be filed in the J section of an alphabetic file.

1. Create a new *Access* database file named *6-4 Labels*.
2. Create a table named **Folder Labels**. Create these fields in the table: Record ID, Name as Written, Caption. Select **AutoNumber** for the field type for the Record ID field. Select **Text** for the field type for all other fields. Set the Record ID Number field as the primary key.
3. Enter the names shown on the following page in the Folder Labels table. In the Name as Written field, enter the complete name as written. In the Caption field, key the letter J followed by two spaces and the name in indexing order. Follow the alphabetic indexing rules studied earlier. In the Caption field, enter the data in all capitals with no punctuation.
4. Create a report for folder labels using the Label Wizard. Choose the **Folder Labels** table as the object the data comes from. Select **Avery Index Maker 3** for the label type (or a label of similar size, about 1 × 3 inches). Select **Arial 12** for the font. Include only the Caption field on the label and sort the labels. Name the report **Folder Labels Report**.



Access Activity

5. Print the labels (or print on plain paper if labels are not available).

Junk by Judy	Vernon L. Jensen, CPA
Julie's Design Studio	John's Jewelry Shop
Charles S. Jungworth	Jill's Wishing Well
Christina A. Jensen	Jottings by Jolene
Jolly Roger Fish 'n Chips	Jon Jungworth Law Firm

6-4 Research Equipment and Supplies (Obj. 2)

1. Visit a website for a company that sells records management equipment and supplies that use color coding or color accenting. To find sites, search using the term *records management system color* in an Internet search engine. You can also find links to sites on the website for this textbook.
2. Prepare a brief summary that describes the types of supplies that use color that this company offers.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 5 Correspondence Filing—Rules 1–5

Job 6 Correspondence Filing—Rules 6–10

Job 7 Correspondence Filing—Rules 1–10 and Tickler File Usage

Continue working with Auric Systems, Inc.
Complete Jobs 5, 6, and 7.

For More Activities Go To:
www.cengage.com/officetech/read

Storing, Retrieving, and Transferring Records

LEARNING OBJECTIVES

1. Explain the importance of developing and implementing a records retention program.
2. List the four values of records, describe each value, and provide an example of each value.
3. Discuss the records inventory, including what it is, why it is done, and what it includes.
4. Describe a records retention schedule and explain its purpose.
5. Discuss manual and automated retrieval procedures.
6. List reasons for transferring records.
7. Discuss types of records center control files.
8. List capabilities of typical records center software.

ON THE JOB

“Confidentiality of information is a critical component of records management, and you can ensure the integrity of the information only if you limit exposure,” says Wendy Shade, Service Line Project Manager with Iron Mountain Incorporated. Customers typically send materials to storage once they have a few full boxes. The benefit of sending them on a continuous basis is eliminating the risk involved with having them staged in an open environment where they are easily accessible.

If an organization has a retention schedule, but it hasn't been recently updated, it creates a lack of confidence to destroy materials once the prescribed retention period has lapsed. Worse yet, a records manager may have a false sense of security that because the company has a schedule, it must be accurate. Wendy emphasizes that a truly compliant retention schedule should be updated in keeping with changing laws and regulations.

Various methodologies exist regarding schedule design as it relates to the number of record class codes (or buckets) representing the groupings with which retention is assigned. “As you can imagine, more choices can create uncertainty for end users that may result in lack of adherence,” Wendy added.

Printed with permission of Wendy Shade.



Courtesy of Wendy Shade

Why is a records retention program important?

RECORDS STORAGE

Phases of the record life cycle include creation, distribution, use, maintenance, and disposition. The last two phases—*maintenance* (i.e., storing, retrieving, and protecting records) and *disposition* (i.e., transferring, retaining, or destroying records)—are discussed in this chapter.

An effective records and information management (RIM) program adheres to best practices to assure that records that continue to have value to the organization are stored and retained (kept). A **records retention program** consists of policies and procedures relating to *what* documents to keep, *where* and in what type of environment the documents are kept, and *how long* these documents are to be kept. Ideally, the time that a record should be retained is known when the record is created because the records series is listed on a **records retention schedule (RRS)**—a comprehensive list of records, indicating the length of time that the records are to be maintained.

Retention policies also allow destruction of records that no longer have value to the organization. Storing records no longer needed is costly because more floor space is used, more storage supplies and equipment are purchased (needed), and more labor is required.

The Value of Records

Records serve as the memory of an organization, and their purpose may be administrative, fiscal, legal, or historical. Classifying records by their value to an organization is useful for making retention decisions as shown in Figure 7.1.

Once a record is stored, it may not be stored forever. One critical step in creating a records retention schedule is estimating the value of a record to an organization and determining how long the record is useful. Understanding the four categories of records values—nonessential, useful, important, and vital—is helpful when determining which records should be retained (and for how long) and which records should be destroyed. Before preparing a records retention schedule, an inventory of all records stored in an organization—in individual offices or departments, in central files areas, or in off-site storage locations—must be conducted.

Records Inventory

A **records inventory** is a detailed listing that could include the types, locations, dates, volumes, equipment, classification systems, and usage data of an organization's records. It usually involves a survey conducted by each department, with a member of each department assigned the task of inventorying its records and documenting important information about those records. Some organizations may also conduct an electronic records inventory or a vital records inventory, depending on the volume of records in those categories. Survey information from all departments is incorporated into an organization-wide records retention schedule. Some organizations use bar code and radio frequency identification (RFID) technology to speed the records inventory process. A bar code is a coding system consisting of vertical lines or bars set in a

records retention

program: a program established and maintained to provide retention periods for records in an organization

records retention

schedule: a comprehensive list of records series titles, indicating for each the length of time it is to be maintained

inventory: a detailed listing that could include the types, locations, dates, volume, equipment, classification systems, and usage date of an organization's records

FIGURE 7.1 Records Values

RECORDS VALUES**Nonessential Records**

- Not worth keeping
- Bulk mail
- Routine telephone messages
- Bulletin board announcements
- E-mail and fax message after action is taken

Useful Records


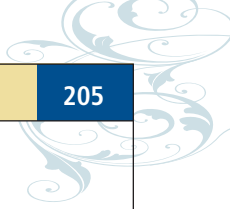
- Short-term storage—up to three years
- Helpful in conducting business operations
- May be replaced at small cost
- Active files of:
 - Business letters
 - Memos
 - Reports
 - Bank statements

Important Records

- Long-term storage—seven to ten years
- Contain pertinent information
- Need to be recreated or replaced if lost
 - Financial data
 - Sales data
 - Credit histories
 - Statistical records

Vital Records

- Permanent Storage
- Essential for the continuation or survival of organization
- Necessary for recreating organization's legal and financial status
 - Business ownership records
 - Customer profiles
 - Student transcripts



What are the four categories of records values?

predetermined pattern that, when read by an optical reader, can be converted into machine-readable language. In records and information management, bar codes are used for tracking locations of documents, folders, or boxes of records. Bar code labels may be placed on individual documents or on folder and box labels. The use of bar code technology brings improvements in data accuracy over keyboard data entry. Bar code technology is used extensively for applications such as cataloging of books and files by libraries and archives.

Radio frequency identification (RFID) is a technology that incorporates the use of an electromagnetic or electrostatic radio frequency to identify an object, animal, or person. RFID is increasingly used as an alternative to bar codes. The advantage of using RFID is that it does not require direct contact or line-of-sight scanning. An RFID system consists of three components: an antenna, a transceiver/reader, and a transponder (the tag or chip). Using microchips to transmit encoded information wirelessly through antennae, RFID tags are activated when placed in the transmission field of a reader. These tags convey encoded information that identifies documents, folders, or boxes. Because information is transmitted automatically beyond line-of-sight, boxes do not need to be unpacked to scan individual bar code labels on folders and/or documents. The result is reduced labor costs and improved accuracy.

An example of the use of RFID is in the library of the Vatican in Italy. Two million pieces of the library's 40 million-piece collection, including 1.6 million books and centuries-old manuscripts, will be tagged with RFID chips. Library staff will be able to complete the annual inventory in 1 day. Previously, the library was closed for up to 1 month to complete the task. The RFID chips will also allow library staff to monitor the condition of the books and their locations at all times.¹



Blend Images/Getty Images

Bar codes are used for tracking locations of documents, folders, or boxes of records.



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radio frequency identification (RFID): a technology that incorporates the use of an electromagnetic or electrostatic radio frequency to identify an object, animal, or person

When conducting a records inventory, a portable RFID reader can scan up to hundreds of folders in a matter of minutes. The RFID tags are read as the portable handheld reader passes within inches of the folders. Depending on the size of the file room, complete file room inventories can often be done in a matter of hours.

¹ Nikki Swartz, Ed., "Vatican Library Tags Books," *The Information Management Journal*, Vol. 39, No. 1 January/February 2005, p. 6.

retention purposes that will be retained according to the records stored on electronic media. (See Chapter 11 for more information about electronic media storage.) The **retention period** is the time that records must be kept according to operational, legal, regulatory, and fiscal requirements.

A records inventory is also a valuable tool for helping managers decide which filing method (alphabetic, subject, numeric, or geographic) to use. Information obtained from a records survey and inventory usually includes the following:

- Name and dates of records series
- Records location by department or office, then building, floor, and room, if necessary
- Equipment in which records are stored—cabinets, shelves, or vaults
- Number of cabinets, shelves, or other storage containers
- How often records are referenced—daily, weekly, monthly, or annually—and why



retention period: the time that records must be kept according to operational, legal, regulatory, and fiscal requirements

FIGURE 7.2 Records Inventory Worksheet

RECORDS INVENTORY WORKSHEET		
(Complete one form for each records series.)		
Department Legal	Person Taking Inventory Randy Thompson	Date of Inventory 01/15/2005
Department Contact Person and Title Tiffany Smith	Telephone / Ext. 1153	E-mail Tiffany.smith@rmg.com
Records Series Title Townsend v Hopkins LLC	Dates of Records Series From <u>Jan 1, 2002</u> To <u>Jan 1, 2005</u>	No. of Storage Containers <u>6</u>
Description of Records Series (Contents; Purpose; Form Numbers, etc. Continue on reverse side if needed.) Closed case files, investigation reports, forensic reports, depositions, court records		
Records Format/Media <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Microform (Specify) _____ <input type="checkbox"/> Electronic (Specify) _____ <input type="checkbox"/> Optical (Specify) _____ <input type="checkbox"/> Publications/Books	<input checked="" type="checkbox"/> Letter <input type="checkbox"/> Legal <input type="checkbox"/> Maps, Drawings <input type="checkbox"/> Printout <input type="checkbox"/> Binders <input type="checkbox"/> Video/Audio Tape <input type="checkbox"/> Other _____	File Arrangement <input type="checkbox"/> Alphabetic <input type="checkbox"/> Geographic <input type="checkbox"/> Numeric <input type="checkbox"/> Chronologic <input type="checkbox"/> Alphanumeric <input checked="" type="checkbox"/> Calendar Year <input type="checkbox"/> Subject <input type="checkbox"/> Fiscal Year <input type="checkbox"/> Other (Specify) _____
Volume of Records Filing Inches _____ Cubic Feet <u>6</u> Annual Accumulation Rate Filing Inches _____ Cubic Feet _____	Records Value <input type="checkbox"/> Nonessential <input type="checkbox"/> Useful <input checked="" type="checkbox"/> Important <input type="checkbox"/> Vital	Reference Rate <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input checked="" type="checkbox"/> Less Than Once a Month <input type="checkbox"/> Annually
Storage Equipment <input type="checkbox"/> Cabinet <input checked="" type="checkbox"/> Box <input type="checkbox"/> Roll <input type="checkbox"/> Shelf <input type="checkbox"/> Flat <input type="checkbox"/> Vault <input type="checkbox"/> Other (Specify) _____	Current Retention Period Active (in Office) <u>3 years</u> Inactive (in Storage) <u>5 years</u> Total <u>8 years</u>	Required Retention Period—Schedule Active <u>Until case closed</u> Inactive <u>10 years</u> Total <u>20 years</u> Destruction Date <u>Jan 1, 2045</u>
Form 203 (Rev. 07/09)		

- Records media—physical (paper), micrographic, electronic, or optical
- Records size—letter, legal, tab/checks, other
- Records housing—folders, binders, disks, reels, etc.
- Records value—nonessential, important, useful, vital
- Retention requirements

E-mail Records

Depending on the content of electronic mail (e-mail) messages, instant messages (IMs), or text messages sent and/or received within an organization, they may be considered records or nonrecords. Although instant and text messages are more often used by employees for personal messages, they are often used for work-related correspondence that must be stored as records. E-mail is a primary form of business communication that reduces mailing costs. These messages are included on a records retention schedule in appropriate records series. Messages that need to be stored for longer periods should be printed and filed with other physical/paper records. The print copy becomes the official record, and the original message should be deleted from the e-mail system or communication device. Some e-mail programs will allow users to archive important messages for longer periods.

Records and information managers must work with the Information Technology (IT) Department in their organizations to develop official policies regarding e-mail retention. Some organizations routinely purge/delete all e-mail after 30 days. Other organizations allow each user to determine what to retain as long as the user is following the organization's retention policy. E-mail users must be trained to delete unneeded documents. (See Chapter 12 for more information on e-mail policies.)

Is an e-mail message ever an official record?

Why should records of employee online benefit transactions be on a records retention schedule?

Records Management in Action

RFID Provides Library Self-Checkout Option

Public libraries in the adjoining towns of Springdale and Fayetteville, Arkansas, installed RFID technology to improve their check-out processes. Springdale library staff were faced with increased circulation and a hiring freeze; so, RFID provided much needed helping hands. Library usage was up 4.4 percent, from 659,977 checkouts in 2007 to 689,133 checkouts in 2008. Through February 2009, circulation was up 1.2 percent compared to the same time frame in 2008. Circulation at the Fayetteville library increased by 57 percent, from 644,000 checkouts to more than one million from 2003 to 2008. Staff could not have handled the increase without hiring new people. With RFID, new hires were held to a minimum.


Source: Richard Massey, "SPRINGDALE: Radio Tags Give Patrons Option to Self-Checkout," *Arkansas Democrat-Gazette*, March 23, 2009.

Web Records

Assuring that documents and information created or submitted on a company's intranet or website are included in retention policies and schedules is an important concern for many records and information managers. Records and information employees will need to determine whether a record exists only on the website. Wikis or blogs maintained among members of a department, customers, and clients may contain business-related information that needs to be transferred to the RIM system and included in the records retention schedule. If the same record exists in multiple locations, where is the official copy? The organization needs a policy that addresses web records. Generally, when materials are posted to an organization's website, the materials qualify as records, and the materials have not previously been stored in the RIM system, then the organization must establish a link between the website and the RIM system. The web records are transferred into the RIM system. Web records go through the same life cycle stages as records in other formats. However, these stages are accelerated because websites may be updated frequently.²

Many company websites have some forms-based applications. Job applicants may complete job applications and submit letters of application through employer websites. These forms may be changed or updated frequently. Additionally, employees in many organizations are able to make changes to their 401K plans, view their medical claims, and obtain other information about their company benefits online. Documents from these online transactions are included in appropriate records series, and they should be retained for the length of time required by relevant regulations, statutes, and company policies. Other organizations must keep track of sales transactions made on their websites. One important effect of the Sarbanes-Oxley Act on organizations is that organizations must retain more documents and for longer periods of time than previously. No one retention period can fit all web records. Web records need to be scheduled according to function or purpose.

After the records inventory is completed, the records and information manager determines the value of each record and then determines how long records are to be retained. Appropriate retention periods are determined and included in a records retention schedule (RRS) (see Figure 7.3 on page 211). A retention schedule contains a comprehensive list of records series titles, indicating for each series the length of time it is to be maintained. It may include retention in active office areas, inactive storage areas, and when and if such series may be destroyed or formally transferred to another facility such as an archives for historical purposes. Records destruction decisions are based on the records retention schedule. Employees do not decide, on their own, to destroy records. RIM best practices include destroying records based on an official and approved records retention schedule and in the normal course of business. Consequently, records are destroyed regularly as certain records reach the end of their usefulness. Chapter 12 contains more information about the role that records retention plays in a comprehensive RIM program.



What factors influence retention periods?

²Gregory S. Hunter, *The Challenges and Opportunities of Web-based Records*, ARMA web presentation material, January 11, 2005.

FIGURE 7.3 Records Retention Schedule

RECORDS RETENTION SCHEDULE			
Records Series	Years Active	Years Inactive	Total Years
Accounting and Fiscal			
Accounts payable invoices	3	3	6
Accounts payable ledger	3	3	6
Accounts receivable ledger	3	3	6
Bank deposit records	3	3	6
Bank reconciliations and statements	3	3	6
Annual audit reports	3	P	P
Administration—Executive			
Correspondence, executive	1	1	2
Policy statements, directives	3	P	P
Advertising			
Contracts, advertising	1	2	3 years after term
Drawings and artwork	10	P	P
Samples, displays, labels	5	P	P
Human Resources			
Applications, changes, terminations	1	0	1
Attendance/vacation records	3	4	7
Medical folder, employee	While employed	0	30 years after term
Training manuals	3	P	P
Insurance			
Claims, group life/hospital	1	3	4
Claims, workers' compensation	1	9	10
Expired policies: fire, hospital, liability, life, workers' compensation	1	2	3 years after expiration
Operations			
Inventories	1	0	1
Office equipment records	3	3	6
Requisitions for supplies	1	0	1
Records Management			
Records destruction documentation	3	P	P
Records inventory	1	0	1
Records management policies	1	P	P
<i>P = Permanent Term = Termination</i>			
Form 220 (Rev. 07/09)			

Could an organization have more than one RRS?

Creating the records retention schedule is a cooperative effort among several departments in an organization: Legal, Tax, Information Management, Records Management, as well as other departments that own the records. The length of time—the retention period—may be determined by law for statutory, regulatory, or tax purposes. For other records, such as general correspondence, the length of time may be limited to the actual time of use of a record. The estimate of the frequency of use for current and anticipated business is also important. This time period usually determines how long records should be retained in offices or records centers before they are transferred to an archives or otherwise disposed of. A **records center** is a low-cost centralized area for housing and servicing inactive records whose reference rate does not warrant their retention in a prime office area.

Each department has unique needs the retention schedule must meet. Without cooperative input from all departments in an organization, the records retention schedule will not serve its purpose. In addition, the records and information manager must consider each of the following interrelated aspects when developing a records retention schedule.

1. How long will the records be used?
2. In what form should the records be kept? How accessible should the records be?
3. When should the records be determined inactive? Which records should be transferred off-site and when? How will such records be accessed? Will transferred records maintain their integrity and security?
4. What are the applicable federal, state, and local laws?
5. What are the comparative costs for keeping the records or not keeping the records?
6. When and how will the records be disposed of?

Records retention schedules are based on the value of the *information* contained in the records and *not* on the storage media. Records stored on all media are included in a RRS. However, as discussed in Chapter 11, the life span of the media is important for long-term retention. In some organizations, a separate retention schedule is maintained for electronic records.

All records users need to comply with the records retention schedule adopted by their organization. Many organizations emphasize the importance of records by conducting Records Week activities centered around cleaning out old records, transferring records, and destroying records. By closely following transfer and destruction timetables, an organization can reduce clutter and improve retrieval time because fewer records will be in storage. Additional space will be available for current records needed for day-to-day decision making. The records retrieval process is discussed next.

RECORDS RETRIEVAL

Retrieval is the process of locating and removing a record or file from storage. It is also the action of recovering information on a given subject from stored records. In this section, you will learn how to retrieve records by

.....

records center: a low-cost centralized area for housing and servicing inactive records whose reference rates do not warrant their retention in a prime office space

retrieval: the process of locating and removing a record or file from storage or accessing information from stored data on a computer system

following standard procedures and recommended best practices. Although the procedures discussed here are primarily for paper-based systems, the same procedures apply for retrieving and accessing electronic and image records. Steps for retrieving a record are shown in Figure 7.4.

A record or information from it may be retrieved in three ways:

1. **Manually.** A person goes to a storage container and removes by hand a record that a user has requested or makes a note of the information someone has requested from it.
2. **Mechanically.** A person uses some mechanical means such as pressing the correct buttons to rotate movable shelves to the correct location of a record, removing the record manually, or recording information requested from the record.
3. **Electronically.** A person uses some means, such as a computer, to locate a record. The requester is shown the requested information or informed on a screen in a database or in an e-mail file as to where it can be found. The physical record may not need to be removed from storage.

Requests for stored records may be made orally (from the next desk, over the telephone or intercom, or by messenger) or in writing (by fax, e-mail, memo, letter, or special form). The request also may be delivered in person. A typical request, for example, might be, “Please find the most recent letter from ABC Computer Corp. that forecasts the number of silicon chips the company will produce next quarter.” Or, “Please pull the DVD of the chairman’s 2010 annual report to stockholders.” Or, perhaps, “Please retrieve the microfiche of the current price list for auto parts.” All these records have previously been stored manually according to an established method of storage. The letter, DVD, electronic record, or microfiche must be


Why are standard retrieval procedures important?

How are records requested?

FIGURE 7.4 Records Retrieval Procedure

STEPS FOR RETRIEVING A RECORD

1. Receive request for stored record or records series—requester or records center employee prepares requisition form.
2. Check index for location of stored record(s).
3. Search for record or records series.
4. Retrieve (locate) record or records series.
5. Remove record(s) from storage.
6. Charge out record(s) to requester: Insert OUT indicator in place of record(s) removed from storage; complete the charge-out log.
7. Send record(s) to requester.
8. Follow up borrowed record(s).
9. Receive record(s) for re-storage.
10. Store record(s) again. Remove OUT indicator. Update charge-out log.



Why are cross-references important?

retrieved from storage and given to the requester quickly. Every minute of delay in finding a record is costly—in user or requester waiting time and in filer searching time—and could possibly lead to loss of money for the company because of a lost sale.

If filers and requesters use the same filing segment for storing and requesting a record, the system works well. If, for instance, records relating to a company named Mansfield Heat & Air were stored alphabetically under *Mansfield* but requested under *Air Conditioner Company*, the searcher would find retrieval extremely difficult because he or she would look in the A section of storage instead of the M section. Consequently, good cross-referencing is necessary for efficient retrieval.

Retrieval and Re-storage Cycle

The same steps followed for retrieving are followed for handling all physical records. Only the specific operating procedures differ. The crucial step, the point at which a problem is most likely to arise, is in Step 1 with the words used to request a record. Ideally, the person who stores a record is also the one who searches for and removes it from storage when it is requested. Realistically, however, a record may be stored by one person and retrieved by someone else when that record or information is requested.

Effective records control enables the records manager or filer to retrieve requested records on the first try and to answer correctly these questions:

1. Who took the records?
2. What records are out of storage?
3. When were the records taken?
4. Where will the records be re-filed when they are brought back to storage?
5. How long will the records be out of storage?

Requisition, Charge-Out, and Follow-Up Procedures

Effective records control includes following standard procedures for requesting records, charging them out, and assuring that they are returned. These procedures, referred to as *requisition*, *charge-out*, and *follow-up*, may be completed manually or by using an automated system. By following standard procedures consistently, the number of lost or misfiled records can be reduced or eliminated.

Requisition Procedures

Preparing a requisition is the first step in the retrieval process. A request is an in-person, mail, telephone, fax, or e-mail inquiry for information about or from records stored in a records center or an archives. A **requisition** is a written request for a record or information from a record.

Even if the borrower orally requests the information or record, that request is put into writing and referred to as a requisition. The form may be prepared by the requester or completed by the filer from information given orally or in writing by the requester. An organization networked through the

• • • • •

requisition: a written request for a record or information from a record

Internet or an intranet may post a variety of forms that users may complete and transmit electronically, including records requisition forms. Two types of requisition forms are described next.

Requisition Form

One of the most frequently used requisition forms is a 5” by 3” or 6” by 4” card or slip of paper printed with blanks to be filled in. Figure 7.5 shows an example of a requisition form. A requester or filer may complete a similar computer-generated form in an automated system. Some RIM software, discussed later in this chapter, is capable of generating a pick list for retrieving a number of requested records. A **pick list** is a list containing specific records needed for a given program or project. A filer can use a pick list to retrieve all records on the list. The records are then sent as a group to the requester. The same list can be used to return the records to the proper files/locations.

When a requisition form is completed, the filer will have answers to the five records retrieval questions previously discussed—Who? What? When? Where? How long? This form may be prepared in duplicate: The original stays in the folder from which the document was retrieved to serve as an OUT indicator. An OUT indicator is a form or document that describes records removed from the files and helps filers quickly find where records have been removed. The copy (usually placed into a tickler file as discussed in Chapter 6) serves as a reminder to assure the record is returned on time.

Why is preparing a requisition form necessary?

What are some consequences of not using OUT indicators?

pick list: a list containing specific records needed for a given program or project

FIGURE 7.5 Requisition Form

RECORDS REQUEST	
Name on Record	Date on Record
Date Borrowed	Date to Be Returned
Requester Name	Extension
Department	E-mail
Place white copy into folder. Place blue copy into tickler control file.	
Form 209 (Rev. 07/09)	

Usually prepared in duplicate—original stays in folder; copy serves as a reminder.

Why should borrowed records be controlled?

on-call/wanted form: a written request for a record that is out of the file

A copy of a computer-generated requisition form may be printed to serve as an OUT indicator in a paper file. The filer may also be able to insert an electronic flag into the records database to indicate that a record is out of the records center. The electronic requisition form is then sent to an electronic tickler file.

On-Call (Wanted) Form

Occasionally, a user will request a record that is charged out to another user. A requisition form replacing the record in the file identifies who has the record and when it will be returned. The filer should notify the second requester that the record is on loan and state when it is scheduled for return to storage. If the second request is urgent, the filer will notify the original borrower that someone else wants the record and ask that it be returned to storage. Notification may be made orally, in writing on an on-call form or a wanted form, or by fax or e-mail. An **on-call form**, or **wanted form**, is a written request for a record that is out of the file (Figure 7.6). This form is similar to an OUT form. A computer-generated form may also be completed and transmitted by fax or e-mail to the records center.

Two copies of an on-call form are made—one copy goes to the borrower; the other copy is attached to the original OUT indicator in storage. When the borrowed record is returned to storage, it is charged out to the second borrower by the standard method of charge-out or by writing on the on-call form the date on which the record was delivered to the second borrower. (Note the Delivered Date column on the form in Figure 7.6.)

FIGURE 7.6 On-Call/Wanted Form

ON CALL				
WANTED BY		RECORDS WANTED		DELIVERED
DATE	NAME	DATE	DESCRIPTION	DATE
9/27	Scott R. Howard	8/17	Frost Construction File	9/30
Form 205 (Rev. 07/09)				

Prepared as a duplicate—one copy to borrower; one copy attached to the original OUT indicator in storage

In some optical disk and microfilm storage systems, requested information is retrieved and sent to the requester electronically. An optical disk record is retrieved on a computer terminal and faxed or e-mailed to the requester. Microfilm is scanned into a computer terminal and faxed or e-mailed to the requester. In both cases, the official record is not removed from its file. No follow-up procedures are needed because the official record is still in storage. Requesters may be instructed to destroy the borrowed record when they have completed their work with it. Note also that physical records (paper) can be scanned and transmitted electronically by e-mail or fax. Paper records can also be faxed via a conventional fax machine. The official record is returned to the file, and the user may destroy the fax or e-mail copy of the official record after use.

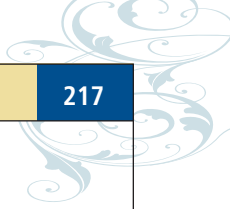
Confidential Records Requests

All stored records are considered valuable, or they would not be stored. Some are so valuable that they are stamped *Confidential*, *Classified*, *Secret*, *Vital*, or *Personal*. Do not release these types of records from storage without proper authorization following established procedures and best practices. In some offices, a written request bearing the signature of a designated officer of the organization is required for release of such records. In an electronic system, access to confidential records is limited to those users who know the password. If a copy of a confidential record is sent electronically, it might be encrypted (the words are scrambled into code using a software program) to prevent unauthorized access. When the requester receives the encrypted file, he or she must unscramble/decrypt the file to read it. Some records may be so valuable or confidential that they are not to be removed from storage under any circumstances. These records must be inspected only at the storage container or in a secure room. The signature of someone in authority is required before the inspection is allowed. A requisition form is usually not needed; however, a record of the persons inspecting the records may be kept.

Manual Charge-Out Procedures

Charge-out is a control procedure to establish the current location of a record when it is not in the records center or central file, which can be a manual or automated system. A record is charged out to the borrower who is held responsible for returning it to storage by an agreed-upon date. A standard procedure for charging out and following up records should be observed each time a record is borrowed, regardless of who removes material from storage. Taking less than 1 minute to note the name of a person borrowing a record will save hours spent searching for a lost or misplaced record. Borrowers seem to be more conscientious about returning records to storage when they know that records have been charged out in their names. Typically, supplies needed to charge-out records consist of the following:

1. OUT indicators to show that records have been removed from storage
2. Carrier folders to transport borrowed records while the original folder remains in the file
3. Charge-out log



Why is keeping track of who has borrowed records necessary?

.....

charge-out: a control procedure to establish the current location of a record when it is not in the records center or central file, which can be a manual or automated system

OUT Indicators

When a requested record is located, it is removed from storage and an OUT form is inserted in place of the record. An OUT form shows where to re-file the record when it is returned. OUT indicators are explained in more detail in Chapter 6. If several records are removed from storage, they may be placed into a folder, referred to as a *carrier folder*, to assure the records stay together during transport to the user.

OUT Indicator Disposal

When a borrowed record is returned to storage, the OUT form inserted while the record was gone must be removed immediately. If the charge-out information was written on the OUT form, this information is crossed out, and the form is stored for reuse. In some offices, OUT forms are kept for tallying purposes—to see how many records are being requested, to determine the workload of employees, and to see which records are being used frequently and which are not. Totals may be kept daily, weekly, monthly, or yearly as determined by the standard procedure in effect. Requisition forms removed from files may be destroyed. Any forms filed in electronic tickler files may also be deleted.

Automated Charge-Out Procedures

In automated systems, completing a paper requisition form is not necessary because records may be charged out using one of two electronic methods: bar codes and RFID tags. A bar code printed on a label affixed to a record, folder, or records center storage box is similar to an electronic product code (EPC) printed on a can of food in a supermarket or on a price tag on a pair of jeans in a department store. As discussed briefly in Chapter 6, records may be indexed and bar coded to identify their places in the files and other information about the records. When a requester has presented his or her bar code identifier—often printed on an employee name tag—and the requested file is located, the bar code on the record is scanned. An electronic form is created when the bar code on the record is scanned that indicates whether the record is checked out, to whom, and for how long. Copies of the form may be printed or stored electronically. A bar code representing the electronic form may be printed and affixed to an OUT indicator and placed into the file where the requested record should be re-filed. When the record is returned, the bar code is scanned again, the OUT indicator is located, the record is returned to the file, and the requester is “cleared” of any borrowed records.

Folders and records may be rapidly checked out using RFID tags by simply passing them over the top of the reader. Many folders can be read at once and a list of them displayed on a screen. A similar process can be used to scan folders into a box for archiving.

Follow-Up Procedures

Whoever is responsible for retrieving and charging out records from storage is also responsible for checking in the records on their return. **Follow-up**

How do bar codes or RFID tags improve records charge-out?

follow-up: a system for assuring the timely and proper return of materials charged out from a file

3M™ RFID Tracking Pad, photo courtesy of 3M



Folders may be charged out by passing them over a tracking pad that reads bar codes on the folders.

is a system for assuring the timely and proper return of materials charged out from a file. The length of time records may be borrowed from storage depends on (1) the type of business, (2) the number of requests received for the records, (3) the use of a copying machine, and (4) the value of the records.

Experience shows that the longer records remain out of the files, the more difficult their return becomes. Many organizations stipulate a week to 10 days, with 2 weeks being the absolute maximum amount of time records may be borrowed. Other organizations allow less time because records can be copied easily and quickly, and the original may be returned to storage within a few hours. Extra copies should be destroyed when they are no longer needed. Following up on a borrowed record may mean calling a borrower, sending an e-mail, or sending a written request as a reminder that borrowed records must be returned to storage. If no other requests for the same records have been received, the date the records are to be returned may be extended.

Follow-Up for Confidential Records

The rule concerning confidential records is generally that the records (if they may be borrowed) must be returned to storage each night. A special reminder often is used to assure that these records are returned. This reminder may be a note prominently displayed, a special flag, or some other type of signal. The same charge-out procedures used for other records are also used for confidential records. However, an additional reminder to obtain the record before the end of the day also is used. Because the memory jogger must remind the filer that confidential records are out of storage and must be returned, it must be something unusual.

What are some factors that affect the length of time for which records may be borrowed?



Why are records transferred?



charge-out log: a written or electronic form filed by dates that records are due back in the inactive records center

records transfer: the act of changing the physical custody of records with or without change of legal title or moving them from one storage area to another

records disposition: the final destination of records after they have reached the end of their retention period

archives: records that are preserved because of their historical or continuing value; also the building or area where archival materials are stored

Charge-Out Log

Usually, an organization will have a charge-out log on which to record information for all records as they are removed from storage. A **charge-out log** is a written or electronic form used for recording the following information:

1. What record was taken (correspondent name or subject title on the record and date on the record)
2. When the record was taken (date borrowed)
3. Who took the record (name of person, extension number, e-mail address)
4. Date due for returning the record
5. Date returned
6. Date overdue notice was sent
7. Extended date due

The charge-out log should be kept current and used in the follow-up procedure. Refer to Figure 7.7 for an example of a portion of a charge-out log.

RECORDS TRANSFER

As indicated on the sample records retention schedule shown in Figure 7.3 on page 211, records may be stored in an active records area for a period of time before being moved to another storage area when they are no longer accessed regularly. **Records transfer** is the act of changing the physical custody of records with or without change of legal title. In other words, records are moved from one storage area to another, but they are usually still owned by the same company. Records are transferred when they are no longer used frequently.

As records age, they are less frequently accessed and become inactive. Consequently, dates on the records are also considered when deciding to transfer records. In most cases, the active files contain the current year's records plus those of the immediate past year.

The final phase of the records life cycle is disposition. **Records disposition** is the final destination of records after they have reached the end of their retention period in active and/or inactive storage. Records may be transferred to an archives for retention, or they may be destroyed. Inactive storage may be housed on-site or off-site. On-site storage is storage of inactive (usually) records on the premises of an organization. Off-site storage is a potentially secure location, remote from the primary location, at which inactive or vital records are stored.

Archives are the records created or received and accumulated by a person or an organization in the conduct of affairs and preserved because of their historical or continuing value.

Archives also may refer to the building or part of a building where archival materials are located. An archives is used for permanent storage. An archivist is

FIGURE 7.7 Charge-Out Log

CHARGE-OUT LOG									
Name on Record	Date on Record	Name of Person Borrowing Record	Ext. or E-mail	Date Borrowed	Date Due	Date Returned	Date Overdue Notice Sent	Extended Date Due	
Hillman Equipment & Rental Sales	5/17	M. Alvarez	1153	8/19	8/26	8/26			
Buchanan Flooring, Inc.	3/3	B. Amatulli	bamatulli@xyz.net	8/21	8/28	8/25			
The Learning Center	11/30	J. Lee	1206	8/22	8/29		8/30	9/6	
LeBow Salon & Day Spa	4/27	L. Davis	ldavis@xyz.net	8/31	9/7	9/6			

Form 211 (Rev. 07/09)

What is the difference between inactive and archive records?

When should records be transferred?

active records: frequently used records needed to perform current operations

inactive records: records that do not have to be readily available but which must be kept for legal, fiscal, or historical purposes

archive records: records that have continuing or historical value and are preserved permanently by an organization

a person professionally educated, trained, experienced, and engaged in the administration of archival materials, including the following activities: appraisal and disposition, acquisition, preservation, arrangement and description, reference service, and outreach to historical societies and individuals or groups interested in preserving documents and other important or historical records.

The U.S. government, most U.S. states, colleges and universities, and corporations store important historical records in an archives. These records may include physical/paper documents, photographs of important events, and other records media. The U.S. National Archives and Records Administration (NARA) maintains public vaults that display hundreds of records—originals or facsimiles of documents, photographs, maps, drawings, and film or audio clips that are important historical records for the nation. Visitors may view documents ranging from important treaties and legislation to letters to and from a former President and citations for military bravery. Universities in which faculty and staff researchers have made important discoveries will have copyright and patent information to protect for long periods of time. These documents and related information are stored in the universities' archives.

In the disposition phase of the record life cycle, decisions are made to (1) destroy a record, (2) retain a record permanently, or (3) transfer a record to inactive storage. Records transfer is made according to an established and approved retention schedule as described earlier. If records are transferred, the main basis for making that decision is often the active or inactive use of the record. Records analysts define three groups of records according to the degree of records activity: **active records**, **inactive records**, and **archive records**. Figure 7.8 describes the three groups.

Sometimes records transfer decisions are made on the basis of dates on the records. The following reasons also greatly influence when and why transfer takes place:

1. No more active records storage space is available.
2. Costs of more storage equipment and extra office space are rising, and less costly areas of nearby storage or off-site storage become attractive alternatives.
3. Stored records are no longer being requested and, therefore, are ready for transfer.
4. Workloads are lighter, and time is available for records transfer activity.
5. Case or project records have reached a closing or ending time (the contract has expired; the legal case is settled or closed).
6. Established organizational policy requires every department to transfer records at a stated time.

Transferring records that are no longer used regularly has three advantages:

1. Records transfer helps to reduce equipment costs because inactive records may be stored in less expensive cardboard containers.
2. Cabinets or shelves formerly used by the transferred files provide additional space for new active files.
3. The space in drawers, cabinets, shelves, or computer storage is increased because files are no longer crowded, which improves efficiency of storage and retrieval of active files.

FIGURE 7.8 Records Activity

RECORDS ACTIVITY		
<p>Active Records</p> <ul style="list-style-type: none"> • Needed to perform current operations • Used frequently • Located near user • Accessed manually or online • Accessed three or more times a month • Stored in very accessible equipment in active storage area or online 	<p>Inactive Records</p> <ul style="list-style-type: none"> • Do not have to be readily available • Kept for legal, fiscal, or historical purpose • Accessed less than fifteen times a year • Stored in less expensive storage area 	<p>Archive Records</p> <ul style="list-style-type: none"> • Kept for their continuing or historical value • Preserved permanently • Used to: <ul style="list-style-type: none"> • Maintain public relations • Prepare commemorative histories • Preserve corporate history • Provide financial, legal, personnel, product, or research information • Provide policy direction • Stored in less expensive storage area, often off-site

Once the decision to transfer is made, the records and information manager must find answers to four important questions:

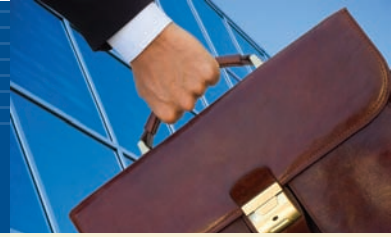
1. What records are to be moved?
2. How are the records to be prepared for transfer?
3. When are the records to be transferred?
4. Where are the transferred records to be stored?

Answers to the first three questions will depend on the transfer method selected and the organization's records retention schedule. The answer to the *where* question will depend on the method selected and on the availability of in-house (on-site) or off-site records storage areas. After answering those questions, the records and information manager then follows perpetual or periodic transfer procedures to move the selected records.

Transfer Methods

Two of the most commonly used methods of transferring records are the perpetual transfer method and the periodic transfer method. Each method is discussed in this section, along with the procedure required to ensure efficient records transfer.

Career Corner



Job Description for Archivist

The following job description is an example of a career opportunity in a college or university.

General Information

Individuals in this position will be responsible for managing, storing, and disseminating information contained in the organization's archives.

Responsibilities

- Acquire, store, and research: textual materials, photographs, maps, architectural documents, electronic materials, films and videos, sound recordings, and multimedia materials

- Direct records management operations, forms management, and electronic information and image management to ensure efficient and effective processing of information
- Ensure that all legal requirements are followed for records storage

Experience and Education

- 1 to 3 years
- Master's degree

Perpetual Transfer Method

Under the **perpetual transfer method**, records are continually transferred from active to inactive storage areas whenever the records are no longer needed for reference. Examples of records that can be transferred by the perpetual method include student records after graduation; legal cases that are closed; research projects when results are finalized; medical records of cases no longer needing attention; prison and law-enforcement case records; and construction or architectural jobs that are completed.

Electronic records and nonrecords should be perpetually transferred from storage on a hard drive to storage on microfilm or optical disks (see Chapter 11 for more on microfilm and optical storage media). E-mail messages should be routinely deleted if they are not official records. The perpetual transfer method is not recommended for business correspondence or records that are referred to often and that must be available quickly.

Periodic Transfer Method

The **periodic transfer method** is a method of transferring active records at the end of a stated period of time—usually 1 year—to inactive storage. Records are moved from current files into inactive storage sites on a scheduled basis. Guides remain in the active storage containers. However, new folders are prepared for records that are then allowed to accumulate in active storage until the next transfer period. All folders in the active records system are transferred to inactive storage at the end of the specified period. No guides are used in the inactive files. Inactive records file drawers or shelves are labeled by year, such as January 1–December 31, 2009, and may

perpetual transfer

method: a method of transferring records continuously from active to inactive storage areas whenever they are no longer needed for reference

periodic transfer

method: a method of transferring active records at the end of a stated period of time—usually 1 year—to inactive storage

include alphabetic ranges. If records are systematically transferred annually, new folders are prepared for the active records system at the beginning of each year. Electronic records dated within the specified time frame are also transferred to inactive storage. (See Chapter 11 for more on electronic storage media.)

A commonly used periodic method of transferring records at the end of one period, usually once or twice a year, is called the **one-period transfer method**. Records are transferred at the end of one period (6 months or 1 year). For example, a records manager may decide on October 1 to transfer records dated January 1 through June 30, 2009. All active folders are checked for records dated between January 1 and June 30, 2009, and only those records are transferred to inactive storage. Any records in the active folders or active electronic files dated after June 30, 2009, remain in the active records system, and new records will continue to accumulate in the active records system. New folders will be prepared for inactive storage and will be labeled the same as the active folders or the active electronic files. Because of lowered costs of electronic media, individual electronic records may not be removed from a CD, DVD, or other optical or image media to reduce labor costs. New media will be used in the active records system for the next six months or a year. Active records accumulated from July 1 through December 31, 2009, would be transferred to the previously prepared folders in the inactive storage system at a date determined by the records manager. Active electronic records media accumulated during the same time frame would also be transferred to the inactive system at that time.

The main advantage of the one-period transfer method is the ease of operation. The main disadvantage is that some frequently requested records will be in inactive storage, and users must make frequent trips to the inactive storage area. Records for some correspondents will occasionally need to be retrieved from both active and inactive storage if the requested records cover several time periods.

Transfer Procedures

After the transfer method is determined, transfer procedures are communicated to every department in the organization. Before the transfer begins, the records and information manager must ensure that adequate storage equipment is available and at the correct location to receive transferred records.

Records are transferred either to inactive or archive (permanent) storage. Inactive storage indicates the record may be infrequently referenced. At the end of the retention period, inactive records are destroyed. Records stored in an archives must be kept permanently; however, the records may still be referenced. Because some records may have historical value, a special display area may be created for those records. Often, records are transferred to a records center. Transfer procedures for inactive and archival records are the same.

Preparing records for transfer involves completing the necessary transfer forms and boxing the records for inactive or archival storage. Figure 7.9 on page 226 shows an example records transmittal form. Note that information on the form should be keyed or clearly handwritten because it will be

What is the purpose of a transmittal form?

one-period transfer method: a method of transferring records from active storage at the end of one period of time, usually once or twice a year, to inactive storage

FIGURE 7.9 Records Transmittal Form

Records Transmittal to Records Center										Page <u>1</u> of <u>3</u>	
Department Legal		Telephone: 1134 E-mail: jane.dorta@xyz.net		Date of Transfer 1/10/20--							
Signature of Person Releasing Records Jane D'Orta				Shaded Areas for Records Management Use Only							
Box Number	Description of Records (Contents of each box)	Records Disposal Auth. No.	Department Retention Schedule Item No.	Year of Record Beg | End	Location in Records Center	Retention Period	Disposal Year	Disposal Date			
Current Year											
20--	Closed cases—Fraud	25	13	04 | 04							
20--	Closed cases—Criminal	26	13	04 | 04							
20--	Closed cases—Copyright	27	13	04 | 04							
<p>The Pink Copy of this form will be sent to you when records are ready for destruction. Please sign and return the form to the Records Center. If a change in disposal method or date is necessary, attach a memo that includes the new date and/or new method of destruction and reason for the delay.</p>											
DESTRUCTION OF RECORDS		Approval Date	Approval Signature for Destruction			Date of Destruction		Destroyed by			
<p>Form 210 (Rev. 07/09)</p> <p>Distribution: White – Records Center; Yellow – Department; Pink – File Copy</p>											

attached to the outside of a storage box and used to locate inactive records that may be requested at a later date. Also note that information on the form is about the contents of a box such as a description of the records, the time span the records cover, the department name, and the retention information.

At the time records are transferred, the transferring department completes a multicopy set of the records transfer form. Copies of the records transfer form are distributed as follows:

- The transferring department keeps one copy while the box is in transit to storage.
- The original and two copies accompany the box to inactive storage where the box is logged in, and its location on the storage shelves is noted on all copies of the transmittal form.
- One copy of the form is returned to the sending department for reference when a record from that box is requested. The copy that was first retained in the department is then destroyed because it does not contain the location of the box.

In an automated system, information from the records transfer form is either keyed or read into automatic equipment. Bar codes make this process much faster. When records are borrowed from an inactive records center or archival storage, the same controls are needed as are used in active storage—requisition, charge-out, and follow-up.

If the records center does not provide boxes of uniform size in which to store records to be transferred, the records manager must ensure that all departments use the same size box. Using uniform box sizes facilitates stacking, uses space most economically, and looks neater.

A **records center box** (carton or container) is usually made of corrugated cardboard and is designed to hold approximately one cubic foot (12 inches high by 12 inches wide by 12 inches deep) of records, either legal or letter size. These boxes may have lift-up or lift-off tops or lift-out sides. Examples of recycled records center boxes are shown in the photo below.

Why is uniform box size needed in a records center?



records center box:

a box designed to hold approximately one cubic foot of records, either legal or letter size

Courtesy of Fellowes, Inc.



Records center boxes hold approximately one cubic foot of records.

RECORDS CENTER CONTROL PROCEDURES

Whether inactive or archival records are stored off-site or within the same building as active records, several control procedures should be in place to ensure appropriate security and accession of the records (Figure 7.10).

Inactive Records Index

First and most important, records must be located. A commercial records center may house records owned by several different organizations; an in-house records center contains records for all departments of one organization. In either case, many different records series are stored on a space-available basis. Consequently, like records series with different dates probably will not be stored near each other. For example, if a request is made for an inactive accounting ledger for July 2008, the filer must locate the box of accounting records for 2008 quickly to find the requested record.

Various indexes are useful in locating stored records. An **index** is a systematic guide that allows access to specific items contained within a larger body of information. A records center will maintain an index to assist filers in locating inactive records. An **inactive records index** is an index of all records in the inactive records storage center. This index contains details about the inactive records: the dates the records were created, a description of the records series, the department that owns the records, an authorization for transfer to inactive storage, their location in the records storage center, the retention period, and the disposition date.

This information can be manually or electronically maintained and is often a continuation of the records transmittal form (Figure 7.9). The transmittal form contains all information needed for an inactive records index. A records center employee completes the location part of the form by checking the available space in the center and assigning space for the box(es). A copy of the records transmittal form is affixed to the box containing the records, and another copy of the transmittal form is filed in the destruction date file (discussed later). If a bar code or a RFID tag is affixed to each box,

Why is an inactive records index considered part of records center control procedures?



index: a systematic guide that allows access to specific items contained within a larger body of information

inactive records index: an index of all records in the inactive records storage center

FIGURE 7.10 Records Center Control Files

RECORDS CENTER CONTROL FILES	
Inactive Records Index	Contains a complete listing of all stored inactive records
Change-Out and Follow-Up File	Contains requisition forms
Destruction Date File	Contains copies of transmittal forms
Destruction File	Contains copies of transmittal forms after records are destroyed

it is quickly scanned into an electronic form that can be printed and affixed to the box and filed into the destruction date file. The destruction date file may also be stored electronically in an automated records center.

Charge-Out and Follow-Up File

As with active records, charge-out and follow-up procedures must be followed for inactive and archive records. When someone from the Accounting Department, for example, requests accounts payable records for July 1, 2005, through December 31, 2005, a requisition form is completed. The filer scans the inactive records index, noting the location of the requested box of records. Then the filer physically goes to that location in the records center, finds the correct box, and removes the correct record(s). One copy of the requisition form is used as an OUT indicator and is placed inside the box. Last, the requisition information is filed or entered into the charge-out and follow-up file.

A **charge-out and follow-up file** is a tickler file that contains requisition forms filed by dates that records are due back in the inactive records center. If a record is not returned by the date due, written reminders, telephone calls, faxes, or e-mail messages are used to remind the borrower to return the record(s) to the center. Electronic charge-out and follow-up files can be programmed to provide daily reports of records due and send notices to borrowers. Borrowers may return the borrowed record(s) or request an extension via reply e-mail.

Destruction Date File

Records destruction is the disposal of records of no further value by incinerating (burning), macerating (soaking in a chemical solution to soften the paper, then bailing it), pulping (shredding and mixing with water, then bailing), or shredding. Destruction is the definitive obliteration of a record beyond any possible reconstruction—nothing can possibly be recovered from the record. Shredders that can shred records in all media formats, including disks, CDs, and micromedia, are available. Some records that do not contain confidential information may be sold for recycling. Many organizations find that contracting with service providers to destroy their records is more cost-effective than purchasing the supplies and equipment and hiring workers to carry out the destruction.

Records center control procedures include maintaining records that document when and how records are destroyed. A **destruction date file** is a tickler file containing copies of forms completed when records are received in a records center. This file may be physical or electronic, and the forms, filed by destruction dates, may be physical or electronic. Destruction dates for each records series are determined when a records retention schedule is created, and these dates are recorded on records transmittal forms. Another copy of the transmittal form can be placed into the destruction date file. Documents in this file are moved into the destruction file after the documents are destroyed.

How are records destroyed?



charge-out and follow-up file: a tickler file that contains requisition forms filed by dates that records are due back in the inactive records center

records destruction: the disposal of records of no further value beyond any possible reconstruction

destruction date file: a tickler file containing copies of forms completed when records are received in a records center

Why are some records not destroyed on the scheduled date?

Before the destruction date arrives, the records center will notify the department that owns the records that the destruction date is approaching.

A **destruction notice** is a notification (memo, listing, form, e-mail message, etc.) of the scheduled destruction of records. This notice reminds departmental employees that some of their records will soon be destroyed even though the department manager signed a records destruction authorization form when the records were transferred to the records center. That authorization form is kept on file in the records center. Notice that the fourth column on the records transmittal form in Figure 7.9 on page 226 identifies a records disposal authorization number. This number is assigned when the records are transferred to the records center. If a written authorization is on file, the number in that column is all that is needed to proceed with the destruction. If, after receiving the destruction notice, the department manager determines that the inactive records continue to have value, destruction may be suspended. Records retention policies and best practices should include provisions for suspending records destruction when a lawsuit or other legal actions are pending or are in process. A **destruction suspension** (sometimes referred to as a *records hold*) is a hold placed on the scheduled destruction of records that may be relevant to foreseeable or pending litigation, governmental investigation, audit, or special organizational requirements. Records for which destruction has been suspended are often referred to as *frozen records*.

Destruction File

Whether records are destroyed by a service provider or by records center employees, the actual destruction must be witnessed or proof provided by a certificate of destruction. A **destruction file** contains information on the actual destruction of inactive records. Usually, the type of destruction is determined at the time the records are transferred to the records center. This information is recorded on the transmittal forms in the destruction date file, which are moved to the destruction file after the records are destroyed. These forms are filed by department names and dates on which destruction was carried out. Records managers maintain and dispose of records as part of the record life cycle. Proper control procedures ensure that the right record is available to the right person at the right time and that records no longer needed are destroyed properly. Electronic destruction files allow for easy entry of essential information regarding the destruction dates, destruction methods used, and department names. Necessary physical forms may be scanned and stored electronically as well.

At least once a year, go through your files and safely dispose of everything that is no longer needed. Cross-cut shredding is a safe way to dispose of any paper records that contain your name, Social Security number, driver's license, account numbers, address, and bank information.

RECORDS CENTER SOFTWARE

Automation in large records centers is extremely important. It improves productivity, helps center employees provide faster service, and improves system integrity. Records center software combined with bar codes or RFID tags

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destruction notice: a notification of the scheduled destruction of records

destruction suspension: a hold placed on the scheduled destruction of records

destruction file: a file that contains information on the actual destruction of inactive records

My Records



Retain and Dispose of Records

Do you have a fear of throwing away documents because you might need them some day? Do you know which records you need to keep and for how long?

To reduce the volume of your paper records, you need to dispose of records you no longer need on a regular schedule. Ask yourself these basic questions to help determine which records to keep and which ones to destroy:

- Is the information important to my life, personal interests, or job?

- Has this information become outdated? Can I find a more current document?
- How easily can I replace this document if I need the information later?

A suggested retention schedule for personal records appears below. If you have specific questions about retaining your records, ask an accountant or attorney.

FILE TYPE	RETENTION	FILE TYPE	RETENTION
Family Records		Employment Records	
Birth certificate	Permanent	Contracts	4 years after completion
Diploma	Permanent	Correspondence	4 years after leaving job
Divorce settlement	Permanent	Pay stubs	1 year
Marriage certificate	Permanent		
Military service	Permanent	Taxes	
Naturalization papers	Permanent	Federal income tax forms	7 years
Passport	Until receipt of renewed passport	State income tax forms	7 years
Pet papers	For life of pet	Legal and Financial Records	
Social security	Permanent	Deeds	Permanent
Will	Permanent	Contracts (mortgage, promissory notes, leases) still in effect	Permanent
Medical Records		Expired contracts	7 years
Details of surgeries, diagnosis, procedures	Permanent	Credit card statements	1 year
Medicines taken	Permanent	Bank statements	1 year
Product Receipts and Warranties			
Currently owned	Permanent		
Sold or recycled	1 year		

How can software improve records center efficiencies?

How can records tracking systems improve retrieval accuracy?

can eliminate many manual tasks. The software should be able to perform the following main functions:

1. Box and/or records inventories
2. Storage management
3. Records and information searches
4. Records retention schedule correlations
5. Destruction methodology correlated with retention schedules
6. Accounting
7. User tracking

Additionally, the software can be programmed to include bar code and RFID tracking, cross-referencing, global searching, off-site storage control, label preparation, document indexing, spell-checking, report generation, audit trails, and more. (Records audits are discussed in Chapter 12.)

By incorporating bar code and RFID technology and having readers connected directly to a computer, records center automation systems can perform these additional functions:

- Locate a box on a shelf
- Check out/in a box or file
- Locate a folder in a box
- Identify a file or box for destruction
- Charge back faxing, copying, microfilm searches, and other activities to departments that requested such services.³

Often, records tracking systems use bar codes or RFID tags to help in retrieval and to eliminate the need for keying input each time a record is requested. Because pertinent information is not keyed each time, input errors are virtually eliminated when bar codes or RFID tags are used. Whether a record is classified as active, inactive, or archival, a tracking system allows instant recall of facts, location, and in some cases, the record itself. Most tracking systems use a database setup to manage records at the document, folder, or box level.

³ARMA International, *Records Center Operations*, 2d ed. (Lenexa, KS: ARMA International, 2002), p. 15.

Chapter Review and Applications

KEY POINTS

- A records retention program establishes policies and procedures for what documents to keep, where to keep them, and how long to keep them.
- A records inventory is a survey of all records maintained by an organization.
- A retention period is the length of time that records must be retained according to operational, legal, regulatory, and fiscal requirements.
- A records retention schedule (RRS) shows how long to maintain records.
- Retrieval is the process of locating and removing a record, a file, or information from storage.
- Follow-up is a system for assuring the timely and proper return of materials charged out from a file.
- Records that are no longer used frequently are transferred to a records center or to an archive for permanent storage, or they are destroyed.
- Archives are the records created or received and accumulated by a person or organization and preserved because of their historical or continuing value.
- Records transfer helps reduce equipment costs because inactive records are stored in less expensive cardboard containers.
- Records center control files include an inactive records index, a charge-out and follow-up file, a destruction date file, and a destruction file.
- Records center software, along with bar codes and RFID tags, perform box inventories, charge in/out records and boxes, locate a box on a shelf, locate a record in a box, and perform numerous other important records and information functions.

TERMS

active records	follow-up	periodic transfer	records disposition
archive records	inactive records	method	records inventory
archives	inactive records index	perpetual transfer	records retention
charge-out	index	method	program
charge-out and	nonrecord	pick list	records retention
follow-up file	office of record	radio frequency	schedule
charge-out log	official record	identification (RFID)	records series
destruction date file	on-call/wanted	record copy	records transfer
destruction file	form	records center	requisition
destruction notice	one-period transfer	records center box	retention period
destruction suspension	method	records destruction	retrieval

REVIEW AND DISCUSS

1. Why is a records retention program useful to an organization? (Obj. 1)
2. List and describe each of the four values of records. Provide a record example for each value. (Obj. 2)
3. What is a records inventory? Discuss why an inventory is conducted and what is included in the inventory. (Obj. 3)

4. Describe a records retention schedule and explain why one is prepared and the purpose it serves. (Obj. 4)

5. What is records retrieval? Name at least three ways that requests for stored records may be made. (Obj. 5)

6. Explain the steps in a manual charge-out procedure. (Obj. 5)

APPLICATIONS

7-1 Determine Retention Periods (Objs. 1, 4)



1. Open the *Access* data file *7-1 Retention Schedule*. Open the Records Retention Schedule table.
2. Refer to the records retention schedule in Figure 7.3, page 211, to find retention periods for the records listed below. Enter the retention data in the Years Active, Years Inactive, and Total Years database fields.

Records

Expired liability policy
Records inventory
Bank deposits
Advertising contracts
Annual audit reports
Policy statements
Records management policies
Requisitions for supplies
Training manuals
Executive correspondence

3. Sort the table by the Records Series field and then by the Record field.
4. Create and print a report to show the records retention schedule.
 - Include all the fields in the Records Retention Schedule table.
 - Group the records by the Records Series field. Sort by the Records field in ascending order.
 - Choose Stepped layout and Landscape orientation.
 - Choose Corporate style.
 - Name the report Records Retention Schedule Report.
 - Print the report.
5. Create a query to show all records with P in the Total Years field. Display the Record Series, Record, and Total Years fields in the query results. Save the query as Total Years Query. Print the query results table.

7-2 Solve Retrieval Problems (Objs. 1, 4, 5)

You and two other students have been invited to assist the owners of a small clothing company to gain better control of their records. The two owners of Creative Designs design, create, and sell silk ties for men. A variety of designs are used, including various holiday and sports themes in addition to their own creative, whimsical designs. Currently, the company consists of the two co-owners, one sales representative, and one administrative assistant. Temporary workers are often called in to help prepare a large order for shipping. The administrative assistant is responsible for preparing files for storage, filing all records, and retrieving records as needed. However, everyone in the company has access to the files, and they often remove records if the administrative assistant is helping prepare a shipment to a major retailer.

Because the company is small, few records controls are being used. Sometimes an owner will not be able to locate the sales records for a specific buyer, and no one knows who has a custom-design client's records. Misfiling occurs frequently because someone is in a hurry when records are re-filed, and file users often stack records to be re-filed wherever space is available. The administrative assistant spends unproductive time searching for misfiled records and records that should be in storage but are not.

The owners plan to expand the product line to include matching dress shirts, which will mean more employees and more records.

1. Work with your team members to prepare a list of recommendations to help Creative Designs improve its records management. Include the kind of records procedures you would recommend for this growing company and additional supplies or equipment needed to provide adequate control of records.
2. Key the list and submit it to your instructor.

7-3 Recommend Records Transfer Methods (Obj. 6)

Which transfer method—perpetual, periodic, or one-period—would you recommend for each of the following records situations? Explain your decision.

1. Home improvement store: employment applications, general correspondence, property mortgage.

2. Medical clinic office: medical case files of deceased patients.

3. Law office: client folders from the past 10 years.

4. Exercise gym and spa: all folders relating to advertising activity—news releases, publicity photographs, and advertising activity reports. All records were created in the current year.

5. Condominium builder: all folders related to a high-rise condominium that has recently been completed. All units are sold, and the grand opening was held the last Saturday of last month. The folders contain records of subcontractors, new owners, insurance carriers, and governmental agencies that issued required permits.

7-4 Learn About Web Resources Retention (Objs. 1, 4)

National Archives in the United States and other countries provide guidance for web records retention. You will learn about guidelines provided by the National Archives of the United States, the United Kingdom, and Australia. You can find the URLs for these websites on the Links tab at the website for this book.

1. Access the U.S. National Archives & Records Administration website. Click **Records Management**. Click **Policy and Guidance**. (If these links do not appear, search for *records management policy and guidance*.)
2. Which item listed under Records Management Policy and Guidance would apply to web records?
3. Access the National Archives (of the United Kingdom) website. Click **Services for Professionals**. Click **Electronic Records Management** on the pull-down menu. Click Advice & Guidance. (If these links do not appear, search for *electronic records management advice and guidance*.)
4. Which of the toolkits listed under Electronic Records Toolkits applies to web records?
5. Access the National Archives of Australia website.
6. What is the title of the guideline for web records?

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 8 Requisition and Charge-Out Procedures

Job 9 Transfer Procedures

Continue working with Auric Systems, Inc.
Complete Jobs 8 and 9.

For More Activities Go To:
www.cengage.com/officetech/read

Subject Records Management

LEARNING OBJECTIVES

1. Define subject records management.
2. List advantages and disadvantages of storing and retrieving records by subject.
3. Compare the dictionary and encyclopedic subject file arrangements.
4. Describe the guides, folders, and labels used for subject records storage.
5. Describe four indexes and their use for subject records management.
6. List the steps used when storing and retrieving records stored by their subjects.
7. Use computer software to prepare an index for subject records.
8. Store and retrieve records following subject records procedures.

ON THE JOB

The State of Oregon is unique in that both records management and archives management are directed by the state archivist. State Archivist Mary Beth Herkert's duties are to: (1) provide advice and assistance on public records management issues and authorize the destruction of public records for all levels of Oregon government; (2) protect, store, and provide access to permanently valuable records of Oregon; and (3) operate the Oregon State Records Center and the Security Copy Depository. Nontraditional duties include: filing "Official Documents," as defined by law, for the Secretary of State; publishing Oregon's Administrative Rules; and publishing the Oregon Blue Book.

Government in Oregon creates physical, image, and electronic records, and the Archives Division is responsible for managing the information from creation to final disposition. The state archives accepts only permanent records for storage, and those records must be in either physical format or microfilm. Access copies of the records may be in electronic form and include paper, maps, drawings, and photographs. The state records center is for nonpermanent records, and it accepts records in any format as long as they fit into a standard-sized records center box.

Mary Beth believes that the profession as a whole, especially in the private sector, will continue to grow. Records management is no longer just storage management but also risk management. She also advises students to know enough about technology and how it works to be conversant and respected by the information technology (IT) community. When RIM staff understand IT's language, they can work with IT to accomplish the tasks at hand and reduce the risks of lost records and unauthorized access to stored records.



Courtesy of Mary Beth Herkert

Printed with the permission of Mary Beth Herkert.

SUBJECT RECORDS STORAGE AND RETRIEVAL

You have already studied the alphabetic method of storing and retrieving records by name—names of individuals, businesses, and organizations. Two other alphabetic storage methods—subject and geographic—are also widely used. In this chapter, you will learn how and when to arrange records by their subjects. Geographic records management, a filing method in which records are arranged by geographic location, is presented in Chapter 10.

Subject records management is an alphabetic system of storing and retrieving records by their subject or topic. Subject filing is recommended when the range of topics used within an organization is broad and may include correspondence, reports, clippings, catalogs, research data, product development plans, and inventory lists. In such a case, a topical arrangement becomes the logical way in which to arrange information.¹ Sometimes, documents cannot be filed by any other filing characteristic.

File users expect records that pertain to the same subject or topic to be stored together. Consequently, subject storage is the preferred storage method in many organizations. Subject records storage is used in any type of business or organization that has a large volume of stored records. A small organization may use a limited list of subject titles (also referred to as *headings*) for coding, storing, and retrieving records. However, a large organization may have an extensive list of main subject titles as well as numerous subdivisions of those titles. Filing by subject has advantages and disadvantages as shown in Figure 8.1 on page 245.

Arranging records by subject categories, such as topic, organizational function, department, service, product, or project, is logical and improves retrieval for certain records. As you study a variety of filing methods, you will learn how components of one or more filing methods can be combined for efficient records storage and retrieval. The alphabetic method is often combined with other methods. Although an organization's records may be filed alphabetically by name, some records are kept together under subject headings, such as APPLICATIONS, PURCHASE ORDERS, and RENTAL CAR CONTRACTS, because use of these records would require such groupings. Arranging records according to organizational functions, such as ACCOUNTING, HUMAN RESOURCES, MARKETING, and SALES, is often used in large organizations.

Subjects are easy to recall, and subject records storage is the only logical, efficient method of storing and retrieving certain records. Many people think records are best remembered and retrieved by subject. As a result, many types of businesses and industries file their records using the subject method. A rule of thumb for choosing an appropriate filing method is to match the method to the most logical way for file users to request records. Office workers sometimes use alternate, synonymous

Why store records by subject?

What filing method is often combined with other methods?

subject records

management: an alphabetic system of storing and retrieving records by their subject or topic

¹ ARMA International, *Establishing Alphabetic, Numeric and Subject Filing Systems* (Lenexa, KS: ARMA International, 2005), p. 4.

FIGURE 8.1 Advantages and Disadvantages of Filing by Subject**SUBJECT FILING****Advantages**

- Subjects are easier to remember than names.
- Related records are easier to find.
- Related records are not scattered throughout the files.
- Files can easily be expanded by adding subdivisions to main subject titles.
- Subject filing is appropriate for storing large volumes of records.
- Security is provided because correspondent names are not visible to unauthorized persons who may not know the subject under which a record is filed.

Disadvantages

- Main subject titles and subdivisions may overlap as the list of subject titles grows.
- Concise, clearly defined, and uniformly stated subject titles may be difficult to select.
- Inconsistent subject title coding on records can make storage and retrieval difficult.
- Users may not remember the exact titles or be unfamiliar with the subject titles and may have more difficulty finding records.
- Planning and maintenance are required to assure that approved subject titles are used consistently.
- Subject filing is the most expensive storage method because experienced filers are required.
- An experienced records analyst may be required to create the subject titles to assure that the most logical subjects are selected.
- Indexing, coding, and cross-referencing take more time because each record must be read carefully and thoroughly.

terms for a single topic when filing by subject. Therefore, cross-references and indexes are necessary when using subject filing. Subject indexes and cross-referencing are explained later in the chapter.

The selection of a word or phrase to use as a subject title (the filing segment) is of prime importance when using the subject storage method. One person should be responsible for selecting subject titles. That person must be thoroughly familiar with the material to be stored and have considerable knowledge of every phase of the operations and activities of the business. If all file users have authority to add subject titles to a subject filing system, the same type of record content soon becomes stored under two or more synonymous terms. Such storage of related records in two or more places separates records that should be stored together and makes retrieval of all related records difficult.

The subject title must be short and clearly descriptive of the material it represents. Once a subject title has been chosen, it must be used by everyone in the organization. Additional subject titles must be chosen so that they do not duplicate or overlap any subject previously used. Good subject selection requires agreement by file users on the subjects to be used, flexibility to allow for growth within the selected subjects and for expansion to add new material, and simplicity so that users can understand the system. Once subject titles

Why should only one person be responsible for adding or changing subject titles?

Why is choosing subject titles so important?

My Records



Subject Filing

Would the subject method be a good way to file your personal records? How can you set up your records for filing by subject?

A purchased bellows folder with subject categories can be used to file your financial records. These folders can be used for many storage purposes. Labels include alphabetic

subdivisions, subjects, and a place to write your own labels. Subject categories vary with the manufacturer of the folders and may include the following:

Automobile	Bank Records	Income Taxes	Insurance Records
Medical and Dental	Unpaid Bills and Receipts	Utilities	Miscellaneous

If you have a filing cabinet, you can also create your own folders. The following categories may serve as a guide for you:

Bank Records	Car	Charity	Education
Investments	Medical and Dental	Miscellaneous	Mortgage/Rent
Payroll	Income Taxes	Utilities	Pet Records

To help all members of your family understand your subject filing, create and print a master index of your subjects.

You and your family can brainstorm all the subjects that are likely for your family's needs. Here are some sample categories:

Family and Friends

- Family information
- Pet information
- Important phone numbers
- Frequently called numbers
- Address/phone directory

Food and Shopping

- Groceries needed
- Meal planner
- Recipe instructions
- Mail/Internet order record
- Monthly spending record

Things to Do

- People to visit or contact
- Places to go
- Movies to see or rent
- Books to read

Home and Automobile

- Home maintenance
- Home repairs
- Household appliances
- Vehicle maintenance
- Mileage record

Cleaning and Chores

- Family chore chart
- Kids' schedule
- Cleaning checklist
- Cleaning schedule

Special Occasions

- Birthdays
- Gift ideas
- Holiday card record

Inventory

- Home inventory
- Book inventory
- Video/DVD inventory
- Audio inventory
- Photograph documentation

Health, Exercise, and Medical

- Balanced diet log
- Nutrition worksheet
- Exercise log
- Walking log
- Quick health info
- Doctor visits
- Medication schedule

have been selected, they must be used consistently by all file users. Preparation and use of necessary indexes ensure consistent use of selected subject titles.

Remember the following important subject filing guidelines:

1. Select subject titles that best reflect stored records, are meaningful to file users, and are easy to remember.
2. Select subject titles that have only one interpretation.
3. Use one-word subject titles whenever possible.
4. Use plural titles whenever possible.
5. Provide for the occasional use of alternate, synonymous, or related subject titles.
6. Consider combining filing methods when subdividing and sub-sorting records in large subject filing systems. For example, subdivide records first by subject and then alphabetically by location or name, numerically by record or document number, or chronologically by date.
7. Designate one person to manage the subject titles—to select the titles and to add new titles as needed.

SUBJECT RECORDS ARRANGEMENTS

Physical and electronic records may be stored in two alphabetic subject arrangements: (1) dictionary, and (2) encyclopedic. The definitions of these two terms are easy to remember when you relate them to the arrangement of words in a dictionary versus the arrangement of information in an encyclopedia. A dictionary contains a list of words in alphabetic order. An encyclopedia contains a list of words and related topics in alphabetic order. Both subject arrangements are explained and illustrated in the following paragraphs.

Dictionary Arrangement

A **dictionary arrangement** is a single alphabetic filing arrangement in which all types of entries (names, subjects, titles, etc.) are interfiled. Characteristics of the dictionary arrangement are listed in Figure 8.2. In the subject

FIGURE 8.2 Characteristics of the Dictionary File Arrangement

DICTIONARY FILE ARRANGEMENT

- Labels on primary guides are the letters A to Z in alphabetic order.
- Special guides are used to identify subject folders that are referenced often.
- General subject folders are used to store all records relating to the subject title.
- Captions on the general subject folders include the letter of the alphabet as well as the subject title.
- Subject titles are not subdivided.



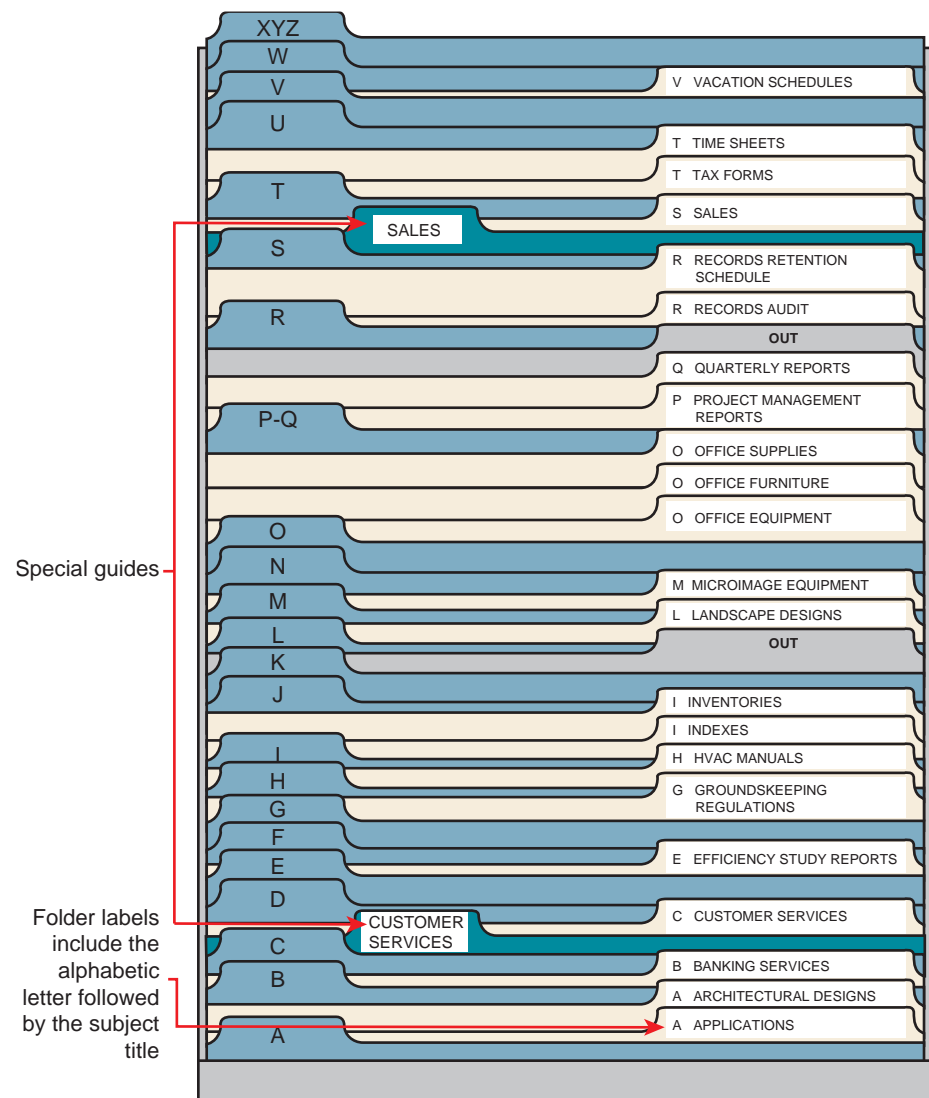
dictionary arrange-

ment: a single alphabetic filing arrangement in which all types of entries (names, subjects, titles, etc.) are interfiled in alphabetic order

dictionary arrangement, subject folders are arranged behind A-to-Z guides in correct alphabetic order by subject title. Generally, the dictionary subject arrangement is not recommended if the volume of records is greater than could be stored in two file drawers. However, the dictionary arrangement is used regardless of the number of records if the subject topics are easily identified without the necessity of using subdivisions.

Figure 8.3 shows a small office file arranged in straight dictionary order. A-to-Z guides are one-fifth cut and occupy first position in the file. Special guides are one-fifth cut and are in second position. Two special guides in Figure 8.3 are CUSTOMER SERVICES and SALES. These special subject guides mark exceptionally active subjects, making them conspicuous and easier to find. All general folders labeled with subject topics and OUT guides are one-third cut. They occupy the third position in the file.

FIGURE 8.3 Dictionary Arrangement of Subjects



So far, subdividing general subjects into more specific subdivisions has not been necessary. If records accumulate and make dividing the general subjects into more specific subdivisions necessary, the arrangement would no longer be considered a dictionary arrangement.

Encyclopedic Arrangement

The **encyclopedic arrangement** is a subject filing arrangement in which records are filed under broad, major subject titles and then under the specific subtitle to which they relate. Titles and subtitles in physical and electronic subject RIM systems are arranged alphabetically. Characteristics of the encyclopedic arrangement are listed in Figure 8.4.

When is a subject dictionary arrangement no longer considered as a dictionary arrangement?

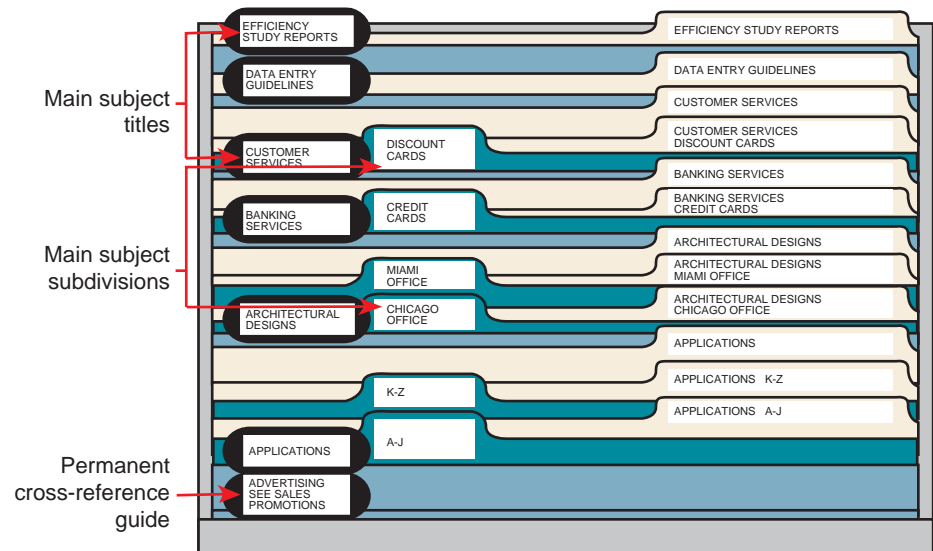
FIGURE 8.4 Characteristics of the Encyclopedic File Arrangement

- ENCYCLOPEDIA FILE ARRANGEMENT**
- Primary guide captions are general subject titles.
 - Secondary guide captions are subdivisions of the general subject titles.
 - Folder captions include the main subject titles and the subdivisions.
 - A general subject folder with the same label caption as the primary guide is inserted behind the last subdivision folder for all subjects.

Figures 8.5 through 8.8 (pages 249–252) show encyclopedic arrangements of the subject file shown in Figure 8.3 on page 248. As the number of records increases, the file arrangement requires specific subject subdivisions for quicker access to filed records. Study the guide and folder captions in Figures 8.5 through 8.8. *Main subjects* are printed on the label captions

Why subdivide main subject titles?

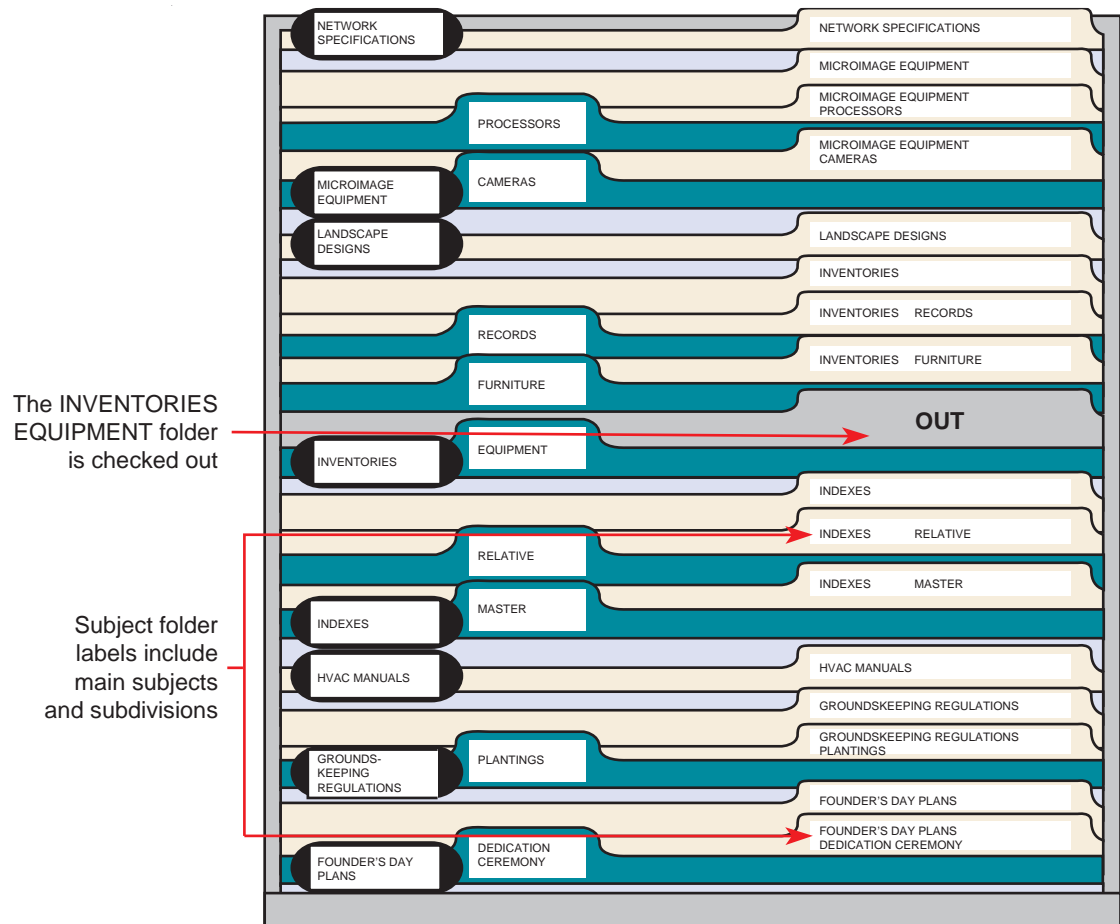
FIGURE 8.5 Encyclopedic Arrangement of Subjects A–E



.....

encyclopedic arrangement: a subject filing arrangement in which records are filed under the specific subtitle to which they relate

FIGURE 8.6 Encyclopedic Arrangement of Subjects F–N



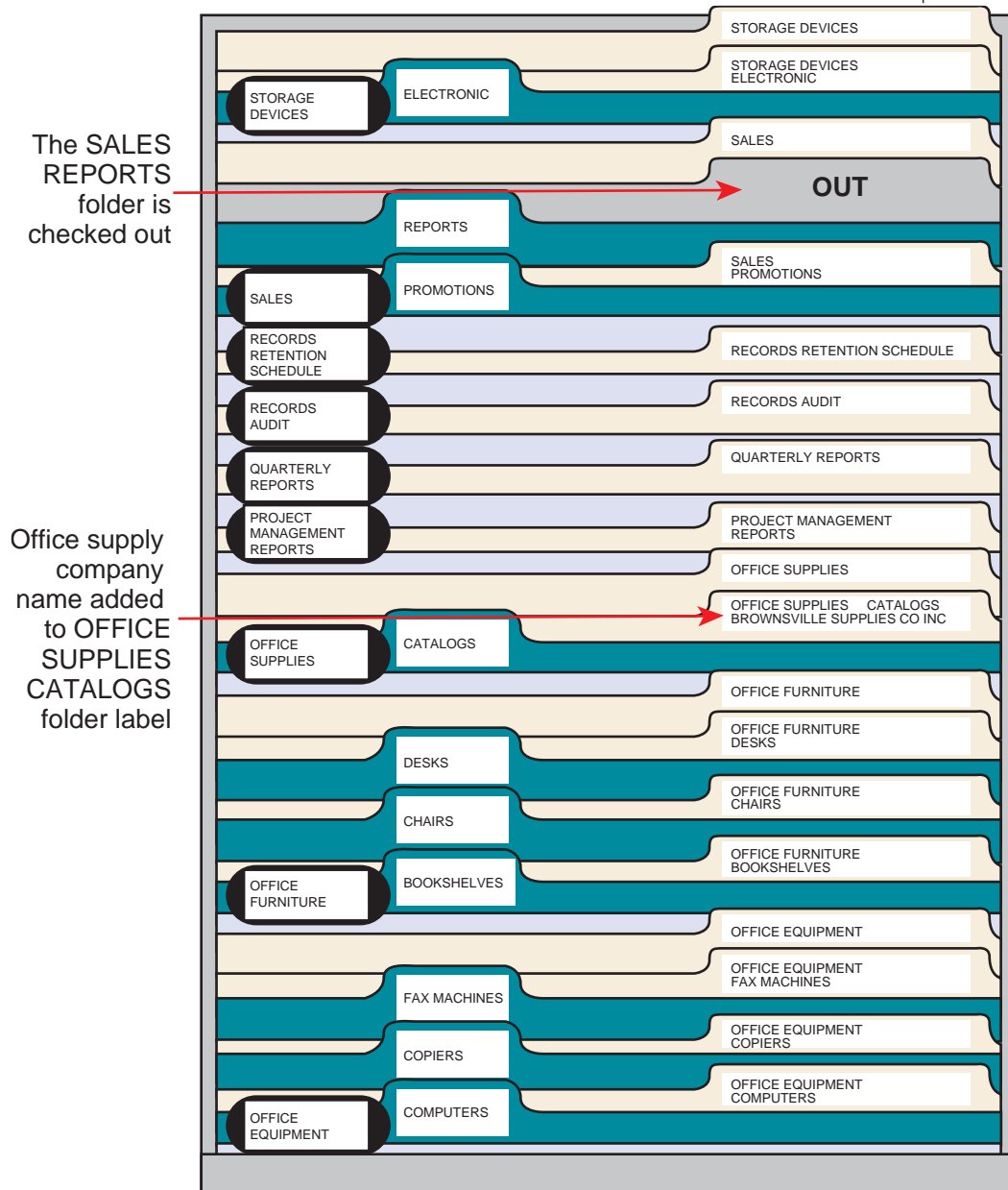
of the primary guides. These guides are one-fifth cut and in first position. Secondary guides in second position also have one-fifth cut tabs. These guide labels bear the *subdivision* of the main subjects. The secondary guides may also include the primary guide captions such as those illustrated in Figure 8.9 on page 253. However, because guides are not removed from the file when storing and retrieving records, repeating the main subject title on the secondary guide is not necessary.

On the other hand, *folder* label captions include the main subjects and the secondary guide captions. If necessary, additional subdivisions of the first subdivision may be made for the specific subject titles. If necessary, the correspondent name may be included on the label. A comprehensive folder label helps assure that a borrowed folder will be returned to its correct file location. One-third cut folders are recommended. Once again, OUT indicators are in third position with all general folders. OUT guides are usually of a distinctive color that is easily visible to show the location of a removed folder.

Most of the same general subject folders in Figure 8.3 on page 248 have been maintained in the encyclopedic file arrangement shown in Figures 8.5 through 8.8 on pages 249 to 252. Specific subject folders have been added where subjects are subdivided by the secondary subject guides. Note the general

When is a new subdivision added?

FIGURE 8.7 Encyclopedic Arrangement of Subjects O–S

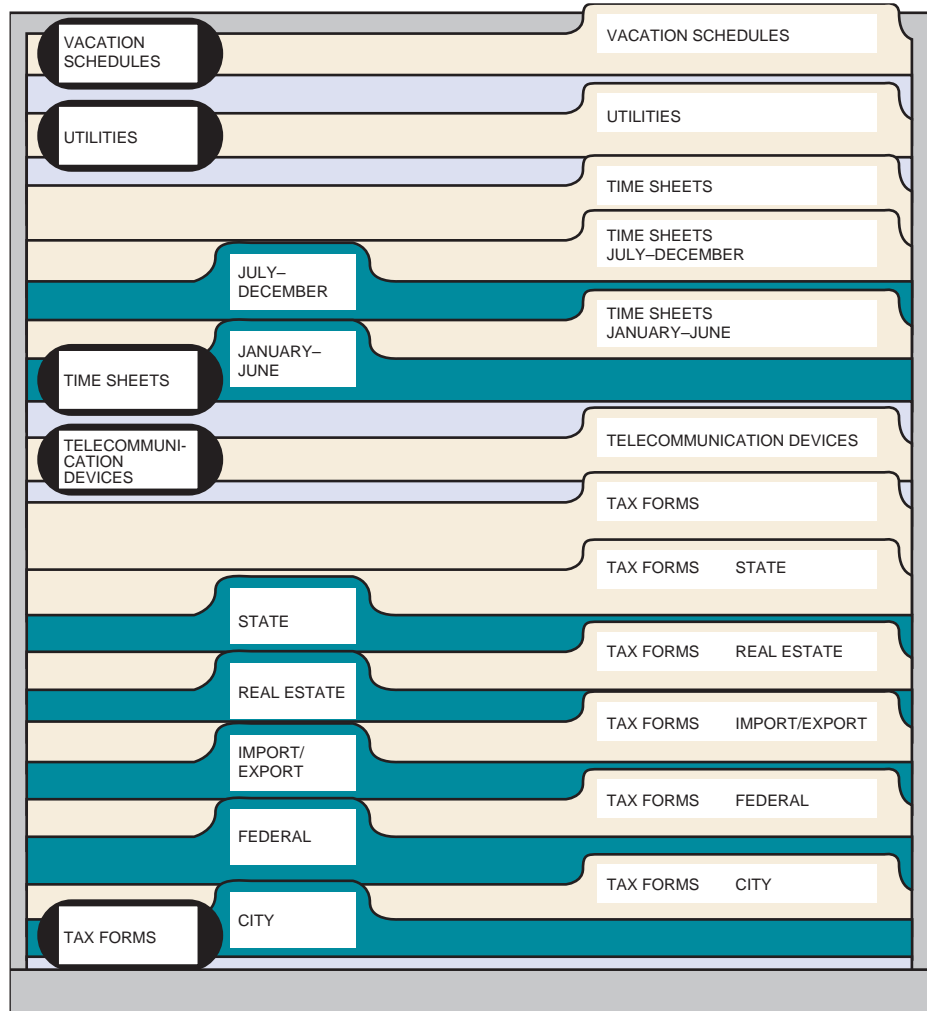


subject folder for BANKING SERVICES in Figure 8.5 on page 249. Although a subdivision folder for CREDIT CARDS has been added, the general BANKING SERVICES subject folder remains. The general folder holds records pertaining to other banking services information that does not fit into the credit card category.

General folders need to be checked regularly to determine whether some records could be moved into a new specific folder. When the number of records for other related subject topics has accumulated to the predetermined number that warrants a specific folder, a new subdivision should be added, the index updated immediately, a new secondary guide prepared, and a new subdivision folder prepared. General subject folders are placed after subdivision or specific subject folders so that users will first look for a subdivision to avoid filing all records in the general folder.

How should general folders be managed?

FIGURE 8.8 Encyclopedic Arrangement of Subjects T–V



When general folders become crowded and no specific subject subdivisions are possible, other means of subdividing records may be used. Notice that the APPLICATIONS general folders are subdivided by sections of the alphabet—A–J and K–Z in Figure 8.5 on page 249.

In Figure 8.6 on page 250, the INVENTORIES general subject is subdivided by types of inventories—equipment, furniture, and records. The name of an office supply company catalog—Brownsville Supplies Co., Inc.—has been added to the folder label for OFFICE SUPPLIES CATALOGS in Figure 8.7 on page 251.

Color can be used effectively with subject filing. Very often, each subject label will have a color band that is repeated on all guides and folders for that subject. Sometimes, all captions of one subject will be one color, the color changing when the subject title changes. A third possibility is that each subject will have guides and folders of only one color, with a change of color used for guides and folders of the next subject. Using a colored folder for all general subject folders can also be effective. Although the use of color can speed the filing process and reduce misfiles in any filing system, using color does not take the place of careful selection of meaningful subject titles in a subject filing system.

How is color used in subject filing?

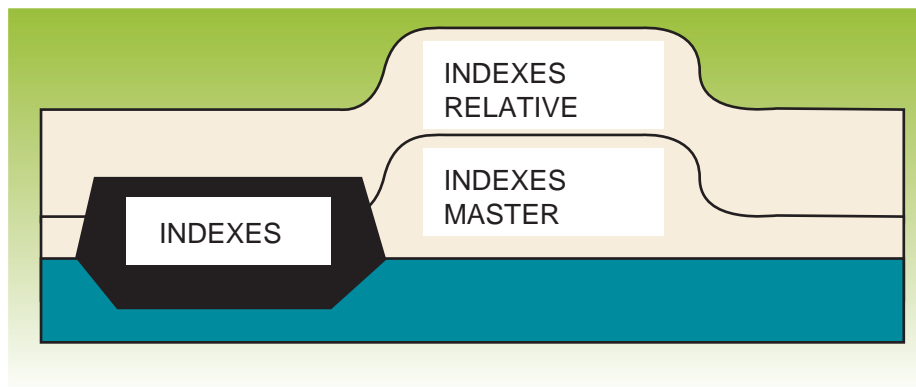
SUBJECT FILING SUPPLIES

Supplies used for the subject arrangement of physical files include guides, folders, labels, and OUT indicators, all of which were explained in Chapter 6. The use of OUT indicators when charging in and charging out records was discussed in Chapter 7. Because more information is keyed on guide and folder label captions for subject filing than for alphabetic name files, preparing records for subject storage is slightly more challenging than for alphabetic records.

Guides and Labels

Guide labels used in subject records storage are determined by the subject titles used. If subject titles are long, subject codes or abbreviations may be used. Subject coding is explained in more detail on pages 260 to 262. Figure 8.9 shows an example of primary and secondary guides. The primary guide caption contains the main subject title; the secondary guide contains the main subject and its subdivision. Because guides are not removed from a storage container during storage and retrieval, a primary guide caption can be omitted on a secondary guide, as shown in Figures 8.5 through 8.8 on pages 249–252.

FIGURE 8.9 Primary and Secondary Guide Labels



Subject filing requires customized labeling of guides and folders that matches subjects and subdivisions. Adhesive labels are available from a variety of suppliers and in a variety of sizes and colors. Packages of labels include directions for using the label function in word processing software programs. The software program label function enables preparation of many different label sizes and styles as shown in the photo on page 254. Label templates may be downloaded from label suppliers' websites. A template allows a user to key several captions on a template and print the entire sheet of labels or only a portion of the sheet at the same time. Blank tab inserts for one-third or one-fifth cut metal or plastic tab sizes can be purchased in strips for attaching computer-generated adhesive labels.

Why do subject folder captions include both main titles and subdivisions?

Why does subject filing require customized guide and folder labels?

Where are captions printed on guide labels or inserts?

The Smead Manufacturing Company



Consistent labels can be prepared using the label feature of software programs.

Captions on all guides in the records system should have consistent spacing and style. All primary guide label captions should begin near the left edge and near the top of the label. The label function of software (word processing or database) uses preset margins for each label selection. When using these settings, be sure the label captions begin at the same point on all labels.

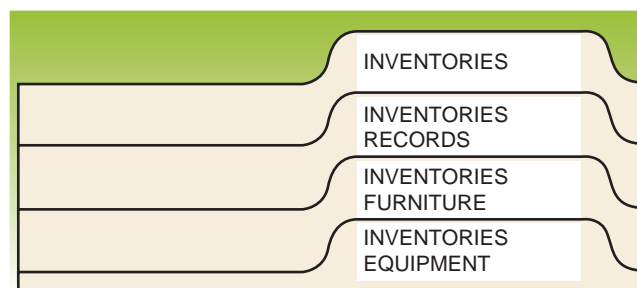
Labels are easier to read with information in a straight line rather than staggered. Key the information in all capitals with no punctuation. Decide whether to use complete subject titles, abbreviated titles, or subject codes and follow this format consistently. Mixing styles of captions complicates filing and retrieval.

Where are captions printed on folder labels?

Folders and Labels

Folder label captions include the primary or main subject title and all necessary subdivisions. As discussed previously, comprehensive label captions help assure that borrowed folders are returned to the correct file locations. One-third cut folders are preferred. Adhesive folder labels are available in a variety of sizes and may be printed using a laser or an inkjet printer. The label size should match the tab cut of the folder. Use the label function of word processing software for preparing labels, or follow the directions for label formatting that is packaged with the labels. The main subject title should begin near the left margin and as near as possible to the top of the label or the bottom of a color bar on the label. Key the *subdivision* 0.5 inches to the right of the main subject title or under the first letter of the first line. Key the label in all capitals with no punctuation as shown in Figure 8.10. Be precise and consistent with folder

FIGURE 8.10 Subject Folder Labels



label preparation. Attention to this detail creates a neat, readable, straight-line filing system.

Color code folder labels for each subject guide to reduce misfiles. Bar codes can be added for electronically tracking records. Bar codes and color codes for folders and labels in subject records storage relate to the first, second, and, sometimes, third letters in subject titles. Supplies and services for color coding and bar coding are available through companies offering records and information management products. These companies can be located through the *Yellow Pages* or on the Internet. The ARMA International website has a buyer's guide listing vendors of filing supplies and records management products. Some of these companies offer records and information management products and services applicable to subject records systems, as well as other records systems. Their websites not only provide information about their companies but also give helpful hints for setting up and maintaining records management systems.

OUT Indicators

An OUT guide appears in the file samples in Figures 8.3 through 8.7 on pages 248–251. You may want to review OUT indicators and the charge-out and follow-up procedures discussed in Chapters 6 and 7. Follow the same procedures for subject filing that you applied in alphabetic name filing. The only difference is that you will use subject titles, rather than individual or organization names, to identify records.

SUBJECT INDEXES

You learned about the importance of using an index when storing and receiving records in Chapter 7. Because filers may not know all subjects used in a subject file, they cannot go directly to a file to locate a record. A subject file requires an index and, therefore, is considered an indirect access filing method.

Indirect access is a method of access to records that requires prior use of an external index. Users must refer to an index to determine whether a subject has been established in the system and, if it has, the location of a record before they can store or retrieve the record from the main file. Alphabetic filing is considered a direct access filing method because a specific record or correspondent name in a file can be found without first referring to an index to find its location. **Direct access** is a method of access to records without reference to an index or other filing aid. The filer goes directly to the file without first referring to a list of names for the location of the record in the files.

Preparation of Indexes

Indexes are electronic or printed lists. Although most indexes are created in text files or databases, a print copy of the index should be available in the files storage area. It should be kept in a designated location, and users should

What information should be written on an OUT guide when a subject record is borrowed?

Why is more than one index needed for subject files?



indirect access: a method of access to records that requires prior use of an external index

direct access: a method of access to records without reference to an index or other finding aid

FIGURE 8.11 Master Index for a Subject File

MASTER INDEX-SUBJECT FILE		
Applications*	Landscape Designs	Storage Devices
Architectural Designs	Microimage Equipment	Electronic
Chicago Office	Cameras	Tax Forms
Miami Office	Processors	City
Banking Services	New York Branch Office	Federal
Credit Cards	Office Equipment	Import/Export
Charitable Donations	Computers	Real Estate
Customer Services	Copiers	State
Discount Cards	Fax Machines	Telecommunication
Data Entry Guidelines	Office Furniture	Devices
Formatting	Bookshelves	Time Sheets*
Keystrokes	Chairs	Utilities
Efficiency Study Reports	Credenzas	Vacation Schedules
Founder's Day Plans	Desks	
Dedication Ceremony	Office Supplies	
Groundskeeping	Catalogs	
Regulations	Invoices	
Plantings	Project Management	
HVAC Manuals	Reports	
Indexes	Quarterly Reports	
Master	Records Audit	
Relative	Records Retention	
Inventories	Schedule	
Equipment	Sales	
Furniture	Projections	
Records	Promotions	
	Reports	

*Divided folders do not need to be listed in the master index.

one selected for use in the system, check the relative index to see whether that subject title has been included. If not, add the requested subject to the index listing with the correct subject title beside it.

Referencing the relative index helps filers avoid duplication of subject titles and locate subjects when records are requested by unfamiliar terms. The relative index often contains both SEE and SEE ALSO cross-references. These notations help to suggest related materials and alternative file locations.

Numeric Index

The numeric index will become more meaningful after you study Chapter 9 and learn to assign numbers to subject file headings. Filers can file and retrieve numbers faster than words or letters because they can read numbers more quickly. When numbers are used to identify specific subjects, a numeric index is needed. A **numeric index** is a current list of all files by the file numbers. Such an index shows numbers assigned to subject titles and helps

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

numeric index: a current list of all files by the file numbers

FIGURE 8.12 Relative Index for a Subject File

RELATIVE INDEX-SUBJECT FILE

Subject Title	Filed Under	Subject Title	Filed Under
Advertising.....	Sales Promotions	Import/Export Tax Forms.....	Tax Forms
Applications.....	Applications	Indexes.....	Indexes
Architectural Designs.....	Architectural Designs	Inventories.....	Inventories
Banking Services.....	Banking Services	Landscape Designs.....	Landscape Designs
Bookshelves.....	Office Equipment	Master Index.....	Indexes
Cameras.....	Microimage Equipment	Miami Office.....	Architectural Designs
Catalogs.....	SEE Office Supplies	Microimage Equipment.....	Microimage Equipment
Charitable Donations.....	Charitable Donations	Network Specifications.....	Network Specifications
Chairs.....	Office Furniture	Office Equipment.....	Office Equipment
Chicago Office.....	Architectural Designs	Office Furniture.....	Office Furniture
City Tax Forms.....	Tax Forms	Office Supplies.....	Office Supplies
Computers.....	Office Equipment	Plantings.....	Groundskeeping Regulations
Copiers.....	Office Equipment	Processors.....	Microimage Equipment
Credenzas.....	Office Equipment	Project Management Reports.....	Project Management Reports
Credit Cards.....	Banking Services	Quarterly Reports.....	Quarterly Reports
Customer Services.....	Customer Services	Real Estate Tax Forms.....	Tax Forms
Data Entry Guidelines.....	Data Entry Guidelines	Records Inventory.....	Records Inventories
Dedication Ceremony.....	Founder's Day Plans	Records Audit.....	Records Audit
Desks.....	Office Equipment	Records Retention Schedule.....	Records Retention Schedule
Discount Cards.....	Customer Services	Relative Index.....	Indexes
Efficiency Study Reports.....	Efficiency Study Reports	Sales.....	Sales
Electronic Storage Devices.....	Storage Devices	Sales Projections.....	Sales Projections
Equipment Inventory.....	Inventories	Sales Promotions.....	Sales Promotions
Fax Machines.....	Office Equipment	Sales Reports.....	Sales Reports
Federal Tax Forms.....	Tax Forms	State Tax Forms.....	Tax Forms
Formatting.....	Data Entry Guidelines	Storage Devices.....	Storage Devices
Founder's Day Plans.....	Founder's Day Plans	Tax Forms.....	Tax Forms
Furniture Inventory.....	Inventories	Time Sheets.....	Time Sheets
Groundskeeping Regulations.....	Groundskeeping Regulations	Utilities.....	Utilities
HVAC Manuals.....	HVAC Manuals	Vacation Schedules.....	Vacation Schedules

filers avoid reusing the same numbers when new subjects are added to the storage system.

Name Index

Customarily, subject records storage does not require an alphabetic index of names of individuals or companies. However, correspondence filed in a subject arrangement *does* require a name index. A **name index** is a listing of correspondents' names stored in a subject file. The name and address of each correspondent are included in the index, as well as the subject under which each name is stored. Names are arranged alphabetically in text or database files and may be printed. Because records are sometimes requested by the name of an individual or a company, a name index containing this information can save time that would otherwise be spent searching for a record by subject.

STORAGE AND RETRIEVAL PROCEDURES

All the steps for storing and retrieving physical correspondence records studied in Chapters 6 and 7 are as important in the subject method as they are in any other storage method. A brief description of each step, together with an explanation of its application to the subject method, follows. The steps are summarized in Figure 8.13 on page 260.

Inspecting

Checking a record to determine whether it is ready to be filed is known as inspecting. Every record in any records and information management system should be inspected to verify that it has been released for filing. Whatever action the record requires should be taken or noted for later action prior to storing the record. Do not store a record until a written notation (called a release mark) by someone with authority indicates that it is ready for storage. A release mark might be a code or check mark, a punched symbol, a person's initials, a stamped notation, or some other agreed-upon mark. In Figure 8.14 on page 261, *JJ* is the release mark used to indicate that the letter is ready for storage.

Indexing

Indexing, or classifying, is the mental process of determining the subject filing segment to be used in storing a record. Because each record must be read carefully, this step takes more time with the subject method than with other storage methods. If a record relates to only one subject, indexing is simple. The filer simply selects the correct subject from the master index. If someone else has previously indicated the subject under which a record is to be stored, recheck the accuracy of the subject selection. If a record contains information about more than one subject, you must determine the most important subject by which to store the record. Then cross-reference the other subject(s).



name index: a listing of correspondents' names stored in a subject file

FIGURE 8.13 Subject Filing Storage and Retrieval Procedures**STEPS FOR STORING AND RETRIEVING SUBJECT RECORDS****Step 1: Inspecting**

- Check for release mark.

Step 2: Indexing

- Read entire record carefully.
- Select filing segment from text.
- Verify that subject is in master index.
- Select filing segment from the master index if not in the text.

Step 3: Coding

- Code the main subject and any subdivisions where they appear in the text.
- Insert diagonals between the units, underline the key unit, and number remaining units of the filing segment.
- Write the subject at the top right of the record if it is not in the text.
- Underline cross-reference subjects with a wavy line, insert diagonals between the units, and number all units, starting with 1.
- Write the correct cross-reference subject title in the margin if it is not exactly right in the text. Underline it with a wavy line and number all units.
- Place an X in the margin beside the cross-reference subject.

Step 4: Cross-Referencing

- Prepare a cross-reference sheet for all alternative subjects, or photocopy the record.
- File the cross-reference sheets, or copies, under the alternative subject title(s).

Step 5: Sorting

- Sort by main subject titles, then by subdivisions.

Step 6: Storing

- File records coded for subject subdivisions in appropriate subdivision folders.
- File records coded for the main subject only into the general subject folder.
- File records in the appropriate folders in alphabetic order by correspondent names; the latest date is in the front of the folder.

Step 7: Retrieving

- Use the master or relative index to locate records.

Coding

In Chapter 2, you learned that coding means marking the filing segment on the record. Code the main subject title and any subdivisions by placing diagonals between the units, underlining the key unit, and numbering the remaining units in the filing segment where they appear on the record. Code the correspondent's name by placing diagonals between the units and continuing the numbering of the units (Figure 8.14). If the subject is not mentioned in the record, write it legibly at the top of the record. Some filers prefer to write the filing segment in

FIGURE 8.14 Record Coded for Subject Record Storage

		2	3
		<u>Sales</u> / Promotions / Magazine	
4	5	6	
Demirchyan /Advertising /Agency			
1530 Park Avenue, New York, NY 10126-5701			
Tele: 212.555-0177 Fax: 212.555.0136			
		May 16, 20-- 11:00 A.M.	
May 15, 20--			
Ms. Angie Brown-Duran Duran Designs, Inc. 600 E 52 Street New York, NY 10022-2844			
Dear Angie			
The magazine advertising media kit you requested for <i>Design Creator's</i> magazine is on its way. Note that the new full-color page rate is \$15,650; the black/white page, \$10,275. A copy of your ad is enclosed and ready for your approval. We should meet the publication deadline for the September issue with no problem.			
If you are still considering television, you might be interested in XYC-TV's monthly advertising schedule for June. <i>HGTV</i> and <i>The Garden Show</i> rates are easily within your budget. We will be happy to show you some ideas for 30-second commercials if you want to pursue TV advertising. X			
		2	3
		Promotions / Television	
<i>Design Creators</i> is offering an incentive to first-time advertisers. It is offering an 8 percent discount to all advertisers booking space in the next two issues. An 18 percent discount is offered to advertisers contracting space in the next four issues. We can discuss these issues at our meeting on Tuesday.			
Sincerely		<i>JJ</i>	
<i>Ani McCord</i>			
Ani McCord Advertising Director			
psm			
Enclosure			



Blend Images/Getty Images

Indexing for subject records storage requires reading the document to determine the subject.

color in the upper right margin of the record. The subject title is, therefore, more visible in the file. When more than one subject is indicated, code only the most important one; cross-reference all other subjects in some distinctive manner. For example, the subject to cross-reference in Figure 8.14 on page 261 is underlined, and an X is placed in the margin opposite the subject. The correct cross-reference subject title and subtitle SALES PROMOTIONS/TELEVISION are written and coded in the margin. Diagonals are placed between the units, and all filing units are numbered.

Do not rely on memory to determine the subject under which a record should be stored. Consult the master or relative index to be sure that you have selected and coded the filing segment correctly.

Coding in an alphabetic subject filing system may include an entire subject title such as PURCHASING. However, abbreviations can simplify coding in a large, complex subject filing system. Create an abbreviation with the first alphabetic character of the subject title followed by the next one or two consonants such as PRC for PURCHASING, or use the first character of each word in a multiple-word subject heading such as RRS for RECORDS RETENTION SCHEDULE. Because the codes may consist of as many as six characters, PRCH may be more easily remembered for PURCHASING than PRC. Consistency is essential when developing a subject code system in which two- to six-character abbreviations are used. Everyone using the system must understand the codes and how to develop new ones when necessary. If abbreviations are used, the master index should show codes as well as complete subject titles. Be sure to write subject letter codes on each record and include them on individual folder label captions, along with the subject title.

Why would using subject codes save coding time?

Career Corner



Job Description for Document Control Manager

The following job description is an example of a position in an energy services provider company.

General Information

Individuals in this position will be responsible for determining data- and document-gathering requirements and methods.

Responsibilities

- Ensure accuracy in storage and ease of retrieval of all physical and electronic documents.
- Oversee the training and assist project team members in the use, filing, and retrieval of documents.
- Help ensure compliance with all regulatory requirements associated with document control and storage.
- Develop and implement tools and techniques, as needed, for continuous improvement of document control.

Experience and Education

- At least 4 years of document management experience on engineering, construction, or consulting projects. Two of the 4 years can be satisfied with an associate degree or equivalent (other than mail or online degree) in a technical field.
- Experience with document-sharing and collaboration software, *SharePoint* and *Livelink*, preferred.
- Must be open to travel.
- Must have effective interpersonal skills.
- Must be able to communicate effectively in oral and written form.
- Must have the ability to plan, organize, and deliver training to individuals with various experience levels.
- Associate degree preferred.

Cross-Referencing

Cross-references help filers locate stored records. When file users request a record under a topic other than its subject title, add a cross-reference under that topic. Code the document as suggested previously and prepare a cross-reference sheet such as the one shown in Figure 8.15 on page 265. File users looking for the document under its alternative subject title SALES PROMOTIONS/TELEVISION are sent to the original record's file location, SALES PROMOTIONS/MAGAZINE. If a record refers to several important subjects, consider filing photocopies of the record under the different subject titles involved. This procedure eliminates the need for preparing several cross-reference sheets for that record. Sometimes a permanent cross-reference guide is placed in the storage container.

In what way are subject cross-references different from alphabetic name cross-references?

In Figure 8.5 on page 249, for example, a permanent guide labeled ADVERTISING, SEE SALES PROMOTIONS has been placed into the file in the primary guide position. Do not file records behind the permanent SEE guide. The SEE guide is there only to direct filers to the correct storage location.

Sorting

Sorting arranges records in filing order according to the records and information management system used. Use some kind of A-to-Z sorter to sort physical records to be stored alphabetically by subject. Sort records by main subject titles; then sort records by subdivisions as well. Time spent

sorting records before filing saves filing time. Filers will be able to file and move in one direction through a filing system rather than moving backward and forward through drawers or shelves of stored records.

Records Management in Action



Enhanced Driver's Licenses (EDLs)

The U.S. states and Canadian provinces have worked closely with U.S. Customs and Border Protection (CBP) to develop a secure, tamper-resistant Enhanced Driver's License (EDL). The license includes vicinity radio frequency identification (RFID) capability and a machine-readable zone-optical character reader (MRZ-OCR) that contains multiple layers of security features. No personal information is stored on the card—only a number that points to the information stored in secure databases.

Vicinity RFID means that an RFID-enabled document can be securely and accurately read by authorized readers from up to 20 to 30 feet away. The RFID chip is read as a vehicle is in line waiting for inspection at a U.S./Canadian border crossing. It signals the database so that biographic information, a photo, and results from terrorist/criminal checks are displayed to the CBP officer as the vehicle pulls up to the inspection booth. The CBP officer can look at the results quickly and focus on the individuals in the vehicle, which is better for officer safety and faster processing.

Source: U.S. Department of Homeland Security, "Overview of Enhanced Driver's Licenses (EDLs)," <http://www.cbp.gov/linkhandler/cgov/travel/vacation/enhanced_dl_fs.ctt/enhanced_dl_fs.doc> (accessed February 22, 2010).

return them neatly to the folder. Records sticking out of folders can obscure guide and folder label captions.

When filing correspondence into subject folders, file records in alphabetic order according to the names of the correspondents. Then for each correspondent, arrange the records by the date of the document with the *most recent date in front*. Place each record in its folder with its top to the left so the record will be in correct reading position when the folder is opened.

Storing

Storing (also called *filing*) places the hard copy into an appropriate location or saves the electronic record. For manual filing, careful placement of records into folders is always important. Be sure the subject folder label caption agrees with the filing segment coded on the record. Raise the folder slightly before inserting the record to be sure the record enters the folder completely. Remove records that are in disarray, jog them, and

FIGURE 8.15 Cross-Reference Sheet for Subject Records Storage

CROSS-REFERENCE SHEET					
Name or Subject					
	2	3	4	5	
<u>Sales / Promotions / Television / Demirchyan / Advertising /</u>					
	6				
<u>Agency</u>					
Date of Record					
<u>May 15, 20--</u>					
Regarding					
<u>Magazine and television advertising</u>					
SEE					
Name or Subject					
<u>Sales Promotions Magazine Demirchyan Advertising Agency</u>					
Date Filed <u>5/15/20--</u> By <u>JJ</u>					

Retrieving

Understanding the subject records system is critical to finding and removing (retrieving) records from storage. Use indexes to help locate records. In addition, follow the retrieval procedures described in Chapter 7. As with other methods of records storage, retrieval procedures for subject records management make use of OUT indicators to show information about records that have been removed from storage. Knowing who has taken the records, the contents of those records, when the records were borrowed, and when the records will be returned is the only way to maintain control over a retrieval system. Follow-up also is necessary to assure that records are returned, to extend the charge-out time, or to direct attention to any matters needing future action or consideration.



dlewis33/istockphoto.com

In subject records storage systems, filers consult an index before going to the files to remove records.

Chapter Review and Applications

KEY POINTS

- Subject records management is an alphabetic system of storing and retrieving records by their subject or topic.
- Subject records may be filed in a dictionary or an encyclopedic arrangement.
- Supplies used for the subject arrangement of files include guides, folders, labels, and OUT indicators.
- The subject records storage method requires the use of indexes and is, therefore, considered an indirect access filing method.
- The master index is an outline of the file and lists all subject titles and subdivisions in alphabetic order as they appear in the file.
- The relative index lists all subject titles and subdivisions in a straight alphabetic, dictionary order.
- When numbers are used to identify specific subjects, a numeric index—a current list of files by the file numbers—is maintained.
- Correspondence filed in a subject arrangement requires a name index.
- Maintain control over the records storage system by carefully inspecting, indexing, coding, cross-referencing, sorting, and storing records.
- Keep a charge-out record of all borrowed records and a follow-up system that ensures their safe return to storage.

TERMS

dictionary arrangement
direct access
encyclopedic arrangement
indirect access
master index

name index
numeric index
relative index
subject records management

REVIEW AND DISCUSS

1. Define subject records management and explain why this system is the best choice for filing certain records. (Obj. 1)
2. Give two reasons that an organization might have a subject filing arrangement for records rather than arranging their records alphabetically by individual or company names. (Obj. 1)
3. List three advantages and three disadvantages of using the subject records storage method. (Obj. 2)

7. What supplies are needed when using the subject storage method? Describe the placement of subject titles on guide and folder label captions. (Obj. 4)

8. Explain how color can be used with subject labels or folders to help locate records and reduce misfiles. (Obj. 4)

9. Name and describe four indexes used with subject records storage. (Obj. 5)

10. Which two indexes are essential for all subject files? Name two types of computer software that can be used to prepare subject file indexes. (Objs. 5 and 7)

11. Explain the procedure for storing and retrieving records in a subject records storage system. (Obj. 6)

12. When filing correspondence into subject folders, how are records arranged in the folder? (Obj. 8)

APPLICATIONS

8-1 Prepare a Master Index for a Subject File (Objs. 5 And 7)

Use database software to complete a master index for subject records files for a small business. Some records have already been entered into the database. You will add records and sort the database, query the database to show only a portion of the master index, and create a report showing the complete index.

1. Locate the *Access* file *8-1 Master Index* in the data files. Copy the file to your working folder on a hard drive or removable storage device. Open the file.



Data File



Access Activity

- Enter records into the Master Index table for the remaining files listed below. For records with only main subject titles, enter only the main subject title in the Main field. For records with main titles and subdivisions of main titles, enter the main title in the Main field and the subdivision title in the Sub field. (You will add subdivisions for some main titles already in the index.) Save the table.

Main Title	Subdivision
Utilities	
Utilities	Natural Gas
Utilities	Electric
Utilities	Water
Accounting	Credit Cards
Reports	
Reports	Annual Reports
Reports	Quarterly Reports
Reports	Monthly Reports
Accounting	Loans

- Use the Advanced Filter/Sort feature to sort the Master Index table by the Main field then by the Sub field to place the index in alphabetic order.
- Create a query based on the Master Index table. The query results should display the Main field in the first column and the Sub field in the second column. The query results should show all records that have Office Equipment in the Main field. Sort the Main field in ascending order and the Sub field in ascending order. Save the query as Office Equipment Query. Run the query and print the query results.
- Create and save a report to show all the data in the Master Index table. The data should be sorted in ascending order by the Main field and then by the Sub field. Choose Tabular layout. Name the report Master Index Report. Print the report.

8-2 Create a Relative Index (Objs. 5 And 7)

- Locate the *Access* file *8-2 Relative Index* in the data files. Copy the file to your working folder on a hard drive or a removable storage device. Open the file.
- Enter records into the Relative Index table for the remaining files listed below. Enter the data into the Subject Title and the Filed Under fields. Save the table.

Subject Title	Filed Under
Resumes	Applications
Cars	Vehicles
Trucks	Vehicles
Charities	Contributions
Banking	Accounting



3. Create a report to show all data in the Relative Index table. Show the Subject Title data in the first column of the report and Filed Under data in the second column of the report. Sort the Subject Title field in ascending order. Choose Tabular layout. Save the report as Relative Index Report. Print the report.

8-3 File or Retrieve Records by the Subject Method (Obj. 8)

Refer to Figure 8.3 Dictionary Arrangement of Subjects on page 248 to file/retrieve the records described below. Indicate where each of these records would be located by writing the complete folder label caption for each. If more than one subject location is possible, list other subjects that should be used for cross-referencing. Place an X in front of each cross-reference title.

1. A new manual for the air-conditioning system
2. A report from a recent workflow efficiency study
3. A job application from Anthony Timmons
4. A letter from an office products vendor about filing supplies
5. A notice of price change on an order you have placed for filing cabinets
6. Last month's sales report
7. A memo about the date that the records audit will begin
8. Weekly time sheets for Records and Information Department employees
9. Vacation schedules for the Accounting Department
10. A price quote from a lawn and garden center to landscape a recreational area

8-4 Use the Internet to Locate Supply Vendors (Obj. 4)

Office supplies needed for preparing guides and folders for a subject records management system are available from local office products stores, various discount stores, and from online vendors. You can find the URLs for two Internet search engines that will help you locate office supplies vendor websites at the Links tab on the website for this textbook.

1. Locate two vendors for guides and folders and two vendors of label software.
2. Go to these vendor websites and review their products.
3. Key a summary paragraph of what you learned by reviewing these sites. Send the summary to your instructor by e-mail.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

JOB 10 Subject Correspondence Filing

Continue working with Auric Systems, Inc.
Complete Job 10.

For More Activities Go To:
www.cengage.com/officetech/read

Numeric Records Management

LEARNING OBJECTIVES

1. Define numeric records management and list three reasons for its use.
2. Describe the components of a consecutive numbering storage method and procedures for this method.
3. Describe how to convert an alphabetic records arrangement to a consecutive numeric records arrangement.
4. List advantages and disadvantages of consecutive numeric records storage.
5. Compare and contrast consecutive, terminal-digit, and middle-digit numeric records storage.
6. Define chronologic records storage and explain its use.
7. Compare and contrast block-numeric, duplex-numeric, decimal-numeric, and alpha-numeric coding.
8. Explain how computer indexes and database software can be used with numeric records management.

ON THE JOB

When Purchase Cancer Group in Paducah, Kentucky, began to run out of storage space in the office and the cost of storing older records in a warehouse was increasing each month, physicians and staff began looking for ways to cut expenses. A large number of patient charts had accumulated in the 20 years since the practice was established; so, they decided that the monthly storage bill was a place to start.

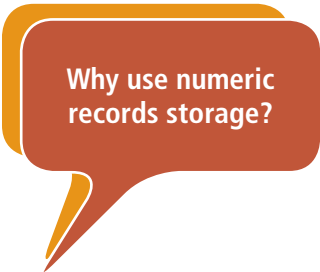
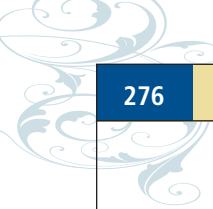
Lisa Thompson, office manager, said, “We began by looking at the amount of time spent looking for patient charts.” When a patient or healthcare professional called, the patient’s chart would be given to the person handling the call. However, because physicians and staff would often lay charts onto their desks or in different areas of the office, the chart could not be located in a timely manner. Everyone in the practice understood that, in a few years, an electronic medical records (EMR) system would be required. The staff had always been proactive in handling issues; so they chose to convert to an EMR system that could be implemented as soon as possible.

All patient records, insurance bills, explanations of benefits (EOBs), and other insurance correspondence are scanned into the electronic system, and inactive records are no longer sent to an off-site storage company. Patient records may be accessed by name, date of birth, or social security number.



Courtesy of Lisa Thompson

Printed with permission of Lisa Thompson.



Why use numeric records storage?

NUMERIC RECORDS STORAGE AND RETRIEVAL

The records and information management (RIM) storage methods you studied in previous chapters were alphabetic—records were arranged in alphabetic order by name or subject. In this chapter, you will learn how to store records in numeric order. As its name suggests, **numeric records management** is any classification system for arranging records that is based on numbers.

Numeric records management is often used in organizations that store and retrieve very large numbers of records and that have a need to preserve confidentiality of their records and information. Numbers used in storing records are assigned to records to identify their locations in a file. The number can be preprinted on the record (such as a purchase order or invoice number), or it may be assigned to the record based on the type of numeric filing arrangement. Records are filed by number in ascending order—from the lowest to the highest number.

Numbers are impersonal; the information they represent is dependent on the numbering system and is not immediately accessible to persons other than users of the system. Anyone who happens to see an open file drawer, file shelf, or file folder cannot readily identify the contents.

The use of numbers for identification and classification of data is part of everyday work routines. Most people appreciate the speed and accuracy of using numbers. The list of numbers that each individual uses and must, therefore, remember today is long. For example, almost every U.S. citizen has a Social Security number, and all U.S. citizens have ZIP Codes. Citizens of other countries also have postal codes to remember. Thousands of people in the U.S. and other countries have a home telephone number, a work telephone number, at least one cellular telephone number, and maybe a pager number to remember as well. Many people also have auto license plate numbers, code numbers for entering their places of work or their condominium buildings, passwords for accessing their computers at work, and personal identification numbers (PINs) for using their debit cards. Those individuals who establish online accounts or register with various websites have user IDs and passwords to remember. Medical office personnel ask patients for their dates of birth because patient records are stored in numeric order by dates of birth. Patient names may also be on the folder labels, but the folders are stored in numeric order. When you order a pizza, the order clerk at the local pizza shop may ask for your telephone number. Your name, address, and the kind of pizza you last ordered shows on the computer screen when your telephone number is entered.

In this chapter, numbering methods for numeric filing are categorized as:

- Consecutive numbering
- Nonconsecutive numbering
- Numeric coding used in combination with geographic or subject filing

The components and procedures for filing physical records numerically are similar for all numeric records management systems. Expanding files is easy with a numeric filing system. An unlimited set of available numbers

.....
numeric records management: any classification system for arranging records that is based on numbers

(compared with the limitation of 26 alphabetic characters) allows the addition of numbers, folders, and storage units without transferring current files. In an alphabetic file, adding files in one section of the alphabet requires moving folders in all drawers or on all shelves that follow the expanded section.

CONSECUTIVE NUMBERING

The most frequently used method of numbering records for storage assigns numbers to records in sequence. Also called *serial*, *sequential*, and *straight numeric*, the **consecutive numbering method** is a method in which consecutively numbered records are arranged in *ascending* number order—from the lowest number to the highest number. Consecutive numbers follow one after another without interruption. Numbers begin with 1, 100, 1000, or any other number and progress upward. Office forms such as invoices, sales tickets, and purchase orders are numbered consecutively. Although these forms may be filled out at various locations within a business, they come together in the file in consecutive numeric sequence.

Consecutive numbers are often assigned to customers and clients, and their correspondence is stored by consecutive numbers. Because a record may be requested by a name or topic rather than by a number, an index must be referenced to locate a numbered record. A numeric RIM system is considered an indirect access system because an index is used to locate a record in the file. As an indirect access system, numeric filing is ideal for storing electronic records where label space for record identification is often limited. An index is prepared to show the contents of the records and their assigned file code numbers. The index lists records by name, subject, creator, date, department, location, function, or a combination of these elements. Indexes required for numeric RIM storage are discussed in detail later in the chapter.

Consecutive Numbering Components

The components of the consecutive numbering method consist of (1) a numeric file, (2) an alphabetic file, (3) an accession log, and (4) an alphabetic index. Physical files use the following supplies for this storage method:

1. Numbered guides and folders for the numeric file
2. Alphabetic guides and folders for the general alphabetic file
3. Database software (or a lined book) for an accession log
4. Database or word processing software for an alphabetic index

Numbered Guides and Folders

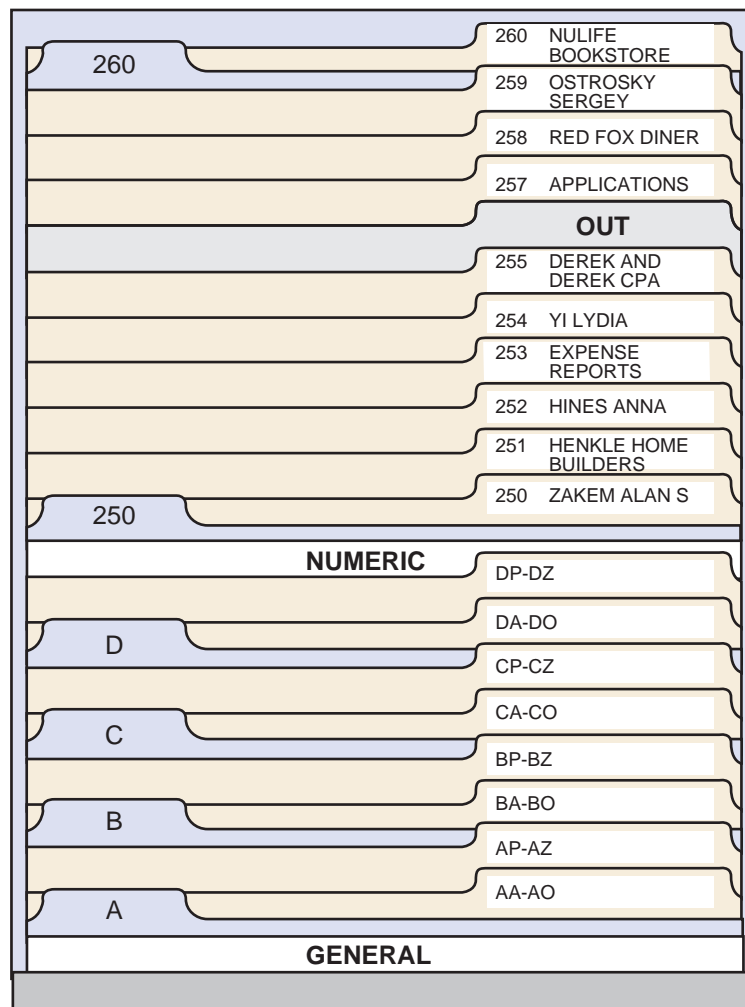
Figure 9.1 on page 278 shows a file drawer of consecutively numbered individual correspondent file folders in a straight-line arrangement. Primary guides, numbered 250 and 260, divide the drawer into easy-to-find numeric segments. Consecutively numbered individual folders 250 through 259 are placed behind a corresponding guide number for Section 250.

What does
consecutive mean?



consecutive numbering method: a method in which consecutively numbered records are arranged in *ascending* number order—from the lowest number to the highest number

FIGURE 9.1 Consecutive Numbering Arrangement



How many folders should be between guides?

Usually, one guide is provided for every ten folders. Folders can show the names of the correspondents to the right of the number on the label if secrecy is not a factor. However, when office policy requires names in addition to assigned code numbers, the names are not in alphabetic order. Folders are arranged in consecutive numbered order; therefore, someone with unauthorized access to files would have difficulty locating a particular person's file.

Guide captions are available in a variety of formats: (1) guides may have numbers already printed on their tabs; (2) numbered labels may be inserted into slots on the tabs; (3) self-adhesive numbers may be attached to tabs; or (4) numbers may be keyed onto guide labels.

As discussed in Chapter 8, software and label templates are available for printing guide and folder label captions. RIM supply companies can also produce customized labels from an organization's database information saved to a disk or CD. The photo on page 279 illustrates computer-generated labels with color-coded numbers. The numbers and colors call attention to misfiles, and bar codes provide electronic tracking of records. Avoid handwriting or hand printing on guide labels. Handwriting lacks uniformity of placement and style, making numbers difficult to read and unattractive.



Courtesy of Ames Color-File, www.amescolorfile.com

Labels with color-coded numbers call attention to misfiles.

Alphabetic Guides and Folders

Perhaps you wonder what a general alphabetic file is doing in numeric records storage. A general alphabetic file, found in many numeric arrangements, holds records of correspondents whose volume of correspondence is small. Some offices prepare individually numbered folders for correspondents as they enter the file. With this procedure, a general alphabetic file is not needed. In most offices, individually numbered folders are not prepared until a predetermined number of pieces of correspondence (usually five or more) have accumulated for one correspondent or when a correspondent’s file is expected to be active. Until an individual numbered folder is prepared, correspondence is stored in general alphabetic folders in a general alphabetic file in the same manner as names stored by the alphabetic method.

The general alphabetic file should be placed at the beginning of the numeric file because expansion occurs at the end of a consecutively numbered arrangement. In Figure 9.1 only a portion of the alphabetic file is shown. The general alphabetic file contains a centered primary guide labeled GENERAL followed by lettered guides. In large records systems, alphabetic-lettered guides follow the primary guide to show the alphabetic divisions. In small systems, alphabetic-lettered guides may not be needed; instead, folders with alphabetic captions are arranged in alphabetic order behind the GENERAL guide. The general alphabetic folders hold records of correspondents who have not yet been assigned numbers.

Accession Log

The **accession log**, also called an *accession book* or *numeric file list*, is a serial list of numbers assigned to records in a numeric storage system. This log provides the numeric codes assigned to correspondents, subjects, or

What is the purpose of the alphabetic file in a numeric system?

.....

accession log: a serial list of numbers assigned to records in a numeric storage system; also called an *accession book* or *numeric file list*

documents and the date of the assignment. The next number available for assignment is obtained from this log. An accession log prevents a filer from assigning the same number twice. Correspondent names and subjects are entered into the accession log in indexed order. Figure 9.2 shows an accession log created in a computer database.

FIGURE 9.2 Accession Log

FILE NO	NAME OR SUBJECT	DATE
525	Norwood Christian Church	5/18/20--
526	Astroturf Applications	5/10/20--
527	Liang Yang	7/12/20--
528	EZ Service Center	11/22/20--
529	A1 Moving & Storage	4/21/20--
530	Unique Web Designs	2/2/20--
531	Colyer James	10/15/20--
532	Happy Time Florist	9/18/20--
533	Borrowed Time Antiques	12/2/20--
534	SmithHarrison Makita	9/1/20--
535	BT Heating & Cooling	8/17/20--

Although a lined book is often used for the accession log, a computer-generated log is simpler to prepare, use, and update. Database software is used in large records systems that have more than 1,000 records or several people accessing the files on a daily basis. Number code assignment can be made automatically with appropriate computer programming.¹ You can store numerous items of information about each record in one or more tables and use the Query or Report functions to generate lists or reports that show all or any part of this information. In smaller records systems, an accession log can easily be produced using a word processing program. The accession log information includes the file number, the correspondent name or subject in indexed order, and the date on which the record was added to the file.

Alphabetic Index

A numeric records storage system cannot function without an alphabetic index. An **alphabetic index** is a reference to a numeric file, organized alphabetically, that is used when the name or subject is known but not the assigned number. For a numeric-subject system, it may be called a *relative index*.² The index is typically a list of correspondent names or subjects for a numeric file. The assigned file codes are listed for records stored in the numbered file or a G is entered as the code for records stored in the general alphabetic file. Filers reference the alphabetic index to determine where records for correspondents are located in the filing system.

• • • • •

alphabetic index: a reference to a numeric file, organized alphabetically, that is used when the name or subject is known but not the assigned number

¹ARMA International, *Establishing Alphabetic, Numeric and Subject Filing Systems* (Lenexa, KS: ARMA International, 2005), p. 1.

²Ibid., p. 9.

A computer file is recommended for the alphabetic index because of its speed and efficiency in locating records. The same database table can be used to store information for an accession log and an alphabetic index. Figure 9.3 shows a partial alphabetic index generated from a database. Cross-references are in bold print.

FIGURE 9.3 Alphabetic Index

NAMES AND SUBJECTS	FILE NO.	SEE
A1 Moving & Storage	529	
Astroturf Applications	526	
Borrowed Time Antiques	533	
BT Heating & Cooling	535	
Colyer James	531	
Easy Service Center	528X	EZ Service Center
EZ Service Center	528	
Happy Time Florist	532	
Harrison Makita Smith	534X	SmithHarrison Makita
Harrison Tom Mrs	534X	SmithHarrison Makita
Liang Yang	527	
Norwood Christian Church	525	
Smith Makita	534X	SmithHarrison Makita
SmithHarrison Makita	534	
Unique Web Designs	530	
Yang Liang	527X	Liang Yang

To retrieve a record, the first source of location information is the alphabetic index to see whether a code for the subject or correspondent's name has been assigned. If a code is not found, the filer then checks the general alphabetic file to locate the record. Because rapid retrieval of a record can be important, keeping all names and subjects in one index is more efficient than looking in multiple locations. With all names and subjects in the index, a filer follows the same pattern for retrieving all records. Each correspondent and subject in the index has a different file code number or the letter G. Because the alphabetic index serves as the records location source for all file users, the index should be accurate and up-to-date.

When information about each correspondent and subject is stored in a database, locating information about that correspondent or subject is quick and easy using the database Find or Query functions. Because of the ease of obtaining information from a database, you may want to add addresses or other information. This information in a database is also useful for printing mailing labels.

When creating a database, you can use the AutoNumber feature to assign file number codes automatically. If you want to use another numbering system, simply include a File Code Number field and enter the number. The data can be sorted on the File Code Number field in descending order so that

Career Corner

Job Description for Senior Records Analyst

The following job description is an example of a career opportunity in records and information management in a large health care products company.

General Information

The senior area analyst is responsible for implementation and execution of corporate records policy and procedures within the business units whether division based or regional.

Responsibilities

- Work with corporate records staff to implement a strategic plan for the integration of RIM practices within their assigned business unit
- Provide RIM leadership and subject matter expertise to employees within the division to ensure standardized and consistent RIM policies and procedures for the creation, distribution, storage, and disposal of records
- Implement training, guidance, and oversight of RIM processes

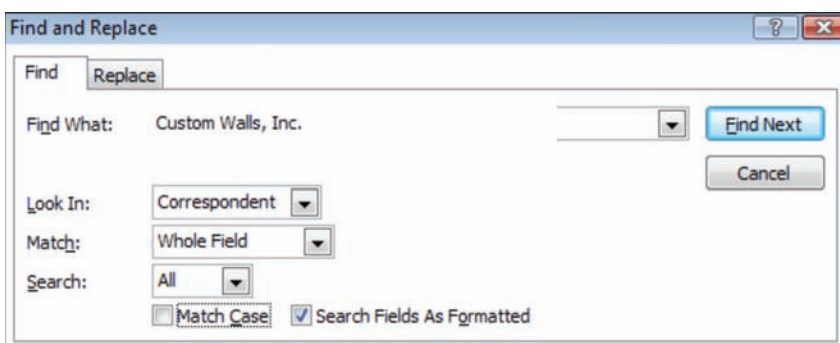
- Provide guidance and subject matter expertise to the business for management of records in electronic systems
- Monitor and report on compliance with corporate records policy and procedures and institute corrective action when and where needed

Experience and Education

- Three years of experience in a RIM environment
- Records implementation design experience
- Experience with records retention schedule checklists
- Five or more years of experience in the health care products industry
- Demonstrated project management skills
- Master's degree preferred

the highest number shows on the first line of the list, allowing you to determine quickly the next number for assignment. The data can also be sorted by name to create an alphabetic name index. The database can be used for an onscreen check of the assigned file code number for a correspondent or subject. Using the Find feature, you can go directly to a record to obtain information as shown in Figure 9.4.

FIGURE 9.4 Find Dialog Box in Access



Storage and Retrieval Procedures

The steps for storage (inspecting, indexing, coding, number coding, cross-referencing, sorting, and storing) and retrieval (requisitioning, charging out, and following-up) are as important in the numeric method as they are in all other RIM storage methods. All records are inspected, indexed, and the

filing segment coded before a number or a G is assigned. The procedures to follow in storing and retrieving records in numeric systems are discussed next. Steps for coding numeric records are listed in Figure 9.5.

FIGURE 9.5 Coding Procedures for Numeric Storage

STEPS FOR CODING RECORDS FOR NUMERIC STORAGE

Coding

- Code the filing segment.
- Write an X in the margin beside cross-reference names or subjects.
- Underline the cross-reference name or subject with a wavy line.

Sorting

- Sort records that do not have preprinted numbers alphabetically before referencing the alphabetic index.

Number Coding

- Consult the alphabetic index for each record.
- Write the assigned file code number or a G in the upper right corner of the record.
- Assign the next available number—if a number has not been assigned—or a G.
- Enter the new file code number into the accession log.
- Write the code number or a G in the upper right corner of the record.

What step in the storage procedures for numeric storage is not needed in other storage methods?

Inspecting and Indexing

Inspect records for release marks. Then index to determine the filing segment by which to store each record.

Coding

Code the filing segment and identify any needed cross-references by marking an X in the margin and underlining the cross-reference name or subject with a wavy line. Sort records that do not have preprinted numbers alphabetically before consulting the alphabetic index to see whether a file code number or a G (GENERAL) has been assigned. For correspondents or subjects with numbers already assigned or preprinted on the record, code the record with the file code number by writing this number in the top right corner of the record. The letter in Figure 9.6 on page 284 shows the coded correspondent name and the code number already assigned to the name. Number 122 is written in the upper right corner of the letter. For correspondents or subjects with the letter G already assigned, the record will be stored in the general alphabetic file. Code the record with a G in the upper right corner.

For new correspondents or subjects with no assigned code number, write the letter G in the upper right corner of the documents. The letter in Figure 9.7 on page 285 shows a document coded for the general alphabetic file. Make a database entry for the new correspondent or subject and indicate the file location to be G. Place the record into an alphabetic sorter for later storage in the general alphabetic file.

Why are records sorted more than once for numeric storage?

FIGURE 9.6 Coded Correspondence for Number File

²/L/³///⁴/M///⁵/Advertising Agency 122
 80 Second Avenue
 New York, NY 10022-1421
 Telephone: 212-555-0146 Fax: 212-555-0187
 www.l&mads.com

September 24, 20--

SEP 25, 20-- 11:03 A.M.

Ms. Graciella Melena
 Melena & Daughters, Inc.
 600 E. 52 Street
 New York, NY 10022-2844

Dear Ms. Melena

Your ad with ¹/Kirkman/²/Products,/³/Inc. is well under way. Executives at Kirkman are more than a X
 little excited about the advertising tie-in with your company. We have a two-page ad for spring
 distribution we would like to share with you and Juan Ramos, Advertising Director at Kirkman.

Juan is eager to complete the work on this campaign. By the way, Kirkman is also willing to
 supply a personal appearance of one of its product designers for your spring exhibition. Kirkman
 has agreed to pay \$47,000 for the first spring as if you will handle all productions costs. We can
 work out these arrangements in more detail at our joint meeting.

Melena & Daughters and Kirkman Products are uniquely compatible, Graciella. This cooperative
 effort crates a far more dynamic campaign for today's market than we could have developed
 from an independent effort. We are eager to show you what we have done.

I will call you next week to arrange a convenient time for a joint ad presentation.


Sincerely

L & M ADVERTISING AGENCY

J. R. McGuire RLG
 J. R. McGuire, Advertising Coordinator

kac

FIGURE 9.7 Coded Correspondence for Alphabetic File—Numeric Method

 ² Starsound Recordings G
4325 21 St., New York, NY 10022-1345
Telephone: 212-555-0197 Fax: 212-555-0198

June 5, 20--

JUN 7, 20-- 12:30 P.M.

Ms. Graciella Melena
Melena & Daughters, Inc.
600 E. 52 Street
New York, NY 10022-2844

Dear Ms. Melena

Last week I met with your friend Diane Pruiksmas regarding the renovation of our office complex at 4325 21 St. here in the city. She suggested that I look at your work on the Theater Arts Building because she thought it was close to the type of makeover we are considering for our corporate offices.

Several employees from our company toured the building last week and agreed that it is an impressive piece of work. We are interested in knowing what you and your staff would propose for us. We have very specific needs in mind, but some creative projects we would leave to you.

Let me know how you would like to proceed. We prefer a meeting at our locations so that we can show you the changes in layout, communications services, and office equipment we have in mind. We are also eager to hear your suggestions and hope that you can prepare a proposal by the end of August.

Now that we have agreed to renovate, we are eager to get started. We are looking forward to an early meeting time that will be convenient for everyone.

Sincerely

Sumiyo Maekawa RLG
Sumiyo Maekawa

dsr

Number Coding

To assign file code numbers to a correspondent or subject, follow these steps:

1. When using a database accession log, create a new record. Key the correspondent's name or subject and current date (and other information) into the appropriate fields and assign the next file code number. If a database is not used, make entries into the accession log to record the assigned number or the letter G for the name or subject.
2. Write the assigned number code on the record in the upper right corner.
3. If any cross-references are needed, enter the cross-reference name or subject into the database alphabetic index with the assigned file code number followed by an X at the end of the number (i.e., 122X). Key the name into the SEE field for the location of the record in the file.
4. Prepare a new folder with the file code number on its tab. Add the correspondent's name or the subject to the tab label if office policy requires this information.
5. Place the record into the folder with the top to the left, and place the folder into a number sorter for later storage in the numbered file.

Cross-Referencing

Code all units in the cross-reference name or subject that has an X beside it in the margin. If the cross-reference name or subject does not exactly match the name or subject in the alphabetic index, write the correct cross-reference name or subject on the document, underline it with a wavy line, and number all units. Do not store cross-references in numbered file folders. File all cross-references in the general alphabetic file. Enter all cross-references into the database as described previously in Step 3. To call attention to cross-references in a database name file, consider using all capitals or bold type.

Sorting

An initial alphabetic sorting is done before assigning file code numbers or the letter G to the records. After consulting the alphabetic index, writing assigned codes in the upper right corners of the records, and assigning all necessary codes, records are placed into numeric or alphabetic sorters. If rough sorting is done as you prepared the records, move the sorter and its contents to the storage area. However, if you prefer to perform like tasks together, sort all records after you have indexed, coded, and prepared cross-reference entries. A quick sort before storage saves time. Stacking the numbered records in random groups by hundreds, for example, eliminates moving back and forth from drawer to drawer or shelf to shelf while storing records.

Storing

Store all records coded with numbers in correspondingly numbered folders with the most recent date on top. Store records coded G in the general alphabetic folders. Store them first alphabetically according to the units in the filing segments and then by dates within each name group with the most recent date on top. File all cross-references into the alphabetic file.

Where are cross-reference sheets filed in the numeric method?

Why is the accession log referenced before records are coded for numeric storage?

Office policy determines the point at which accumulated records in the general alphabetic file require the assignment of a permanent code number. When that accumulation has occurred, remove the records from the general file and take the following steps:

1. Consult the accession log to determine the next available number. Enter the name of the correspondent or the subject and the file code number into the database file or the accession log. Record the current date.
2. Locate the correspondent's name in the alphabetic index. Replace the G with the file code number.
3. Locate all cross-references for the subject or correspondent's name. In the alphabetic index database, change the G on all cross-reference entries to the file code number followed by an X.
4. Re-code all records removed from the general file by crossing out the G and writing the assigned file code number above or beside it.
5. Prepare a new folder with the assigned file code on its tab (and, possibly, the correspondent's name or the subject).
6. Place all records into the new folder. Place the record with the most recent date on top.
7. Place the numbered folder in its correct numeric sequence into the number file.

Retrieving

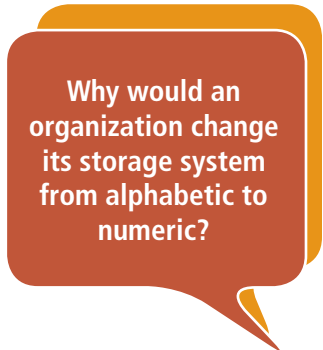
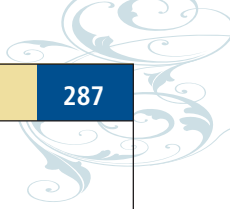
When you remove records from numeric storage, use requisitions, OUT indicators, and a charge-out log in the same way you used them for alphabetic and subject records storage. With a database table, you can include an OUT Date field, Borrower's Name field, and Date Borrowed field to record charge-out information. When a record is removed from the file, an entry is made in the database table. To ensure the safe return of borrowed records, follow the same procedures described in Chapter 7. If OUT information is kept in the database, a filter or query could be used to show all borrowed OUT files, sorted by date.

Converting to Numeric Storage

An organization may decide that a numeric arrangement would provide quicker RIM storage and retrieval than an existing alphabetic arrangement. Security may be another consideration for changing from alphabetic storage to consecutively numbered storage. A number on a storage container or file folder does not convey information to inquisitive persons. However, a name on a folder is instantly recognizable to anyone who sees it. File users may prefer an indirect access storage method that allows for a variety of useful indexes to locate stored records such as a database master index. Whatever the reason for a conversion, the procedure is time-consuming but not difficult.

The following steps convert an alphabetic file arrangement to a consecutively numbered arrangement:

1. Prepare numbered guides for every 10 folders in storage according to the sequence of numbers decided upon such as 1–10–20, 100–110–120, 1000–1010–1020, etc.



Why would an organization change its storage system from alphabetic to numeric?

My Records



Home Inventory

What is a home inventory? Should you create a home inventory?

Creating a home inventory is a good idea. An inventory lists the value of your possessions and helps you keep track of the warranties, receipts, and other information about the items in your home. Use the inventory to determine your homeowner's or renter's insurance needs as well as to provide details about your possessions in case of loss.

Create an Inventory

To create an inventory, start by listing the rooms in your home. Next list the items in each room. You can find sample home inventory sheets on the Internet by using the search term *homeowner's inventory*. Here are sample inventory headings: Item, Model, Serial Number, Year Purchased, Cost, and Present Value.

Maintain Your Inventory

Follow these suggestions for maintaining a home inventory:

- Keep receipts of major purchases to prove the value of an item in case of loss.

- Store warranties and/or user manuals with the receipt of the item.
- Photograph the contents of each room. Show cabinets and closets with open doors. If a closet is a walk-in, photograph inside the closet.
- Set a specific date to update the inventory annually such as the beginning or end of Daylight Savings Time or the anniversary of an important family event.
- Store the photos and a copy of your inventory sheet in a safe place such as a safety deposit box or a fire-resistant box.
- When you replace possessions, update the inventory and remove all records about the old item. Make sure the records for the new item are stored.

Don't wait for a disaster to strike before you complete a home inventory!

2. Remove each individual folder from storage and assign a file code number from the accession log. Enter the filing segment for each correspondent name or subject into the database or accession log beside the assigned number. Enter the date.
3. Prepare a numbered label and affix it to the folder or add the newly assigned number to the older label. Caution: Do not remove general folders from alphabetic storage; the reason will be explained later in the chapter.
4. Key each filing segment for cross-references into an alphabetic index database. Key the assigned file code number and an X into the database.
5. Remove and destroy all cross-reference sheets and SEE ALSO cross-references from individual folders because the database now replaces those sheets. Database records can be sorted as needed or located without sorting by using the Find function.

6. Remove any permanent cross-reference guides within the group of folders being converted to the numeric method, and make database entries for the information on the guides.
7. Code each record in every folder with its newly assigned file code number in the upper right corner of the record.
8. Return the numbered folders to storage in correct numeric sequence.
9. Create the general alphabetic file by coding all remaining records with the letter G. (All individual folders from alphabetic storage were converted to numbered folders and filed numerically.)
10. Key the name of each correspondent or subject in every general folder into the database. Database records can be sorted as needed or located with the Find function without sorting.

Advantages and Disadvantages

Every storage method has advantages and disadvantages. Consecutive numbering is no exception as shown in Figure 9.8 on page 290. This indirect access method has advantages for storing electronic records such as CDs and DVDs, where labeling space is often limited. A numeric code identifies the records. A database record for each item shows this number, along with the originator's name, department, subject, special project, or any other meaningful category. The database record can be as comprehensive as necessary to identify and locate records. Even when CDs and DVDs are reused, the file code number remains the same; only the information in the record fields is updated. A complete list of correspondents' names, addresses, and other information is available from the alphabetic index or a correspondent database. These database files could be searched by any of the fields of information to find a particular record. Numeric database files are used frequently for inventories of equipment and supplies. Each item is assigned an identifying number, and pertinent fields of information are added to the database for data entry and retrieval.

NONCONSECUTIVE NUMBERING

Nonconsecutive numbering is a system of numbers that has blocks of numbers omitted. Records arrangements based on these nonconsecutive numbers use a sequential order that differs from a consecutive order of numbers normally read from left to right. This section explains the use of three of these methods: terminal-digit, middle-digit, and chronologic storage.

Terminal-Digit Storage

Terminal-digit storage is a numeric storage method in which the last two or three digits of each number are used as the primary division under which a record is filed. Groups of numbers are read from right to left. The digits in the number are usually separated into groups by a space or hyphen.



nonconsecutive numbering: a system of numbers that has blocks of numbers omitted

terminal-digit storage: a numeric storage method in which the last two or three digits of each number are used as the primary division under which a record is filed and groups of numbers are read from right to left

FIGURE 9.8 Advantages and Disadvantages of Consecutive Numeric Storage

CONSECUTIVE NUMERIC RECORDS STORAGE

Advantages

1. Re-filing of numerically coded records is rapid because people recognize number sequences better and faster than alphabetic sequences.
2. Expansion is easy and unlimited. New numbers can be assigned without disturbing the arrangement of existing folders or other stored records media.
3. Transfer of inactive records is easy because the lowest numbers are the oldest records and are stored together.
4. All cross-references are in the general alphabetic name database and do not congest the drawers or shelves where numbered records are filed.
5. Security is provided because names do not appear on numeric captions on guides, folders, electronic records, and other records media.
6. All records for one customer bear the same numeric code, keeping related records together.
7. Time and effort in labeling is minimized because numbers can be affixed much more quickly than names, subjects, or project titles.
8. Misfiled records are detected easily—numbers out of sequence are easier to detect than misfiled records arranged alphabetically.

Disadvantages

1. Consecutive numeric is an indirect access method that requires reference to an alphabetic index.
2. More guides are necessary for the numeric method; therefore, the cost of supplies can be higher.
3. Consecutive numeric storage is more time-consuming than other methods. Records must first be sorted alphabetically and then resorted numerically prior to storage. Resorting is eliminated with a database and use of the Find function to locate specific names or numbers in the records file.
4. Congestion occurs around the end of the file where new records are added. Records with the highest numbers are typically the most current and most active records.
5. Numbers can be easily transposed, which causes misfiles.

Which set of digits in a terminal-digit number are the terminal digits?

Terminal-digit storage breaks large numbers into groups of digits and overcomes the disadvantage of congestion that can occur at the end of a consecutive numeric storage area. The terminal-digit storage method is used most effectively with thousands of folders whose numbers have reached at least five digits (10,000 or more). The words *terminal digit* refer to the end digits of a number (091 38 0297). Numbers may be assigned sequentially, or the digit groups may mean something specific. For example, the first group of numbers may be a customer identification number; the second group may indicate a sales district, salesperson, or department; the third group may indicate a date, branch office, or department.

The number may be a product number in which various groups of numbers refer to a sales department and/or a particular manufacturer or wholesaler. The numbers can have a variety of meanings, or they can be simply a sequentially assigned numeric code number.

The groups of numbers are identified as primary, secondary, and tertiary numbers reading from right to left.

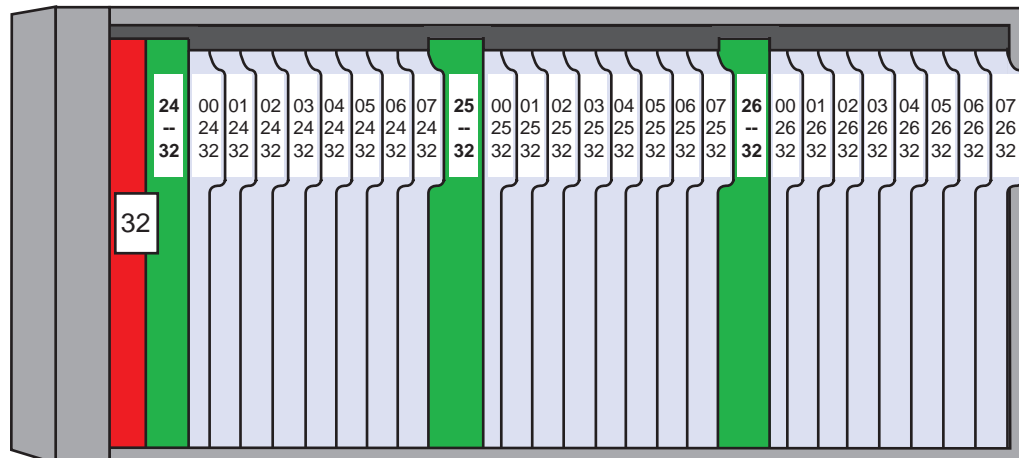
Tertiary (Folder Number)	Secondary (Guide Number)	Primary (Terminal) File Section, Drawer, or Shelf Number
35	14	65

An arrangement of numbers in terminal-digit sequence would look like the following illustration. The numbers in bold determine the correct numeric order in the file. The front of the file is at the top of the illustration.

786	67	1258 (Front of File)
231	55	2187
189	40	2891
303	99	2891
947	28	6314
287	29	6314
502	64	9284
498	64	9485
502	64	9485 (End of File)

Primary numbers usually indicate a drawer or shelf number. If the volume of records stored is great, more than one drawer or shelf may be needed to hold all records with numbers ending in the same terminal (or primary) digits. Figure 9.9 shows the arrangement of folders in a portion of shelf 32.

FIGURE 9.9 Terminal-Digit Arrangement



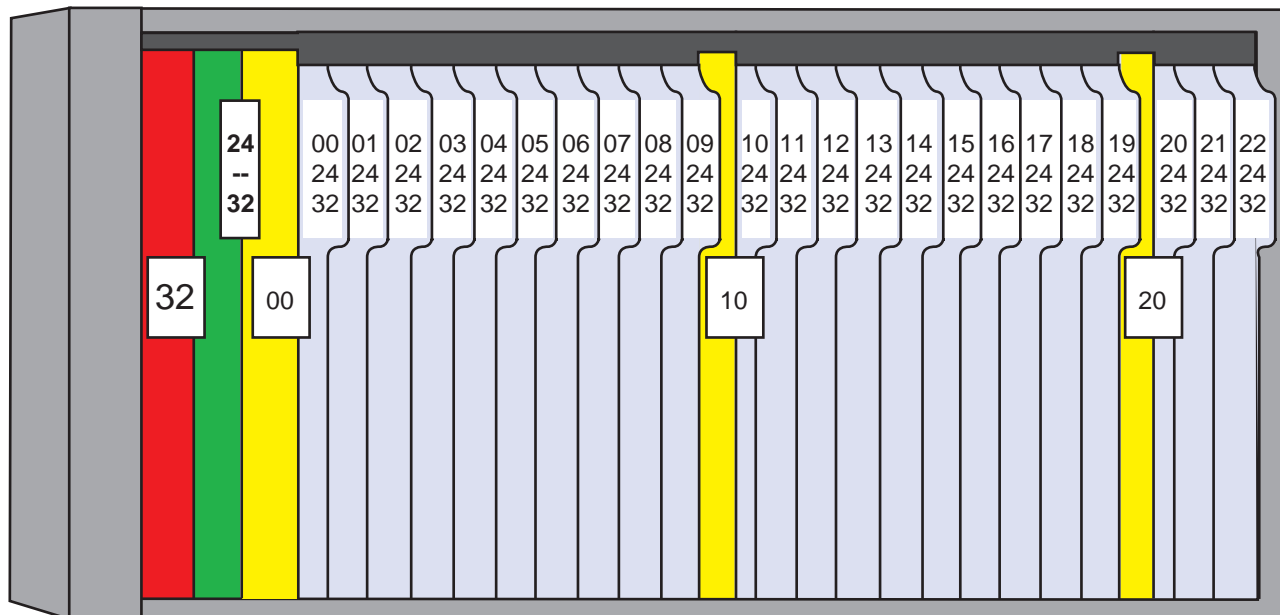
Why are records numbered 05 25 32 and 05 25 33 stored in different locations?

The secondary numbers determine the primary guide captions. The section of the shelf shown begins with guide 24–32. If space had permitted, the entire 32 section would show guide 00–32 at the front of the drawer. Records are arranged behind each guide by the tertiary numbers—the digits at the extreme left of the number.

As new folders are stored, new guides are added to separate each group of ten folders. The first section of the file shown in Figure 9.9 (the 24–32 section) has been expanded in Figure 9.10 by the addition of folders numbered 08–24–32 through 22–24–32. The tertiary numbers have increased from 00 through 07 to 00 through 22. Therefore, secondary guides 00, 10, and 20 were added in first position, and the primary guide for 24–32 was moved to the second position of the file shelf.

When sequentially numbered records, such as 05 25 32 and 05 25 33, are added to terminal-digit storage, these new and typically more active records are filed in different file locations. Distributing current records throughout a storage area avoids congestion in one particular storage area. Remember that in consecutive numeric storage these records would be stored next to each other at the end of the storage area.

FIGURE 9.10 Expansion of Terminal-Digit Arrangement



Middle-Digit Storage

Middle-digit storage is another method of nonconsecutive numbering. Similar to terminal-digit storage, using this method avoids working with large numbers and overcomes the disadvantage of congestion at the end of the storage area. The words middle-digit refer to the middle group of digits in a large number. **Middle-digit storage** is a numeric storage method in which the middle digits are used as the finding aid to organize the filing system. It uses the middle two or three digits of each number as the primary division under

.....
middle-digit storage: a numeric storage method in which the middle digits are used as the primary division for organizing the filing system

which a record is filed. Groups of numbers are read from the middle to left to right. Primary numbers are in the middle, numbers to the left are secondary, and numbers to the right are tertiary, or last.

Secondary (Guide Number)	Primary (File Section, Drawer, or Shelf Number)	Tertiary (Folder Number)
35	14	65

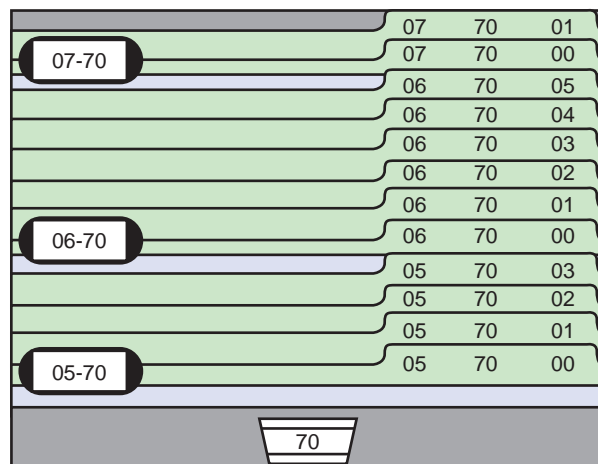
An arrangement of numbers in middle-digit sequence would look like the following; the numbers in bold determine the correct numeric order:

947	28	6314 (Front of File)
287	29	6314
189	40	2891
231	52	2187
498	64	9485
502	64	9284
502	64	9485
786	67	1258
303	99	2891 (End of File)

In Figure 9.11, all records with middle digits 70 are stored in one section. The digits on the left determine record sequence within the 70 drawer, followed by the digits on the right. The left digits determine the primary guide captions **05–70**, **06–70**, and **07–70**.

In the middle-digit method, blocks of sequentially numbered records are kept together. However, records are distributed through the files in blocks of 100. Records numbered 10 **70** 00 to 10 **70** 99 are filed together in one section; 10 **71** 00 to 10 **71** 99, in the next file section. The middle-digit method has additional value when the middle digits identify someone or

FIGURE 9.11 Middle-Digit Arrangement



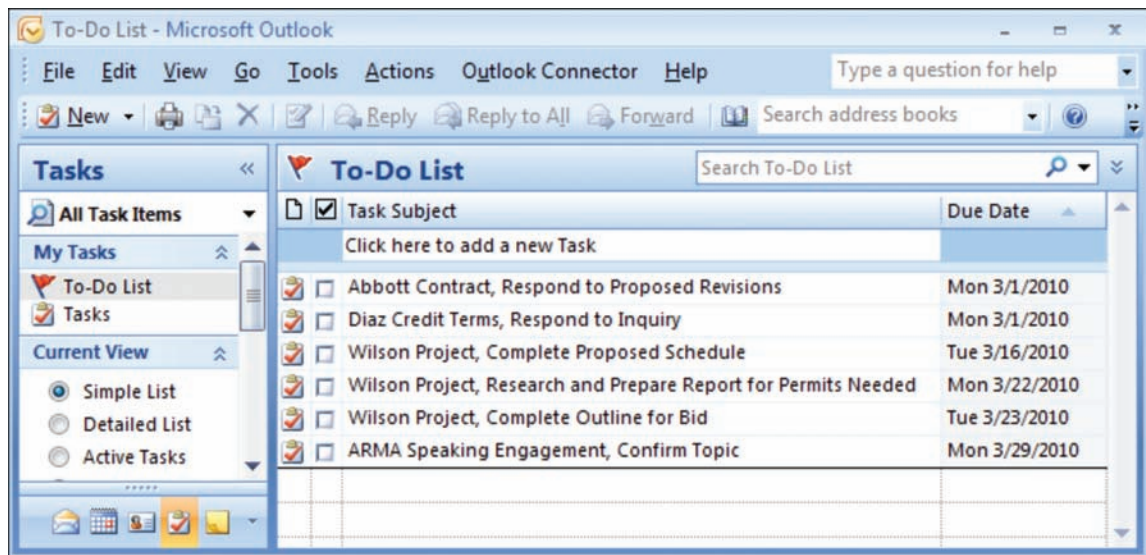
something specific and related records need to be kept together. If the middle digits represent a sales representative or a sales district, for example, all records for that individual or location are kept together in one block.

Chronologic Storage

Chronologic storage is a method by which records are filed in date sequence, either in reverse sequence (with the most recent date on top) or forward sequence (with the earliest or oldest date on top). Users often refer to a chronologic file as a *chron file*. Exact chronologic storage is not well suited to correspondence because of the need to keep together all records from, to, and about one individual or organization. Chronologic storage is often used for daily reports, deposit slips, freight bills, statements, and order sheets that may be best stored by date.

The chronologic principle is followed in all methods of storage as records are placed into their folders. The most current records are at the front or back of the folder, thereby keeping the most recent records easily accessible. Tickler files are one form of chronologic storage. A tickler file may be kept electronically in a program such as Microsoft Outlook, as shown in Figure 9.12. You may want to refer to the discussion of tickler files in Chapter 6.

FIGURE 9.12 Tickler File in Microsoft Outlook



chronologic storage: a method by which records are filed in date sequence, either in reverse sequence (with the most recent date on top) or forward sequence

OTHER NUMERIC CODING SYSTEMS

Numbers are sometimes added to encyclopedic arrangements of subject and geographic filing methods. Numbers help to eliminate misfiles in subject and geographic files that contain main subject divisions and numerous subdivisions. Numeric coding methods described in this section allow for coding necessary subdivisions.

Block-Numeric Coding

Block-numeric coding is a coding system based on the assignment of number ranges to subjects. Groups of numbers represent primary and secondary subjects such as the encyclopedic arrangement of a subject file discussed in Chapter 8.

The major subject divisions are assigned a block of round numbers such as 100, 200, 300. Then, each subdivision is assigned a block of numbers within the major block of round numbers such as 110, 120, 130. The more file expansion expected, the larger the blocks of numbers. The subdivision 110, for example, allows for additional subject subdivisions of subjects (111 to 119).

Duplex-Numeric Coding

Like block-numeric coding, duplex-numeric coding is also used in subject or geographic filing systems that contain major categories and subdivisions.

Duplex-numeric coding is a coding system using numbers (or sometimes letters) with two or more parts separated by a dash, space, or comma. An unlimited number of subdivisions is possible with this coding system. Subject subdivisions are added sequentially, however, and may not follow a strict alphabetic order. Notice that PAST BUDGETS comes before FUTURE NEEDS in the following example because FUTURE NEEDS was added to the file *after* PAST BUDGETS.

10	BUDGETS
10-1	ACCOUNTING DEPARTMENT
	10-1-1 PAST BUDGETS
	10-1-2 FUTURE NEEDS
	10-1-3 RECEIPTS
10-2	ENGINEERING DEPARTMENT
	10-2-1 PAST BUDGETS
	10-2-2 FUTURE NEEDS
10-3	INFORMATION SYSTEMS DEPARTMENT
	10-3-1 PAST BUDGETS

Decimal-Numeric Coding

Decimal-numeric coding is a numeric method of classifying records by subject in units of ten and coded for arrangement in numeric order. An unlimited number of subdivisions is permitted through the use of digits to the right of the decimal point. This method is used for classifying library materials and where large numbers of records arranged by subject or geographic location must be permanently grouped and when these records are subdivided into smaller groups.³ It is called the *Dewey Decimal Classification (DDC) System*.

³ARMA International, *Establishing Alphabetic, Numeric and Subject Filing Systems* (Lenexa, KS: ARMA International, 2005), p. 15.

How many subdivisions are possible with duplex-numeric coding?



block-numeric coding: a coding system based on the assignment of number ranges to subjects

duplex-numeric coding: a coding system using numbers (or sometimes letters) with two or more parts separated by a dash, space, or comma

decimal-numeric coding: a numeric method of classifying records by subject in units of ten and coded for arrangement in numeric order

Where is decimal-numeric coding most often used?

The system has nine general classes or main divisions (100–900). A tenth division (000) is used for records too general to be placed in any of the nine main divisions. Each main division can be divided into nine or fewer parts (110, 120, to 190). These nine parts can be divided further into nine additional groups (111, 112, to 119). Decimals are added for further divisions (111.1, 111.1.1). The DDC is not commonly used in an office. However, the use of decimals to subdivide records is a practical alternative to the dashes, spaces, and commas used in duplex-numeric coding to subdivide records.

Alphanumeric Coding

Alphanumeric coding is a coding system that combines letters and numbers, in combination with punctuation marks, to develop codes for classifying and retrieving information. Main subjects are arranged alphabetically, and their subdivisions are assigned a number. After all main subjects are determined, they are given a number (usually in groups of 10 or 100 to provide for expansion). More elaborate variations of this system may use both letters and numbers and have numerous subdivisions.

MGT-MANAGEMENT

MGT-01 RECORDS MANAGEMENT

MGT-01-01 STORAGE EQUIPMENT

MGT-01-02 FILING SYSTEMS

MGT-01-02-01 PHYSICAL

MGT-01-02-02 ELECTRONIC

MGT-01-02-03 PROCEDURES MANUAL

MGT-01-03 ELECTRONIC RECORDS RETENTION SCHEDULE

MGT-01-04 VITAL RECORDS RETENTION SCHEDULE

MGT-02 SALES MANAGEMENT

MGT-02-01 ADVERTISING

How does using a database help filers in numeric storage and retrieval?

DATABASES FOR NUMERIC STORAGE

Earlier in this chapter, you read how database software can simplify creating the accession log and the alphabetic index required for a numeric file. All necessary information can be kept in one table for ready access and updating. When you design database queries to sort file code numbers for the accession log, remember that the computer sorts within a database field from left to right. With terminal-digit or middle-digit numeric storage, use a separate field for each part of the number to aid in sorting and preparing the accession log and alphabetic index. For example, with terminal-digit numbering, set up three fields in the database table for the numeric code: Tertiary, Secondary, and Primary. Enter the numeric code for each group of numbers in its correct field. Data entry is simplified and less prone to error if the order of the numeric codes in the table matches the normal left-to-right reading sequence.

To sort these numbers as an accession log and determine the next number to be assigned, create a query to display fields in this order: Primary,

alphanumeric coding: a coding system that combines letters and numbers, in combination with punctuation marks, to develop codes for classifying and retrieving information

Secondary, and Tertiary. Then sort each of these three columns in descending order. The query results would be displayed as shown in Figure 9.13.

FIGURE 9.13 Terminal-Digit Accession Log Query Results

Primary	Secondary	Tertiary	Name or Subject	Date
9485	64	502	WXTV	9/30/20--
9485	64	498	Cleaning Supplies	9/14/20--
9284	64	502	Chou Meiling	10/02/20--
6314	29	287	Balawi Vincent	10/03/20--
6314	28	947	GlorePost Dorothy CPA	9/24/20--
2891	99	303	LaPlata Motor Sports	9/04/20--
2891	40	189	McCutchen Alex Jr	9/17/20--
2187	55	231	Brentwood Apartments	9/18/20--
1258	67	786	Applications	9/04/20--

Note that the numbers in the query results are in reverse order to the numeric file code to allow the last four digits (Primary field) to be sorted first, the middle digits (Secondary field), second, and the first three digits (Tertiary field), last. The last number assigned—502 64 9485—is shown at the top of the list. The next number available for assignment is 503 64 9485.

A list similar to that used for terminal-digit numbering can be generated to produce a sorted list of numeric codes for middle-digit numbering. Numeric codes for middle-digit numbering would be entered on the query design with the middle set of numbers (Primary field) first; the left-most set of numbers (Secondary field), second; and the last group of numbers (Tertiary field), third. Sorting for these three fields would follow the same order. The middle-digit numbers could be sorted from only two fields (by combining the Primary and Secondary

Records Management in Action

ePrescribing

Electronic prescribing or ePrescribing (eRX) means the transmission, using electronic media, of prescriptions or prescription-related information between a prescriber and a dispenser, pharmacy benefit manager, or health plan. It includes two-way transmission between the point of care and the dispenser.

In 2007, only 2 percent of an estimated 1.47 billion new and renewal prescriptions were sent electronically. According to the study conducted by Gorman Health Group for the Pharmaceutical Care Management Association, nearly 80 percent of all U.S. prescriptions will be generated with eRX and 1.9 million adverse drug effects will be avoided by 2017. Benefits of eRX include reduced medical errors, improved patient safety, lower medication costs, increased efficiency, less paperwork, and decreased staff time.

Source: OmniMD™, accessed July 9, 2009, available from <http://www.omnimd.com/html/prescription.html>.



numbers into one field because they read from left to right and would be sorted in that order). However, using the same practice for either method of numbering reduces confusion, and also increases the flexibility to change later to terminal-digit or consecutive numbering without changing the table.

When using the accession log for a nonconsecutive numbering system, the number on the top line of the query results table may not show the next number to be assigned. Remember that in a particular office, the Primary number may indicate a drawer or shelf; the Secondary number, the section of the shelf or drawer; and the tertiary number, the order of the file in that section.

Another office may have different categories assigned for the number groupings. For example, the first group of numbers could indicate a customer identification number; the second, a branch office; and the third, a department. A specific record's appropriate grouping would determine where to look on the database-generated accession log to locate the next number to be assigned. For a large volume of records, however, you may need to use the database Filter function to show only the categories that pertain to the group of records that you are coding.

A convenient feature for database records is the ability to sort and print mailing labels. Mailing labels must be pre-sorted to take advantage of bulk mailing rates. Computer-generated mailing labels can be sorted by ZIP Code without entering parts of the ZIP Code into separate fields because these numbers are sorted in sequential order as read from left to right.

Chapter Review and Applications

KEY POINTS

- Records can be numbered consecutively, numbered in combination with geographic locations or subjects, or stored in nonconsecutive filing arrangements.
- Components of the consecutive numbering method include (1) a numbered file, (2) an alphabetic file, (3) an accession log, and (4) an alphabetic index.
- The accession log is a serial list of numbers assigned to records in a numeric storage system. It also provides the next number available for assignment.
- The alphabetic index is a reference to a numeric file, arranged alphabetically. It is used when the number code for a name or subject is not known. Because the index must be referenced before storing or retrieving a record, numeric records storage is an indirect access method.
- Steps for storing records in a numeric system include inspecting, indexing, coding, number coding, cross-referencing, sorting, and storing.
- Terminal-digit storage creates an even distribution of consecutively numbered records throughout a numeric system, and middle-digit storage allows blocks of related records to be stored together sequentially.
- Chronologic storage is used in some aspect of almost every filing method. Records from the same correspondent are arranged in folders by date, and tickler files are arranged by date to serve as reminders of due dates.
- Block-numeric coding and duplex-numeric coding combine numeric codes with subject or geographic categories, and alphanumeric coding uses alphabetic subject abbreviations with a numbering system.
- Computer databases are important for efficient numeric records storage. Improved efficiency of records management derives from the computer's ability to select particular records quickly, to identify their numeric code, to sort records so that a specific record or numeric code is located quickly, and to prepare lists and reports from stored information in a variety of formats.

TERMS

accession log
alphabetic index
alphanumeric coding
block-numeric coding
chronologic storage
consecutive numbering method

decimal-numeric coding
duplex-numeric coding
middle-digit storage
nonconsecutive numbering
numeric records management
terminal-digit storage

REVIEW AND DISCUSS

1. Define numeric records management and list three reasons for storing records by the numeric method. (Obj. 1)
2. Why is expansion easier with numeric than with subject filing? (Obj. 1)
3. List and describe the components of consecutive numeric storage. (Obj. 2)

4. What steps are used when preparing records for numeric storage? (Obj. 2)
5. Explain why records in numeric storage may be coded with either the letter G or a number. (Obj. 2)
6. When are records transferred from the general alphabetic file to the numbered file? (Obj. 2)
7. Why should a general alphabetic file be placed at the beginning, rather than at the end, of a consecutively numbered storage arrangement? (Obj. 2)

14. Give at least one way that block-numeric, duplex-numeric, decimal-numeric, and alphanumeric coding are alike and one way they are different. (Obj. 7)
15. What are two ways that database software makes numeric data storage and use easy and fast? (Obj. 8)

APPLICATIONS

9-1 Arrange Physical Files (Obj. 5)

1. Manually arrange the numbers below in terminal-digit order.
2. Manually arrange the numbers below in middle-digit order.
3. Manually arrange the numbers below in consecutive order.

24 15 38	18 03 01	16 74 34	17 34 60	27 11 82	21 32 71
21 33 71	26 00 02	17 33 60	19 31 01	27 10 82	20 33 70
29 17 50	16 74 32	29 17 51	18 31 02	17 31 01	27 11 42

9-2 Sort Database Records (Obj. 5)

The numbers in Application 9-1 have been entered into a database table so that they can be sorted for terminal-digit, middle-digit, and consecutive numbering. The first group of two digits is in the Group 1 field, the second group of two digits is in the Group 2 field, and the third group of two digits is in the Group 3 field.

1. Locate the *Access* file *9-2 Number Arrangements* in the data files. Copy the file to your working folder on a hard drive or removable storage device. Open the file.
2. Create a query based on the Number Arrangements table to sort the numbers in terminal-digit filing order. Sort in descending order. Save the query as **Terminal-Digit Order**. Print the query results.
3. Create a query based on the Number Arrangements table to sort the numbers in middle-digit filing order. Sort in descending order. Save the query as **Middle-Digit Order**. Print the query results.
4. Create a query based on the Number Arrangements table to sort the numbers in consecutive filing order. Sort in descending order. Save the query as **Consecutive Order**. Print the query results.
5. Use the query results to check your answers for Steps 1–3 in Application 9-1.

9-3 Learn More About Decimal-Numeric Coding (Obj. 7)

Decimal-numeric coding, or the Dewey Decimal Classification (DDC) System, as stated earlier, is used in libraries and other organizations. You can find the URL for learning more about the DDC at the Online Computer Library Center website. A link to this site is provided under Links on the website for this textbook. Answer the following questions based on information found on the website.

1. Where is the Online Computer Library Center (OCLC) organization located?
2. What is the purpose of this organization?



Data File



Access Activity

3. What is the mission of the OCLC?

4. Search the site using the search term DDC. What is the current print edition of the DDC?

5. Write a brief description of WorldCat.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 11 Consecutive Number Correspondence Filing

Job 12 Terminal-Digit Numeric Correspondence Filing

Continue working with Auric Systems, Inc.
Complete Jobs 11 and 12.

For More Activities Go To:
www.cengage.com/officetech/read

Geographic Records Management

LEARNING OBJECTIVES

1. Explain the need for geographic records management and the kinds of organizations that might use this method.
2. Describe the geographic records storage method and procedures for this method.
3. Explain the use of an alphabetic index in the geographic storage method.
4. Describe the types of cross-references used in the geographic storage method and how they are stored.
5. Describe how files are arranged using compass terms and how this method differs from general alphabetic filing.

ON THE JOB

Dr. Eugenia K. Brumm, CRM, FAI, a Director in the Records and Information Management Practice, in the Legal Operations Consulting area, at Huron Consulting Group, has been in the records management field for 20 years as a practitioner, consultant, and academic. Dr. Brumm observed that “Over the past several years, my consulting projects have brought me into a variety of very large, global organizations. Only a handful of these organizations have stored a significant amount of physical records in centralized locations. In some instances, the centralized locations—off limits to unauthorized personnel—are staffed by personnel who control access to the records and handle records requests and checkout. Such situations often are found in highly-regulated industries, such as pharmaceutical, and in confidential information departments such as Human Resources. Staff in the centralized locations follow basic storage and retrieval procedures for hard copy records.

In other instances, small department-specific, physical records repositories are set up on the honor code. Users can retrieve hard copy files and, according to procedure, are required to complete an OUT card. File users often do not follow proper procedures. As a result, the missing files and records, as well as the disturbance of the file plan within these file rooms, make retrieval difficult for all users.”

Printed with permission of Eugenia Brumm.



Courtesy of Eugenia K. Brumm

GEOGRAPHIC RECORDS STORAGE

You have already studied numeric storage and alphabetic storage by name and by subject. In this chapter, you will learn a third storage method closely related to subject records management that uses alphabetic and numeric filing and indexing rules. Some types of information, especially in specialized activities, are more easily accessed based on location within a facility, a locality, a state or province, a country, or a continent. Business activities spanning wide geographic areas demand intelligent business decisions based on location. Specialized fields, such as natural sciences, the oil and gas industry, property records in city/county/state or federal governments, and the facility management profession, use storage methods based on location.

Geographic records management is a method of storing and retrieving records by location using a geographic filing system. A **geographic filing system** is the classification of records by geographic location usually arranged by numeric code or in alphabetic order.¹

In this age of e-commerce and dot.com companies, communication and commerce, even for small businesses, can involve a worldwide audience. The automobile industry is an example of a widespread international business operation. American automobile manufacturers, such as General Motors and Ford, do not limit their markets or purchase of components to this country, and companies from countries, such as Japan, produce and sell a variety of cars in the United States. Even state and local governments establish branch offices in other countries to promote foreign trade. Clearly, the global economy creates business opportunities that extend to locations all around the world. High-tech communications and satellite networks facilitate interactions for multiple locations worldwide.

Scientific institutions that conduct research and house the results of the research may use geographic storage for documentation as well as specimens collected in the field. For example, a large natural sciences academy includes a herbarium that houses plant collections. It is the primary repository and source of information for many well-known botanists. The herbarium uses a regional geographic filing system for the materials about specimens collected from around the world and housed at the herbarium. The file plan includes local (nearby states alphabetic by name), other North America north of Mexico (with states then provinces in alphabetic order), Latin America (all of western hemisphere from Mexico south), Europe and the Middle East, Africa, Asia, and the Pacific Islands (including Australia and New Zealand). Figure 10.1 on page 309 shows the arrangement of records by region for the specimen files. The materials are also used to generate color-coded maps of the geographic system.

In another example, a major oceanography library has an outstanding collection of expedition reports and over 78,000 maps. The map collection includes a large collection of hydrographic/bathymetric charts. The map collection is arranged alphabetically by national hydrographic agency and then in a geographic filing arrangement within each agency.

What are some business activities that require decisions based on location?

geographic records management:

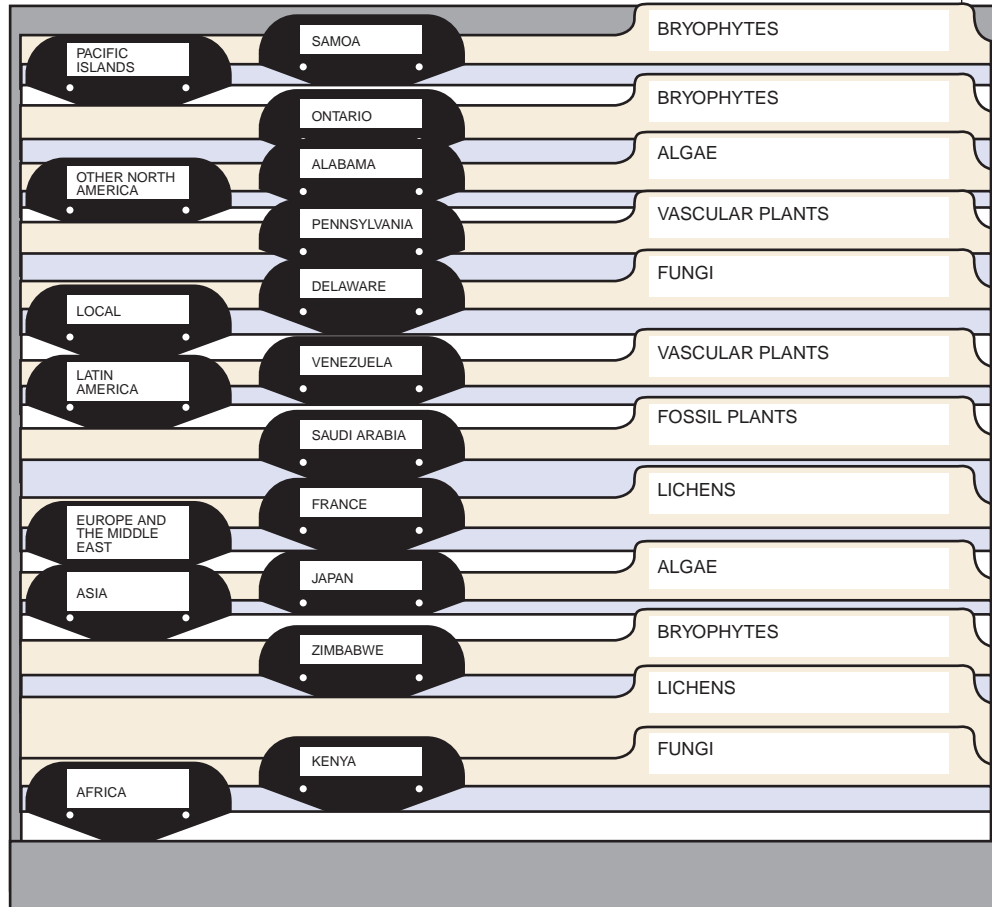
a method of storing and retrieving records by location using a geographic filing system

geographic filing system:

the classification of records by geographic location usually arranged by numeric code or in alphabetic order

¹ARMA International, *Glossary of Records and Information Management Terms* (Lenexa, KS: ARMA International, 2007), p. 13.

FIGURE 10.1 Herbarium Files



The oil and gas industry needs to track oil and gas resources by location worldwide. A major oil company files its information related to specific oil wells by a standard numbering system, established by the American Petroleum Institute, that is used to code the material by location. The ID number includes codes for state, county, and oil well number. For example, ID#42-501-12345 would be state #42 (Texas), county #501 (Harris County), and Oil Well #12345.

Records of property such as homes, businesses, new developments, parks, and government offices are important for proving ownership, for obtaining necessary permits, and for responding to 911 calls or other emergencies. Finding ownership, responding to emergencies, or issuing permits is faster and more efficient when the records are arranged by location.

Some large corporations, government agencies, and universities monitor and track the maintenance of a great number of buildings, grounds, and equipment through facility management. In addition, new construction or reconstruction must also be monitored and related to existing records. For example, a large university tracks construction projects on campus. The campus map is divided into 26 alphabetic sectors, starting in the east with A and ended in the west with Z. Each time a building was added in a sector, a new code was created, A01, A02, A03 through Z07, etc. The building codes translated into coordinates, such as A1 or B52, and so on.

How does geographic records management help facilities management?



TebNad/iStockphoto.com

Petroleum companies may use geographic records management.

To track projects, a number is added to the end of the building code. For example, A01-04 is the fourth renovation on building A01 (Science Center). The codes include the type of construction. For example, 1 is off campus, 2 is renovation, 3 is original construction, and 4 is infrastructure (across sectors/buildings). A project code that reads 3-Z01, is the original construction of the first building in sector Z, which coordinates with a particular building such as the Medical Center.

A similar example is a large gas and electric utility that uses coordinates internal to the plant to identify the location of equipment (fittings, valves, subsystems, pipe runs, compressors, etc.) and each piece of equipment or pipe run has a tag number associated with it. The tag number is entered into a database, and it accesses the specification sheet, drawing, bill of materials, and Operations & Maintenance manual for the item. The tag number is comprised of several components. It includes the area number of the gas plant (170), then the system type (s=steam, o=oil, g=gas), then the line number or system number it was located on (221), and finally a size and item number (8-1234). So a tag #170-G-221-8-1234 is:

- in gas plant area 170
- a gas system (G)
- gas line number 221
- 8 inch
- item #1234

Who uses
geographic records
storage?

Career Corner



Job Description for Records Supervisor

The following job description is an example of a position with a large accounting firm with subsidiaries across multiple geographies.

General Information

The individual in this position is the lead central files administrator responsible for all central files operations, including training, supervising, and directing all other central files personnel.

Responsibilities

- Track and safeguard all administrative and client working paper files using the firm's records management system
- Implement records and other policies, including archiving and destruction processes; new technologies, including electronic records management solutions and imaging; and customer satisfaction and change management initiatives
- Perform complex database queries to meet client needs
- Assure compliance with retention guidelines
- Serve as key contact with offsite storage vendors and retrieve and arrange file delivery as requested by clients
- Perform backup and disaster recovery processes as directed

Experience and Education

- Experience implementing and/or managing an electronic records system
- Experience managing people
- Strong presence, poise, and communication skills—written and verbal
- Strong business acumen and computer skills and ability to think and act globally
- CRM preferred
- Minimum 1–3 years of relevant experience in records management, including records management systems, imaging, and emerging technologies with a B.S. degree in records management, library science, accounting, business, or information technology; or 3–5 year's relevant experience with an associate's degree in some specialized training beyond high school in a recognized technical program

Other examples of businesses that may store records by the geographic method include:

- Multinational companies with plants, divisions, and customers outside the boundaries of the United States
- E-commerce businesses that need information about customer locations and target sales areas
- Insurance companies, franchised operations, banks, and investment firms that have many branches (possibly sales offices) at different geographic locations within the United States and have a high volume of intra-company correspondence
- Businesses that are licensed to operate in specific states and whose records are kept according to those states

- Utility companies (electricity, gas, telephone, water) whose utility facilities and services and customers are listed by location within their service area
- Real estate agencies that list their properties by areas such as foreign countries, divisions of countries or cities, groupings of subdivision names, or streets within a metropolitan area
- Scientific and other publications that file photographs and slides by location

Many geographic filing systems are used to support an internal geographic information system. A **geographic information system** (GIS) is a computer system designed to allow users to collect, manage, and analyze large volumes of data referenced to a geographic location by some type of geographic coordinates such as longitude and latitude. It lets the user query or analyze a database and receive the results in the form of a map. Geographic information systems are increasingly considered essential components of effective engineering, planning, and emergency management operations.

ADVANTAGES AND DISADVANTAGES OF GEOGRAPHIC RECORDS STORAGE

Like any records system, geographic records management has advantages and disadvantages; however, when information is requested and referenced by location, records need to be stored by location. In these situations, the advantages outweigh the disadvantages. This section describes advantages and disadvantages of geographic records management.

Why use geographic records storage?

.....
geographic information system: a computer system designed to allow users to collect, manage, and analyze large volumes of data referenced to a geographic location by some type of geographic coordinates such as longitude and latitude

Advantages

The principal advantage of geographic storage is that operations relating to a specific location are filed together. It provides reference to information specific to certain geographic areas for making decisions about those locations or for compiling statistics relative to the locations. For example, storing records by building name and location is a means of monitoring all the maintenance activity for that building. An analysis of records can be used constructively to note (1) the types of equipment that must be maintained and how often maintenance is done; (2) the kinds of maintenance or operational problems that have occurred most often and how soon equipment must be replaced; (3) the buildings that require the most maintenance and resources to do that maintenance; or (4) the buildings that must be updated to meet new codes. If equipment is moved from one building to another, geographic file guides and folders are easily rearranged. Each geographic area in storage is a unit or a group, and the shift of groups of records is easily accomplished by moving an entire group from one file location to another.

Disadvantages

The principal disadvantage of geographic storage is that the user must know the geographic location, or an index must be created and maintained. For instance, customer records filed by location require an alphabetic index of all correspondents' names and addresses. If the location of a correspondent is not known, an alphabetic index must be referenced to learn the location before a record can be filed or retrieved from the geographic file. Like the subject and numeric storage methods, geographic storage may require two operations to store and retrieve a record—a check of the index for the correct file location and then the actual search of the file. Another disadvantage of the geographic method is the complexity of the guide and folder arrangements that may be required in some large systems. For example, a geographic arrangement takes more time to establish than an alphabetic name or subject file when the nature of the organization requires many subdivisions. Storing and retrieving records can be more time-consuming, too, because reference must be made first to an area (such as a state), then to a location within that area (such as a city), and finally to a correspondent's name and address.

Cross-references are necessary in the geographic storage system for both alphabetic filing methods and numeric filing methods. Alphabetic cross-references may include, for example, names of organizations having more than one address or organizations located at one address and doing business under other names at other locations. Although place names are typically sequenced alphabetically, geographic arrangements sometimes combine alphabetic and numeric arrangements. Records from global locations are sometimes written in the native language of the country producing the record. At the very least, city and country names are written in the native language. In some instances, the English language equivalent of the city/country name may be different. For instance, Mumbai, India is known in many U.S. organizations as Bombay, India and Firenze, Italia is known as Florence, Italy. The records are usually filed in the order of the U.S. known name, so a cross-reference to other languages is required.

The advantages of using geographic records management outweigh these disadvantages for business operations requiring information accessed by geographic location.

GEOGRAPHIC RECORDS STORAGE ARRANGEMENTS

The geographic arrangement of records in an office depends on the following:

- The type of business
- The way reference is made to records (i.e., by building, by state, by ZIP Code, by geographic region, by country)
- The geographic areas related to records

What makes using geographic records storage time-consuming?

Why are cross-references needed in a geographic storage system?

My Records



Organizing Photographs

How do you organize your photos? Can you find a particular photo quickly? Are your photos stored safely?

If you are like many people, you have photos both in printed and digital form. Are your printed photos in a shoe box, a drawer, or stacks on a shelf? How about your digital pictures—are they scattered on your hard drive or several removable storage devices? Are you able to find and view the photos within a few minutes when you want to see particular photos?

Organize Printed Photos

Follow these guidelines to organize your printed photos:

- Organize your printed photos by location, subject, date, or event.
- Organize and store negatives using the same system as the printed photos.
- Store photos in plastic enclosures made of uncoated polyester, polypropylene, or polyethylene.
- Create albums of your photos using the plastic enclosures stored in a three-ring binder.
- If you place photos in a scrapbook, avoid using adhesives that may cause chemical damage to the photo. Rubber cement and

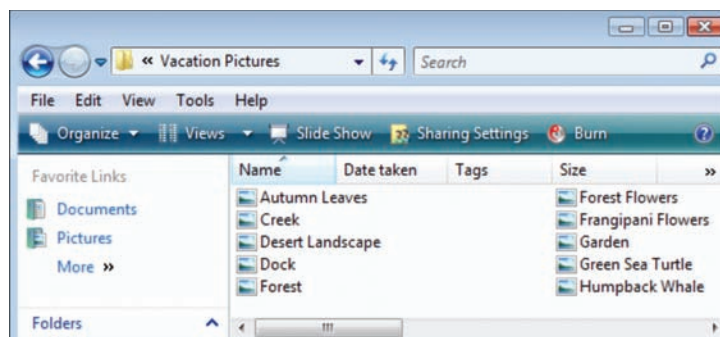
self-stick “magnetic” pages are particularly damaging to photos.*

Organize Digital Photos

Follow these guidelines to organize your digital photos:

- Centralize your photos for a particular location, subject, date, or event. Windows creates a My Pictures folder inside the My Documents folder. Create appropriate folders inside the My Pictures folder or on your hard drive or removable storage device.
- Make a back-up copy of your picture folders to a CD, DVD, or to a large flash drive.
- Use photo software that comes with your digital camera to help you organize pictures into albums.
- Internet companies have photo websites where you can post your pictures—not all are free. Use these sites to post pictures for sharing with friends.

*Source: Northeast Document Conservation Center, Care of Photographs, <<http://www.nedcc.org/resources/leaflets/5Photographs/03CareOfPhotos.php>> (accessed August 21, 2009).



Create a folder for your photos for a particular date or event, such as a vacation trip.

The geographic arrangement can be as simple as a file of city streets or countries of the world. More complex systems include subdivisions and are arranged in order from major to minor geographic units; for example, (1) country name, (2) state name or state equivalent (provinces, for example), (3) city name, and (4) correspondent's name. In general, the filing segment in geographic records storage includes geographic filing units first, followed by the correspondent's name. If geographic areas are subdivided by subject such as Accounts Receivable, Sales, or Purchasing, the subject area would be considered second and then the correspondent's name. Subdivisions by subject may be appropriate for centralized records in a company that maintains extensive business operations through branch offices in different locations. The location of the branch office could be subdivided by operational functions and then by correspondent names. Most likely, such centralization of records would be through centralized electronic records accessed in various company sites through an intranet.

Compass Terms

Some records and file guides in geographic filing use compass point terms. A **compass point** is any of 32 horizontal directions indicated on the card of a compass.² A **compass term** is a compass point used as part of a company name or subject. For example, Southern Mutual Life Insurance Corporation contains a compass term (Southern). When filing records with compass terms, each word or unit in a filing segment containing compass terms is considered a separate filing unit. If the term includes more than one compass point, the term should be treated as it is written.³ This procedure is the same procedure you learned earlier for alphabetic filing of company or organization names. The following table shows examples of indexed names that contain compass terms.

Examples of Names with Compass Terms

Filing Segment	Indexing Order of Units				
	Name	Key Unit	Unit 2	Unit 3	Unit 4
1.	North West Plumbing Inc.	North	West	Plumbing	Inc
2.	North Western Imaging	North	Western	Imaging	
3.	North-West Computer Co.	Northwest	Computer	Co	
4.	Northwest Kitchens	Northwest	Kitchens		
5.	Northwestern Refrigeration Co.	Northwestern	Refrigeration	Co	

How are words or units in a filing segment containing compass terms coded?

Who uses compass terms?

²Dictionary.com, <http://dictionary.reference.com/browse/compass20%point> (accessed August 2, 2009).

³ARMA International, *Establishing Alphabetic, Numeric and Subject Filing Systems* (Lenexa, KS: ARMA International, 2005), p. 21.

compass point: any of 32 horizontal directions indicated on the card of a compass

compass term: a compass point used as part of a company name or subject

Compass terms are frequently applied to technical studies conducted by geographers, geologists, geophysicists, and other scientists studying the earth's surface. To maintain a geographically organized file in these circumstances, the compass term is treated as an adjective and is placed after the name. Again, this procedure is used only in scientific document filing. The table below shows examples of names that contain compass terms indexed for scientific document filing.

Examples of Names with Compass Terms

Filing Segment	Indexing Order of Units for Scientific Document Filing			
	Name	Key Unit	Unit 2	Unit 3
1.	North Andreas Fault	Andreas	Fault	North
2.	Northwest Mackinaw Island	Mackinaw	Island	Northwest
3.	Ohio	Ohio		
4.	Eastern Pacific Rim	Pacific	Rim	Eastern
5.	Southern Point Island	Point	Island	Southern
6.	Tennessee	Tennessee		

What are two commonly used guide plans?

.....
dictionary arrangement: an arrangement of records in alphabetic order (A–Z)

lettered guide plan: an arrangement of geographic records with primary guides labeled with alphabetic letters

Dictionary Storage Arrangement

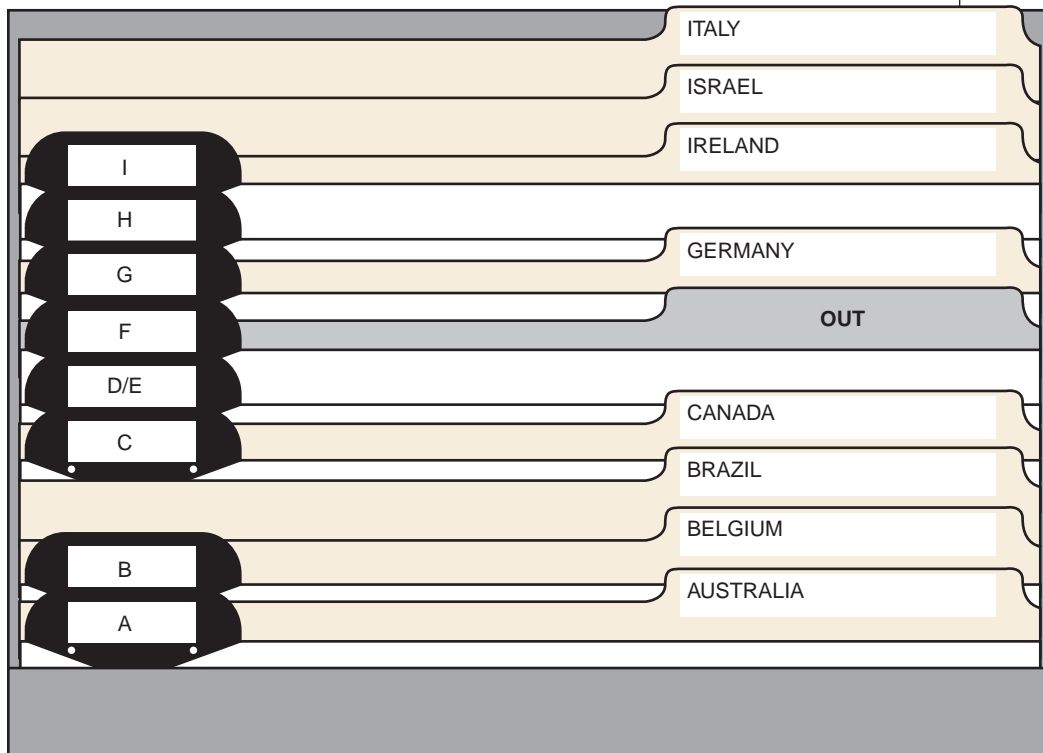
A **dictionary arrangement** for geographic records is an arrangement of records in alphabetic order (A–Z). All types of entries in the system (names, subjects, titles, etc.) are interfiled. Use the dictionary arrangement when filing single geographic units such as all streets, all cities, all states, or all countries. Two guide plans may be used: the lettered guide plan or the location name guide plan.

Lettered Guide Plan

A **lettered guide plan** is an arrangement of geographic records with primary guides labeled with alphabetic letters. The lettered guide plan can be used in any geographic arrangement. For a large volume of records stored geographically, alphabetic guides cut storage and retrieval time by guiding the eye quickly to the correct alphabetic section of storage.

Figure 10.2 on page 317 shows a dictionary arrangement of records by country in a lettered guide plan. The primary guides are one-fifth cut lettered guides arranged in a straight line in the first file drawer position (from left to right). The general country folders are third-cut folders arranged in a straight line in the third folder tab position (far right) in the file drawer. As you can see, a lettered guide plan may be excessive in a file consisting of only a few, diverse names.

FIGURE 10.2 Dictionary Arrangement of Records, Lettered Guide Plan



Location Name Guide Plan

A **location name guide plan** is an arrangement of geographic records with primary guides labeled with location names. When location names are few but diverse, use the location name guide plan.

Figure 10.3 on page 318 shows a location name guide plan in a dictionary arrangement of foreign country names. The primary guides are one-fifth cut country name guides arranged in a straight line in the file drawer first position. The general country folders are one-third cut folders arranged in a straight line in the file drawer with a third-position tab location (far right side). Figures 10.2 and 10.3 show the different guide plans in a dictionary arrangement of identical records.

Encyclopedic Storage Arrangement

An **encyclopedic arrangement** is the alphabetic arrangement of major geographic divisions plus one or more geographic subdivisions also arranged in alphabetic order. Similar to the dictionary storage arrangement, the encyclopedic arrangement makes use of either a lettered guide plan or a location name guide plan. Guides in a storage system provide sufficient guidance to speed the storage and retrieval of records. Guides should not dominate a storage area and become an efficiency barrier.

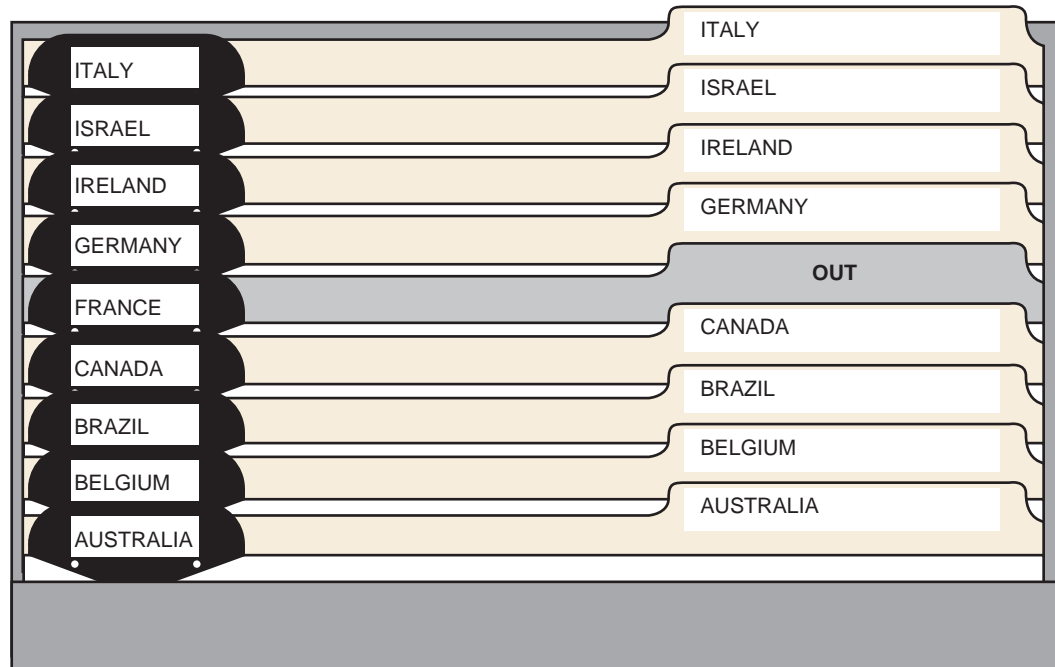
location name guide

plan: an arrangement of geographic records with primary guides labeled with location names

encyclopedic arrange-

ment: the alphabetic arrangement of major geographic divisions plus one or more geographic subdivisions also arranged in alphabetic order

FIGURE 10.3 Dictionary Arrangement of Records, Location Name Guide Plan



What other storage method uses encyclopedic arrangements?

What kinds of guides and folders are needed in the lettered guide plan?

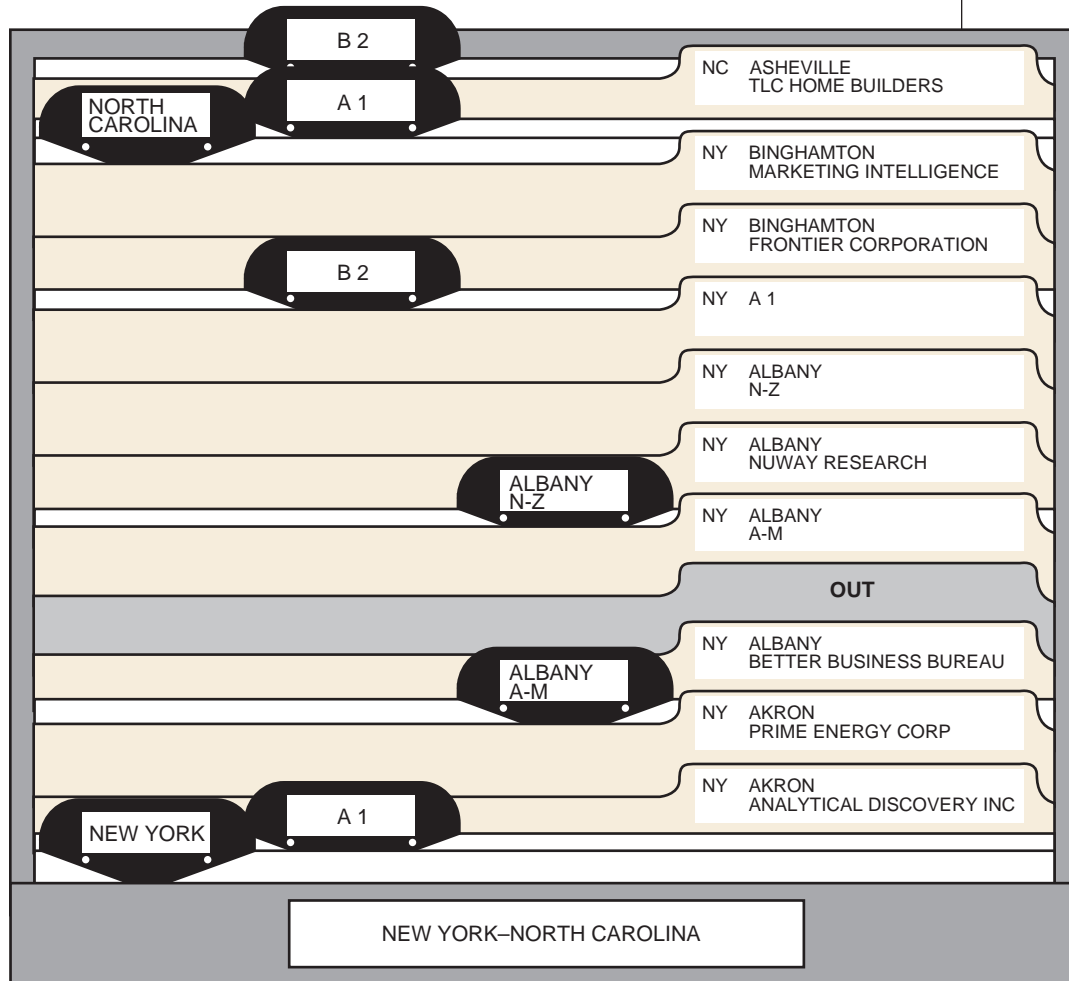
Although lettered guides with closed captions require more thought when filing (i.e., A–D, E–H, I–P), they provide a means of using fewer lettered guides. Figures 10.4 and 10.5 (pages 319 and 320) illustrate geographic records storage in an encyclopedic arrangement. Compare the guide plans used for these identical records: Figure 10.4 uses a lettered guide plan, and Figure 10.5 uses a location name guide plan. The major geographic units in the illustrations are state names; the subdivisions are city names. Refer to the illustrations as you study the following detailed explanations of the file arrangements, the guide plans, and the folder contents.

Lettered Guide Plan

Figure 10.4 shows part of a drawer of New York and North Carolina records stored by the lettered guide plan. Refer to Figure 10.4 as you study the following arrangement description.

1. In first position in the drawer are fifth-cut, primary guides for the state names NEW YORK and NORTH CAROLINA, the largest geographic division in this storage plan.
2. In second position are the secondary guides. The secondary guides are fifth-cut alphabetic guides that divide the states into alphabetic sections. Each guide indicates the alphabetic section within which records with city names beginning with that letter are stored. The guide tabs are numbered consecutively so that they will be kept in correct order.
3. In third position are special guides. Special city guides indicate cities with a high volume of records. The guides ALBANY A–M and ALBANY N–Z provide a separation of correspondents' names in the city section. These guides are fifth-cut.

FIGURE 10.4 Encyclopedic Arrangement of Records, Lettered Guide Plan



4. In fourth position as your eye moves left to right across the contents of the file are the folders. Folders are one-third cut, third position tab folders arranged in a straight line at the right of the file drawer. Notice the three kinds of folders used in this file arrangement: general alphabetic state folders, special city folders, and individual folders.
5. Each secondary guide is accompanied by a corresponding general alphabetic city folder, which is placed at the end of that alphabetic section. The folder has the same caption as that of the secondary guide. Each general alphabetic folder contains records from correspondents located in cities with names beginning with the letter of the alphabet on the folder. For instance, the general A 1 folder might contain correspondence from organizations and individuals in New York cities such as Adams, Akron, Alabama, and Amsterdam but not from Albany because that city has its own special city folders.
6. The special city folders accompany the special city guides (NY ALBANY A–M and NY ALBANY N–Z).
7. Individual folders for correspondents are arranged alphabetically by city and then by correspondents' names. The label caption for individual

What type of folder is placed at the end of an alphabetic section in the lettered guide plan?

folders includes the name of the correspondent's state and city on the first line. The correspondent's name is on the second line.

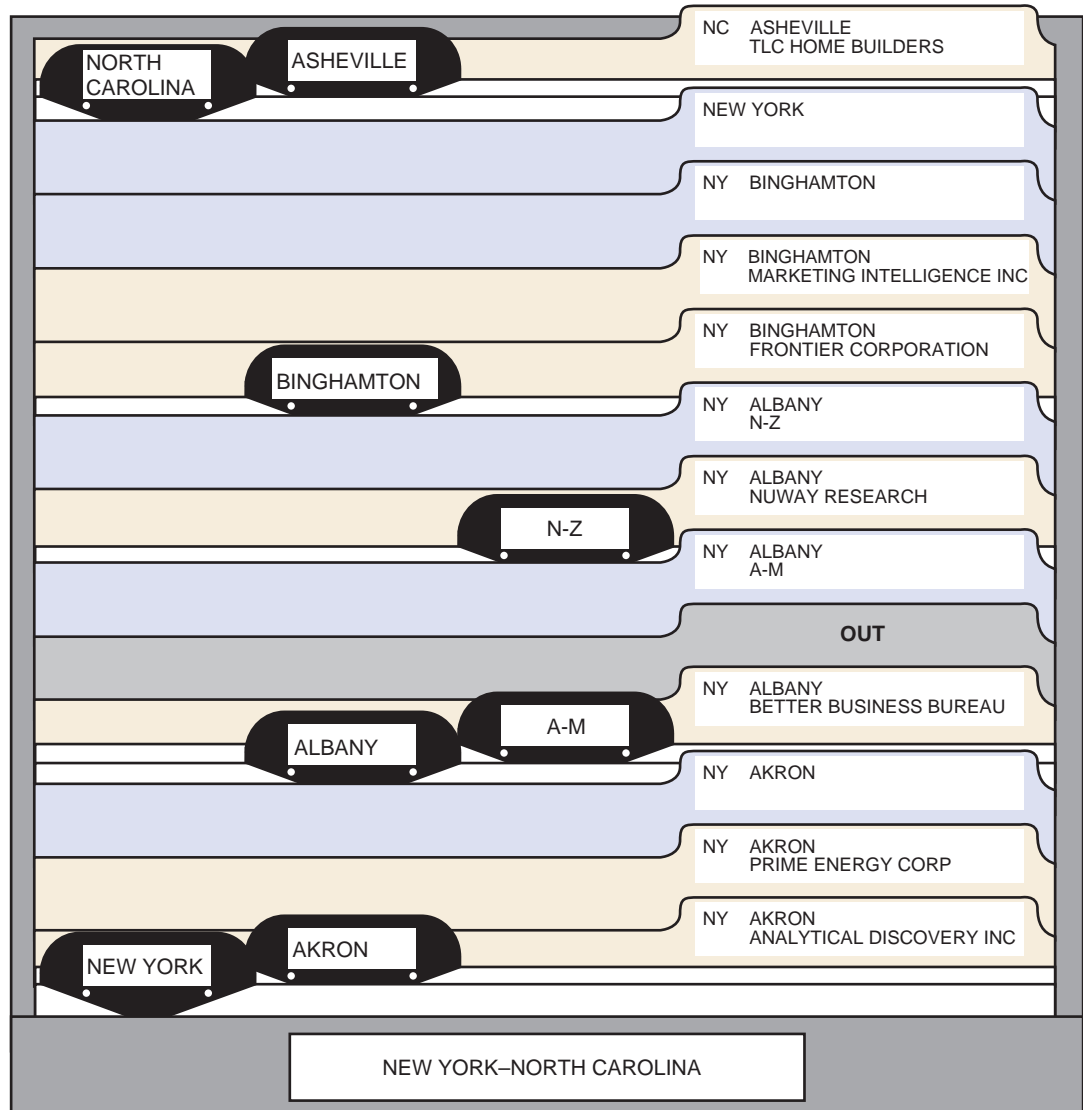
- Also in fourth position in the drawer are OUT guides. The OUT guides are third-cut, third-position guides and mark the location of a borrowed folder.

Location Name Guide Plan


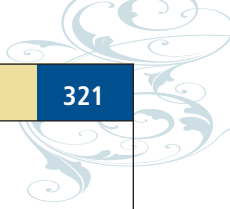
Probably the most frequently used location name guide plan arrangement is one that uses state names as the first filing segment (or country names for international operations). Figure 10.5 shows part of a drawer of New York and North Carolina records stored by the location name guide plan. Refer to Figure 10.5 as you study the following arrangement description:

- In first position in the drawer are primary guides for state names NEW YORK and NORTH CAROLINA. The guides are one-fifth cut, first-position guides.

FIGURE 10.5 Encyclopedic Arrangement of Records, Location Name Guide Plan



2. In second position are city guides. AKRON is the first city guide after the NEW YORK state guide. Because the city guides stay in the drawer in their correct positions, they do not need to include the name of the state. The guides are one-fifth cut, second-position guides.
3. In third position are special lettered guides A–M and N–Z. These special guides show an alphabetic division of correspondents' names in the city of ALBANY section. Special guides speed the location of active or high-volume records. The guides are one-fifth cut, third position guides.
4. In fourth position in the drawer are all folders. The folders are one-third cut, third-position folders. Notice that a general city folder bearing the same caption as the city guide comes at the end of the folders behind each guide.
5. The general state folder for NEW YORK is at the end of the NEW YORK section. File correspondence from other cities in New York in this general state folder when no general folder for those cities is in the file. Arrange the records alphabetically in the general state folder by city name first, followed by the correspondent's name. If correspondents' names are identical, use the street name and house number to determine correct order. Store all records from the same correspondent in chronologic order with the most recent record in front.
6. A general city folder is used for every city guide used in the file drawer. Place the general city folder at the end of the city subdivision. ALBANY has two general city folders, one for correspondents' names beginning with A to M and a second general city folder for correspondents' names beginning with N to Z. Store all records in general city folders alphabetically by correspondent's name. Arrange records from the same correspondent with the most recent record in front. When records begin to accumulate for one correspondent, say five or more, consider opening an individual folder for that correspondent.
7. Individual folders for correspondents are arranged alphabetically by name within their state and city sections. The folder label captions include the state and city locations as well as the correspondents' names. Because folders will be removed from the file, the comprehensive caption helps to prevent misfiles when borrowed records are returned to storage. Arrange records in individual folders with the most recent record in front. Be sure to store all records in folders with the top of the document at the left of the folder.
8. Also in fourth position in the file drawer are one-third cut OUT guides, which show the location of borrowed records.



How are special guides used in the location name guide plan?

GEOGRAPHIC RECORDS STORAGE INDEXES

You are already familiar with indexes because you studied the use of alphabetic and master indexes in Chapter 8, Subject Records Management, and alphabetic indexes and accession logs in Chapter 9, Numeric Records Management. Because geographic records are arranged first by location and

When is an alphabetic index used in a geographic arrangement?

Why is an alphabetic index needed?

then by company or individual names, the correspondent's location must be known before a record can be located. If the location of a correspondent is not known, the file user must use an alphabetic index.

Numeric File List

As you learned in Chapter 9, a numeric file list, also called an *accession log*, is a serial list of the numbers assigned to records in a numeric storage system. The list is used to determine the next number available for assignment. In the examples described on pages 309 and 310 of this chapter, a numeric list would be used to determine the next oil well number, the next building number, the next project number, or the next equipment item number.

Alphabetic Index

The alphabetic index lists all correspondents or subjects in geographic storage. This index can be a computer database index or a printed list. For numeric files, the alphabetic index includes the assigned file codes for records stored in a numbered file. The index would include an entry for each identification number assigned to each file (i.e., account number, oil well number, customer number). Figure 10.6 shows an example of the alphabetic index for numeric geographic files.

FIGURE 10.6 Alphabetic Index for Numeric Geographic Files

Alphabetic Index for Oil Wells	
Oil Well	Number
Harris County, Texas, Oil Well #12345	42-501-12345
Harris County, Texas, Oil Well #13567	42-501-13567
Jones County, Oklahoma, Oil Well #6789	40-403-6789
Rainer Parish, Louisiana, Oil Well#2468	45-203-2468

However the index is maintained, the index must be easy to update and keep current. Names or subjects will be added, deleted, or changed. The index should include appropriate information. For example, in an alphabetic index, the correspondent's name and full address or the full subject name should be used. Figure 10.7 on page 323 is a database alphabetic index for geographic records storage. The correspondents' names are in alphabetic order in column one. The state, city, and street locations are shown in the remaining columns. All correspondents are listed in the index, including correspondents whose records are stored in general city and state folders.

When the information for an index is stored in a database, users can access an individual name on the screen without looking for the name on a printed list. Even with the capability to check electronic indexes, a printed copy of the index should be available.

FIGURE 10.7 Alphabetic Index for Geographic Files

Alphabetic Index					
Indexed Name	State	City	Bldg	Street	See Also
Analytical Discovery Inc	NY	Akron	4873	Center St.	
Armor Supply Center	NY	Cortland	1601	Fourth St.	
Better Business Bureau	NC	Asheville	389	Main St.	NY Albany
Better Business Bureau	NY	Albany	150	Rowan St.	NC Asheville
Computer Magic	NY	Geneseo	38	Main St.	
Echo Power Equipment	NY	Cherokee	174	Military Rd.	
Frontier Corporation	NY	Binghamton	20	Shuman Blvd.	
Kerry Company The	NY	Albany	204	Delaware Ave.	
Marketing Intelligence Inc	NY	Binghamton	451	Dunbar Rd.	
Nuway Research	NY	Albany	44	Broadway	
Prime Energy Corp	NY	Akron	2470	Miles Rd.	
TLC Home Builders	NC	Asheville	20	River Dr.	

Master Index

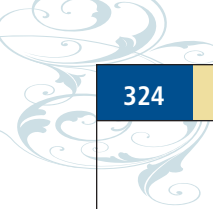
A master index is a complete listing of all filing segments in the filing system. Figure 10.8 is a database master index for correspondents. States were sorted first, then the city names, and finally the correspondents' names.

The master index shows at a glance the geographic units covered in the filing system and is especially useful to new file users. A printed copy of the index is kept in the front of the file drawer or another readily accessible location. If the alphabetic index is prepared with database software and names

What is a master index?

FIGURE 10.8 Master Index for Geographic Files

Master Index				
State	City	Indexed Name	Bldg	Street
NC	Asheville	Better Business	389	Main St.
NC	Asheville	TLC Home Builders	20	River Dr.
NY	Akron	Analytical Discovery Inc	4873	Center St.
NY	Akron	Prime Energy Crop	2470	Miles Rd.
NY	Albany	Better Business Bureau	150	Rowan St.
NY	Albany	Kerry Company The	204	Delaware Ave.
NY	Albany	Nuway Research	44	Broadway
NY	Bath	Marketing Intelligence Inc	451	Dunbar Rd.
NY	Binghamton	Frontier Corporation	20	Shuman Blvd.
NY	Cherokee	Echo Power Equipment	174	Military Rd.
NY	Cortland	Armor Supply Center	1601	Fourth St.
NY	Geneseo	Computer Magic	38	Main St.



What steps are used when storing geographic records?

What names require cross-referencing?

are kept updated, queries can be created for viewing or printing an updated alphabetic or master index at any time; or an individual record can be viewed or printed. Other software packages that allow resorting and moving of columns can also produce a master index.

GEOGRAPHIC RECORDS STORAGE AND RETRIEVAL PROCEDURES

Supplies used in the geographic method are similar to those used in other storage methods. These supplies consist of guides, folders, and OUT indicators. You may want to review the section on filing supplies in Chapter 6 before continuing with the discussion of storage and retrieval procedures.

The same basic steps for storing records in alphabetic, subject, and numeric methods (inspecting, indexing, coding, cross-referencing, sorting, and storing) are also followed in the geographic method. Minor differences are explained in the following paragraphs. Retrieval procedures (requisitioning, charging out, and following up) are also basically the same.

Inspecting and Indexing

Check to see that the record has been released for storage (inspect) and scan the letter for content to determine its proper place in storage (index). In Figure 10.9 on page 325, the handwritten letters JK indicate that the letter is released for storage.

Coding

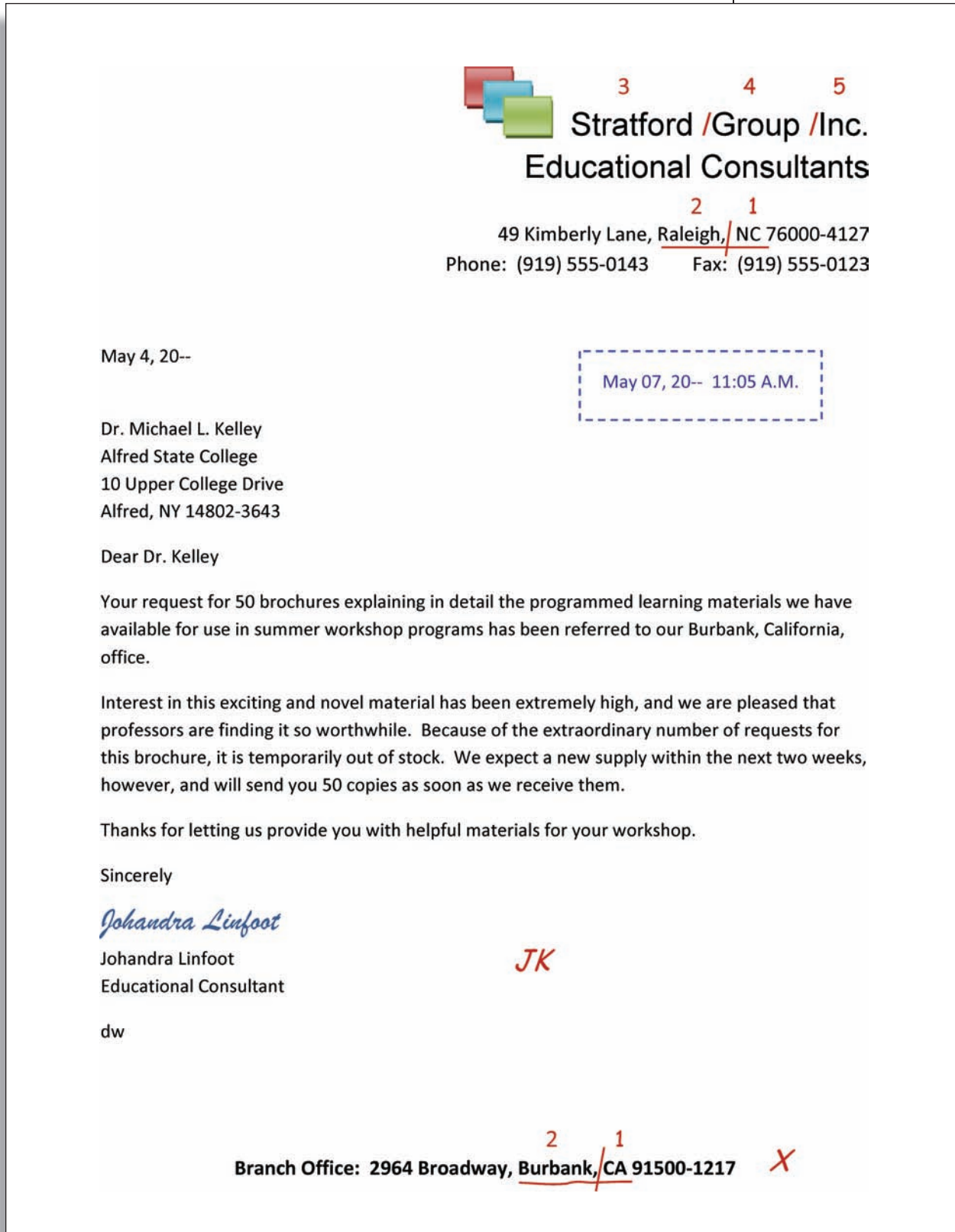
Code the document for geographic storage by marking the correspondents' *location* (address) first. Code by underlining the filing segment (see Figure 10.9, Raleigh, NC). Write numbers above or below the filing segment to show the order of indexing and alphabetizing units. Then code the name of the correspondent by underlining the name, placing diagonals between the units, and numbering the succeeding units. Figure 10.9 shows a letter coded for the geographic storage method.

After coding documents, consult the alphabetic index to see if the correspondent is currently in the system. If not, add the new correspondent's name and address to the index.

Cross-Referencing

Cross-referencing is as necessary in the geographic storage method as it is in the alphabetic or numeric storage methods. In Chapters 2, 3, and 4, personal and business names are listed that may require cross-references. In the geographic storage method, additional cross-references may be needed for (1) names of organizations having more than one address, and (2) organizations located at one address and doing business under other names at other locations. When a foreign country name is translated into its English equivalent, a cross-reference to the other language is also required.

FIGURE 10.9 Letter Coded for Geographic Filing



Filers coding a letter or other form of correspondence will first code the geographic location by underlining the filing segment, inserting diagonals between filing units, and numbering the units to show their rank in indexing order. The correspondent's name is indexed last. When an alternative location is mentioned in the letter, it is underlined with a wavy line, diagonals are inserted between units, and units are numbered. An X is placed beside the cross-reference location. (See Figure 10.9 on page 325.)

In the geographic storage method, insert cross-references in both the alphabetic or numeric index and the storage file. In the numeric index, prepare an entry for each identification number assigned to each file (i.e., account number, oil well number, customer number). In the alphabetic index, prepare an entry for every name by which a correspondent may be known or by which records may be requested. For the letter shown in Figure 10.9, a cross-reference shows a branch office located in another city. A filer might look for a record from the Stratford Group, Inc., in either of these two locations.

In the file, four types of cross-references can be used: (1) cross-reference sheets that are stored in folders to refer the filer to specific records, (2) photocopies of coded records that are placed in the alternate locations serve as substitutes for cross-reference sheets, (3) cross-reference guides that are placed in storage as permanent cross-references, and (4) SEE ALSO cross-reference notations on sheets or on folder tabs. Each of these cross-references is explained in the following paragraphs.

A **cross-reference sheet** is a sheet placed in an alternate location in the file that directs the filer to a specific record stored in a different location other than where the filer is searching. The cross-reference sheet in Figure 10.10 on page 327 is made for the branch office indicated on the letter shown in Figure 10.9. The original letter is stored in the N section of geographic storage (NORTH CAROLINA), but the cross-reference sheet is stored in the C section (CALIFORNIA).

Making photocopies of records after coding them for geographic storage saves time by eliminating the tasks of writing the filing segments onto cross-reference sheets and then coding them. The photocopy serves as the cross-reference sheet.

A **cross-reference guide** is a special guide that serves as a permanent marker in storage indicating that all records pertaining to a correspondent are stored elsewhere. For example, the cross-reference guide in Figure 10.11 on page 327 shows that all records for Lockwood, Inc. are stored under the home office location in Ann Arbor, MI, not the branch office location in St. Clair Shores, MI. The words *Ann Arbor* must be written on each record when it is coded. The cross-reference guide is stored according to the location on the top line of its caption in alphabetic order with other geographically labeled guides and folders.

A **SEE ALSO cross-reference** is a notation on a folder tab or cross-reference sheet that directs the filer to multiple locations for related information. If a company has two addresses and records are stored under both addresses, two SEE ALSO cross-references would be used. For example, if Windsor Publishing Co., Inc., conducts business in Houston, TX, and also in Milan, Italy, the references would indicate that

• • • • •
cross-reference sheet:

a sheet placed in an alternate location in the file that directs the filer to a specific record stored in a different location other than where the filer is searching

cross-reference guide:

a special guide that serves as a permanent marker in storage indicating that all records pertaining to a correspondent are stored elsewhere

SEE ALSO cross-reference:

a notation on a folder tab or cross-reference sheet that directs the filer to multiple locations for related information

FIGURE 10.10 Cross-Reference Sheet for Geographic Method

CROSS-REFERENCE SHEET

Name or Subject
 2
CA/ Burbank

Date of Record
May 4, 20--

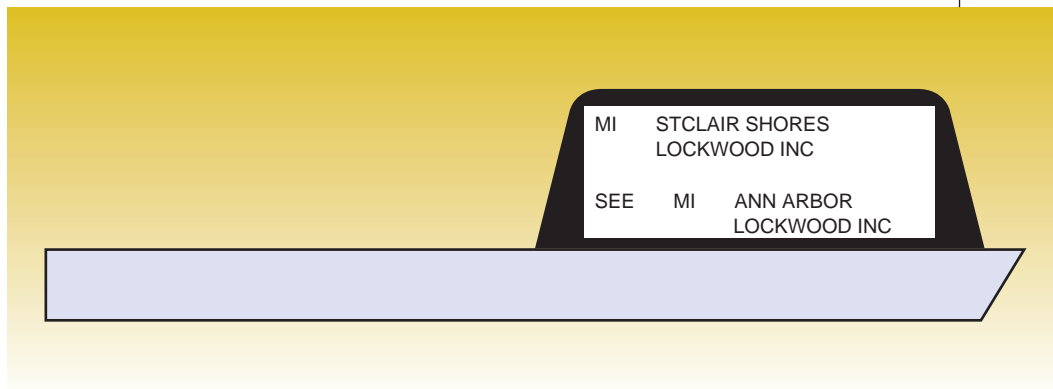
Regarding
Program learning materials for summer workshop

SEE

Name or Subject
NC Raleigh
Stratford Group, Inc.
49 Kimberly Lane

Date Filed 5/7/20-- By JK

FIGURE 10.11 Cross-Reference Guide for Geographic Method



information for this company can be found in two storage locations. If these SEE ALSO cross-references are sheets of paper, they are kept as the first items in their respective folders so that they will not be overlooked (see Figures 10.12 below and 10.13 on page 329). Instead of being written on separate cross-reference sheets, this SEE ALSO information may be keyed on the tabs of the two folders for the Windsor Publishing Co., Inc. (see Figure 10.14 on page 329). Figure 10.15 on page 330 shows a cross-reference entry in a database record.

How does this cross-reference sheet differ from the one shown in Figure 10.11?

FIGURE 10.12 Cross-Reference Sheet for SEE ALSO Cross-References

CROSS-REFERENCE SHEET					
Name or Subject					
2					
<u>TX / Houston</u>					
3	4	5	6		
<u>Windsor / Publishing / Co. / Inc.</u>					
<u>1313 North Sixth Street</u>					
Date of Record					

Regarding					

SEE ALSO					
Name or Subject					
<u>TX Wichita Falls</u>					
<u>Windsor Publishing Co., Inc.</u>					
<u>2264 Evanston Avenue</u>					
Date Filed <u>11/4/20--</u> By <u>JK</u>					

FIGURE 10.13 Cross-Reference Sheet for SEE ALSO Cross-References

CROSS-REFERENCE SHEET

Name or Subject

2 3

TX / Wichita / Falls

3 4 5 6

Windsor / Publishing / Co. / Inc.

2264 Evanston Avenue

Date of Record

Regarding

SEE ALSO

Name or Subject

TX Houston

Windsor Publishing Co., Inc.

1313 North Sixth Street

Date Filed 11/4/20-- By JK

What is the advantage to placing SEE ALSO cross-reference information on folder labels?

FIGURE 10.14 SEE ALSO Cross-References on Folder Tabs

<p>TX HOUSTON WINDSOR PUBLISHING CO INC</p> <p>SEE ALSO ITALY MILAN</p>	<p>ITALY MILAN WINDSOR PUBLISHING CO INC</p> <p>SEE ALSO TX HOUSTON</p>
---	---

FIGURE 10.15 Cross-Reference in a Database Record

Field	Value
Record No	21
Name	The Windsor Publishing Co., Inc.
Indexed Name	Windsor Publishing Co Inc The
Bldg	2264
Street	Evanston Avenue
City	Wichita Falls
State	TX
ZIP	76301-2264
See Also	TX Houston

Record: [Navigation icons] 21 [Navigation icons] of 21

What two ways of sorting may be used in the geographic storage method?

Sorting

Sort records numerically by file code or alphabetically by location. If alphabetic, sort first by the largest geographic unit such as country or state name; then sort by the first subdivision such as state equivalent or city; finally sort by the names of the correspondents, in alphabetic order.

Storing

Individual correspondents' folders, special city folders, alphabetic subdivisions of cities with their corresponding general folders, general folders for alphabetic grouping of cities, and general state or regional folders may be part of a geographic records storage arrangement. Therefore, placing a record in the wrong folder is easy to do. Because of the complexity of a geographic arrangement, be extremely careful when storing.

Lettered Guide Plan

Assuming that the alphabetic arrangement is by state and city, look for the primary state guide. Then use the lettered guides to locate the alphabetic state section within which the city name falls. After finding that section, look for an individual correspondent's folder. If you find one, store the record in that folder in chronologic order with the most recent record on top.

If an individual folder for the correspondent is not in the file, look for a general city folder. If a general city folder is in the file, store the record according to the correspondent's name in the same manner as in an alphabetic arrangement. If a general city folder is not in the file, store the record in the general alphabetic folder within which the city name falls. Again, arrange the city names according to the rules for alphabetic indexing.

Within a city, arrange the names of correspondents alphabetically; group the records of one correspondent with the most recent date on top.

If identically named correspondents reside in one city, follow the rules for filing identical names (see Chapter 4 for review).

When enough correspondence has accumulated to warrant making a separate folder for a specific city, a specific geographic section, or an individual correspondent, remove the records from the general folder and prepare a new folder with the geographic location on its tab as the first item of information. Then prepare a similarly labeled guide, if one is needed, for the folder. Finally, place the folder and guide in their alphabetic positions in storage.

Although requirements for preparing a separate folder for a specific geographic location vary, a good rule of thumb is this: When five or more records pertaining to one specific geographic location (such as a state, city, or region) accumulate, prepare a separate folder for that location.

Location Name Guide Plan

Again, assuming that the arrangement is by state and city, find the primary state guide and look for the correct city name on a secondary guide. If a city guide is present, search for an individual correspondent's folder. If one exists, store the record in the folder according to date.

If an individual folder is not in the file, store the record in the correct general city folder according to the geographic location of the correspondent and then by name, in alphabetic order with the other records within the folder. If more than one record is stored for a correspondent, arrange the records chronologically with the most recent date on top.

If a general city folder is not in the file, place the record in the general state folder, first according to the alphabetic order of the city name and then by correspondent's name and street address (if necessary), according to the rules for alphabetic indexing.

Records Management in Action

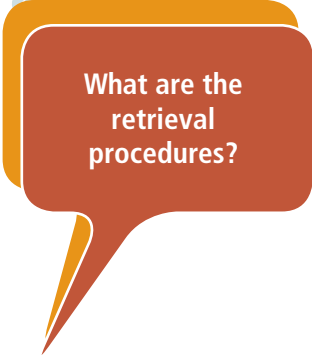



How Food Gets to the Correct Destination

Houston-based food distributor, Sysco, ships 21.5 million tons of produce, meats, prepared meals, and other food-related products each year. The company maintains a complex web of software, databases, scanning systems, and robotics to deliver its products to the correct destinations. Sysco uses customized tools to develop a logistical plan every day to assure that a restaurant that wants Fuji apples does not receive Macintoshes instead, or that an elementary school cafeteria doesn't receive meals meant for a nearby assisted-living facility.

In Sysco's 450,000-square-foot facility in Jersey City, New Jersey, where restaurant supplies and food are sorted and loaded onto trucks, forklift drivers wear wireless scanners and printers on their hips that provide exact instructions on what to load onto their forklifts. Software then calculates how each pallet of food items should be arranged, based on the weight of the items, their location, and their destination. The drivers, or "Selectors," point their scanners at a bar code above an item, grab it, and put it onto a pallet. They work in one direction, never doubling back. Aisles are organized by weight and temperature.

Source: "Veggie Tales," *Fortune*, Technology Section, June 8, 2009, pp. 25–29.



What are the retrieval procedures?

Retrieving

Retrieving a record from a geographic file involves these five steps:

1. Asking for the record (requisition)
2. Checking the alphabetic or numeric index to determine the location of the record
3. Removing the record from the files
4. Completing charge-out documentation for the record
5. Following up to see that the record is returned to storage within a specified time

Requisition

Requests for a record stored by geographic arrangement may identify it by location, by numeric file code, or by correspondent's name. If the request is made by location, finding the record should be simple. If the request is made by name or number, however, refer to the alphabetic index or a computer database to locate the file used to store the record.

Charge-Out

After you have located and retrieved the record, charge it out in the same manner that you charge out records from any other storage method. Be sure to insert an OUT indicator at the storage position of the record. A Charge-Out field can be added in a records database and shown in the alphabetic index.

Follow-Up

The follow-up procedures used to secure the return of borrowed records are the same for the geographic method as those used with any other storage method. Use a tickler file or another reminder system to be sure that records are returned to storage at designated times and to remind yourself of records that need to be brought to someone's attention in the future. If OUT information is recorded in a database table, this information can be sorted by date and used as a tickler file.

Chapter Review and Applications

KEY POINTS

- Geographic records management is grouping and storing records by location.
- Companies that need information by location to make good business decisions are likely to choose geographic records management.
- Many geographic filing systems are used to support an internal geographic information system.
- Geographic records storage requires a more complex system of guides and folders than other types of records storage, and storing and retrieving records can be more time consuming.
- Some records and files in geographic filing use compass point terms which require the use of unique filing rules.
- Two basic arrangements are commonly used in geographic storage: the dictionary arrangement and the encyclopedic arrangement. The arrangement used depends on whether subdivisions of the geographic units are necessary.
- Either the lettered guide plan or the location name guide plan can be used. Whether the files contain a small number of diverse names or a large number of similar names will likely determine the guide plan.
- Because geographic records are arranged first by location, then by company or subject, and then by individual names, the correspondent's location must be known before a record can be located.
- An alphabetic index lists all correspondents or subjects in geographic storage. For numeric files, the alphabetic index includes the assigned file codes for records stored in a numbered file.
- A master index, which shows at a glance the geographic units covered in the filing system, is also helpful and is especially useful to new file users.
- Except for indexing and coding, the storage and retrieval procedures for geographic storage are similar to those used for other storage methods.
- Indexing and coding require looking first at the location of the document and then at the name, the document subject, or project title being stored.
- Cross-references should be placed in both the alphabetic index or numeric index and the storage file.

APPLICATIONS

10-1 Selecting a Geographic Arrangement (Obj. 2)

For each of the following scenarios, identify the most efficient geographic arrangement and explain the reasons for your choices. Identification of this arrangement should include as many of the following elements as appropriate: major and minor geographic units, encyclopedic or dictionary arrangement, lettered guide plan or location name guide plan. Key and print your answers.

1. A large aerospace company keeps its facility and equipment maintenance records by building code. The buildings and equipment include:
 - Assembly Plant: Belt 1, Belt 2, Motor 456, Motor 123, Lathe 3
 - Research Center: Computer 72, Mega Server 6, Small printer, Large printer
 - Fire Station: Hose 3, Hose 5, Extinguisher 23, Ladder 9
 - North Testing Laboratory: Oven 17, Microscope 43, Centrifuge 12
 - South Testing Laboratory: Oven 18, Microscope 21, Centrifuge 5
2. The home office of a large food processing/packing plant is located in Iowa. The company maintains correspondence and records to branch offices in three regions of the United States—Western, Northeast, and South Central—as well as in Japan, Canada, and England.
3. A newspaper publisher in Scranton, PA, maintains a file of all streets in the city. The street name file identifies paper carriers who distribute home delivery to those locations. The newspaper also has mail subscribers in the states of Pennsylvania, New York, Ohio, and West Virginia.
4. A garment manufacturer maintains records by its operations in ten cities. City locations include the following:

United States

Los Angeles, CA
Philadelphia, PA
Detroit, MI

Central America

Managua, Nicaragua
León, Nicaragua

Canada

Calgary, Alberta
Montréal, Quebec
London, Ontario

South America

Cuernavaca, Morelos, Mexico
Zamora, Michoacan, Mexico

10-2 Compass Terms (Obj. 5)

1. Assume that the names listed are to be filed in a scientific document file that uses compass terms. Code the names by writing the units in the appropriate columns. The indexing order of the first name is shown below as an example. In the Order column, number the names to show the order in which they would be placed in the files.

Order	Name	Key Unit	Unit 2	Unit 3
	a. East Cumberland Lake	Cumberland	Lake	East
	b. Eastern Shore Park			
	c. East Avon Park			
	d. North River Preserve			
	e. Northern Plateau			
	f. Southwest Mackinaw Island			
	g. Northern Ohio Fault			
	h. East Ridder Fault			
	i. Western Pacific Rim			

2. Assume that the names listed are to be filed in an alphabetic subject file (not a scientific document file). Code the names by writing the units in the appropriate columns. In the Order column, number the names to show the order in which they would be placed in the files.

Order	Name	Key Unit	Unit 2	Unit 3
	a. East Cumberland Lake	East	Cumberland	Lake
	b. Eastern Shore Park			
	c. East Avon Park			
	d. North River Preserve			
	e. Northern Plateau			
	f. Southwest Mackinaw Island			
	g. Northern Ohio Fault			
	h. East Ridder Fault			
	i. Western Pacific Rim			

10-3 Geographic Indexes (Objs. 2 and 4)

1. Create a new *Access* database file named *CH10 Indexes*. Create a table named *Records*. Create the following fields in the table and set the primary key.

Field Name	Field Type
Record No	Number (primary key)
Name	Text
Indexed Name	Text
Bldg	Number
Street	Text
City	Text
State	Text
ZIP	Text
See Also	Text

2. Enter records for names shown on page 340 in the *Records* table. For names with more than one address, enter each record separately and enter cross-reference information in the *See Also* field. (This information may seem unnecessary when all records are viewed. When an individual record or a subset of the records is viewed, however, this data alerts users that the same name is filed in another location.)
3. Create a query named *Alphabetic Index* based on the *Records* table. Include the *Indexed Name*, *State*, *City*, *Bldg*, *Street*, and *See Also* field in the query results. Design the query to sort by *Indexed Name*, then by *State*, then by *City*, and then by *Street* fields. Print the query results table.
4. Create a query named *Master Index* based on the *Records* table. Include the *State*, *City*, *Indexed Name*, *Bldg*, *Street*, and *See Also* fields. Design the query to sort by *State*, then by *City*, then by *Indexed Name*, and then by *Street* fields. Print the query results table.

10-4 Research Geographic Filing Uses (Obj. 1)

1. Access a search engine on the Internet. Search using the exact phrase *geographic filing system*.
2. From the results list, find sites for at least two businesses or institutions that describe their use of a geographic filing system. Do not include course outlines or course descriptions at colleges or universities.
3. Follow the links to the business or institution website. Read and summarize the use of a geographic filing system for the business or institution. Send an e-mail to your instructor with a summary of your findings.



Access Activity

Record No	Name and Address	Record No	Name and Address
1	John Powers Electronics 24 Delaware Ave. Rochester, NY 14623-2944	11	Wilkes Tree Farm 400 Stanton Christiana Rd. Newark, DE 19713-0401
2	Indian River Community College 3209 Virginia Ave. Fort Pierce, FL 34982-3209	12	Beverly Plumbing 1000 Gordon Rd. Rochester, NY 14623-1089
3	Computer Land, Inc. 30 Shepherd Rd. Springfield, IL 62708-0101	13	Electric City, Inc. 3201 Southwest Traffic Way Kansas City, MO 64111-3201
4	Portland Cement Co. 12000 Lakeville Rd. Portland, OR 97219-4233	14	Abba D Plumbing 901 S. National Ave. Springfield, MO 65804-0910
5	Penn Valley Community College 3300 Southwest Traffic Way Kansas City, MO 64111-3300	15	Pioneer Center Furniture 560 Westport Rd. Kansas City, Mo 64111-0568
6	Cerre Ceramic Studios 7250 State Ave. Kansas City, KS 66112-7255	16	Amy's Sports Center 874 Dillingham Blvd. Honolulu, HI 96817-8743
7	Toby Leese Tack Shop 175 University Ave. Newark, NJ 07102-1175	17	Genesis Cinema 1325 Lynch St. Jackson, MS 39203-1325
8	John Powers Electronics 10 State St. Rochester, NY 14623-2944	18	Computer Magic 84 Center St. Springfield, MA 01101-2028
9	City Office Supplies 4281 Drake St. Rochester, MI 48306-0698	19	Computer Magic 24 Fourth Ave. New York, NY 10018-4826
10	Armstrong State College 11935 Abercorn St. Savannah, GA 31419-1092	20	The Computer Store 2847 14th St. New York, NY 10018-2032

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

SIMULATION

Job 13 Geographic Filing

Continue working with Auric Systems, Inc.
Complete Job 13.

For More Activities Go To:
www.cengage.com/officetech/read

Electronic and Image Records

LEARNING OBJECTIVES

1. Define *electronic record* and *image record* and describe the relationship between the two records media.
2. Define *magnetic media* and *optical media* and list three types of each media.
3. Discuss retention for active and inactive electronic records.
4. Discuss records safety and security.
5. List and describe four types of microforms and four factors related to microfilm quality.
6. Discuss microfilming procedures and equipment.
7. Describe microform storage, retrieval, and storage environments.
8. Discuss image records retention.
9. Discuss RIM software for electronic and image records.

ON THE JOB

The Records Management Department of Proctor & Gamble (P&G), an international consumer products company headquartered in Cincinnati, Ohio, includes a corporate records manager, an internal records administrator, two e-Discovery staff, a varying number of workers in the 21 Research & Development (R&D) sites for a total of 30, plus a dozen contractors. Separately, a Corporate Archives Manager has a staff of four for a total of five. Gladys E. Parker, the Internal Records Administrator, is a site records manager and helps manage the database for laboratory notebooks.



Courtesy of Gladys Parker

According to Ms. Parker, "The records management work changes somewhat as P&G sells or buys companies or closes and consolidates product lines and plants." In Cincinnati, records offices were consolidated to equalize work load and to provide better "flow to work" capability as each administrator could back up another. Ms. Parker explains that "litigation requirements play a very large role in P&G records management. The company averages a new patent award each day, and such patents are constantly being challenged, as are product claims and results. The outcome of the litigation has a direct bearing on the financial well-being of the company; so, research has to be documented in such a way that it is credible and can be duplicated and corroborated. Consequently, signatures also play a large role. Whatever electronic records processes are developed must include viable digital signatures. Individual judges may refuse to accept e-documents, which means that the company must be prepared to produce paper documentation."

Printed with permission of Gladys Parker.

How are electronic and image records related?

THE RELATIONSHIP BETWEEN ELECTRONIC AND IMAGE RECORDS

Although some records are stored only on electronic media, image records may be stored on image or electronic media. Some physical records can be stored on electronic or image media. However, some larger image records, such as medical testing films, movies, and photographs, are stored on electronic media because of the larger storage capacity of such media.

An **electronic record** is a record stored on electronic storage media that can be readily accessed or changed. An electronic record is often referred to as a *machine-readable record*—digitized and coded information that must be translated by a computer or other type of equipment before it can be understood. An **image record** is a digital or photographic representation of a record on any medium such as microfilm or optical disk.

Electronic records may contain quantitative data, text, images, or sounds that originate as an electronic signal. A memorandum created with word processing software and stored as a computer file is an electronic record. A printed physical copy of that memorandum is not an electronic record; it is a physical record. A database index of a subject filing system is an electronic record. A computer-generated, printed physical copy of the subject index or a copy on microfiche is a physical record.

ELECTRONIC MEDIA

Electronic media include magnetic media and optical media. Optical media are also electronic image media. Magnetic recording is the most widely used technology for video and audio recordings. Magnetic media can store and retrieve a document faster than other storage media. Because the moving parts of magnetic media are subject to failure, backups are regularly scheduled. When erased or damaged, data on magnetic media can be restored from backups.

Magnetic and Optical Media

Magnetic media are a variety of magnetically coated materials used by computers for data storage. Types of widely used magnetic media are listed in Figure 11.1 on page 343. **Optical media** is a high-density information storage medium where digitally encoded information is both written and read by means of a laser. Optical media include optical disks, compact disks (CDs), computer output to laser disk (COLD), digital videodisks (DVDs), and optical cards. An optical disk is a platter-shaped disk coated with optical recording material.

Floppy disks or diskettes—removable magnetic storage media for microcomputers, or desktop computers—have largely been replaced with larger-capacity storage media such as CDs and DVDs. The hard disk is usually called a *hard drive* because the storage device and the recording

electronic record: data stored on electronic media that can be readily accessed or changed

image record: a digital or photographic representation of a record on any medium such as microfilm or optical disk

magnetic media: a variety of magnetically coated materials used for computers for data storage; e.g., hard disk, magnetic tape, redundant array of independent disks (RAID), videotape

optical media: a high-density information storage medium where digitally encoded information is both written and read by means of a laser

FIGURE 11.1 Magnetic Media

MAGNETIC MEDIA

- Hard disk—A thin, rigid metal platter covered with a substance that holds data in the form of magnetized spots.
- Magnetic tape—A long strip of polyester film coated with magnetizable recording material, capable of storing information in the form of electro-magnetic signals.
- Redundant array of independent disks (RAID)—A computer storage system consisting of over 100 hard disk drives contained in a single cabinet that simultaneously send data to a computer over parallel paths.
- Videotape—A magnetic tape on which visual images are electronically recorded, with or without sound.

medium are considered as one unit. Hard disks, in a variety of storage capacities, are installed into most microcomputers. They may also be removable external drives as discussed later in this chapter.

Magnetic tape on reels or in cartridges is often used for storing backups of data. Magnetic tape is a preferred long-term and archival storage medium. **RAID** configurations provide mass storage with the advantage of spreading data across an array of hard drives, which reduces the chance that if one drive fails, all data will be lost. Desktop units are also available. Videotapes are used for recording personal activities and television programming.

Electronic document formats include digitized images generated by document scanners and character-coded data or text produced by word processing software, e-mail systems, or other computer programs. Each format (physical, photographic, and electronic) has distinct attributes that can satisfy specific life-cycle and records retention requirements. However, no format is superior in every circumstance.

Optical disks are electronic image media. The high storage capacity and durability of optical disks allow the capture of text as well as graphic, photographic, and animation images for viewing on a computer screen. More commonly used types of optical media are listed in Figure 11.2 on page 344.

CD-ROM disks were developed first for audio storage, and they gradually evolved to data storage. Additional CD formats—CD-R (recordable) and CD-RW (rewritable)—have contributed more options for records and information management storage applications. CDs provide safe and reliable media that can store images for long periods of time, sometimes up to 100 years. CDs store databases, documents, directories, publications, and archival records that do not need alteration. CDs do not require special hardware or software to retrieve information; however, the storage capacity is limited. A standard CD can hold from 12,000 to 15,000 documents. Because CDs can be stored in a jukebox that can hold as many as 500 CDs, a larger number of documents can be stored on a large number of CDs.

What is the difference between a CD-R disk and a CD-RW disk?

RAID (redundant array of independent disks): a computer storage system containing many hard disk drives that send data to a computer over parallel paths

FIGURE 11.2 Optical Media

OPTICAL MEDIA

- Compact disk-read-only memory (CD-ROM) disk—A high-density digital disk storage medium that can be read only. It cannot be written on.
- Compact disk-recordable (CD-R) disk—A write-once optical disk.
- Compact disk-rewritable (CD-RW) disk—An erasable optical disk.
- Computer output to laser disk (COLD)—A technique for the transfer of computer-generated output to optical disk so that it can be viewed or printed without using the original program.
- Digital videodisk or digital versatile disk (DVD)—A read-only optical storage medium that stores approximately 130 minutes of full-motion video.
- Digital videodisk-recordable (DVD-R)—A recordable DVD.
- Digital videodisk-rewritable (DVD-RW)—A rewritable DVD.
- Optical card—A small electronic device about the size of a credit card that contains electronic memory and possibly an imbedded integrated circuit. This card is also known as an *optical memory card*, an *optical digital data card*, and a *smart card*.

COLD technology combines the capabilities of scanning documents created on another system and linking them to COLD documents (computer-created records saved by laser to optical disks). This combination of digital image scanning of physical documents, optical disk storage, and search capabilities of database software facilitates development of a computerized records storage and retrieval system for both active and long-term records. Full-motion video requires huge amounts of storage space. One solution to the high-storage capacity needed for multimedia is the digital videodisk (DVD). DVDs are also used in long-term data storage applications. DVD-R and DVD-RW media have extended their use to include data storage.

Smart cards may be used for secure access to buildings, for student IDs, and to store automobile service histories. They may be preloaded with specific currency amounts for use in ATMs and debit card purchases. When that amount is depleted, the card may be reloaded with the same or a larger amount. Optical memory cards may be used to store medical images and personal medical records; for access/entry cards; and for immigrant ID cards.

Removable Data Storage Devices

When fixed magnetic disks become full, they must be replaced with higher capacity drives or additional hard drives must be purchased. Using hard drives with removable media or using external hard drives has several advantages:

What are optical memory cards used for?

- Removable media can be stored in locked cabinets, vaults, or other secure locations to prevent unauthorized access.
- Removable disks can be used in other computer systems with compatible drives.
- Removable disks can be used to back up conventional hard drives and to restore electronic records if a hard drive fails.
- Removable hard disks can be used with an identical device if a removable hard drive fails.

Small portable drives, such as flash drives, make carrying data for use on multiple computers very easy. A **flash drive** is a read/write device that attaches to a computer and is usable as a standard hard drive. The drive consists of a small printed circuit board encased in a hard plastic covering. These devices are provided by a variety of vendors and have various names. Storage capacities range from 128 MB to 64 GB. They may be carried in pockets, attached to key rings, or worn around the neck on a lanyard (cord). A flash drive can be plugged into a USB port directly, or it can be plugged into a hub that is plugged into a USB port. A USB hub allows two or more USB devices to be plugged in via one USB computer port. A desktop docking station is available for some flash drives. Fingerprint recognition for security is available on some flash drive models as well. Flash drives may be used to carry files to another computer for working in another location or to back up computer data. With sufficient memory, a flash drive can be used to back up an entire microcomputer hard drive.

Data Input

Computer data entry most often is done through a computer keyboard. However, other input devices such as scanners, bar codes, optical character recognition (OCR), fax machines, and various handheld devices are also used. Remember that hard disks and other removable media are also input devices. With voice-recognition software and a microphone, users may enter data by



PRNewsFoto/Imation Corp/AP Photo

External hard drives and flash drives are popular storage devices.

What are the advantages of using removable disks?

Why use a flash drive instead of another type of external hard drive?

.....

flash drive: a read/write external storage device that attaches to a computer via a USB port and consists of a small printed circuit board encased in a hard plastic covering

How does a scanner enter data?

dictating letters, memos, messages, or other documents into a computer or by speaking commands to a computer. This technology is especially helpful to individuals who do not have full use of their hands.

A scanner is a device that converts an image (text, graphic, or photograph) of a document into electronic form for processing and storage. A scanner passes light over a document or object and converts it to dark and light dots that become digital code. Scanners may be handheld devices that are passed over an item to be entered or desktop models that scan a document from a flat surface. A desktop document scanner used in RIM applications has an automatic document feeder, which will allow a stack of paper to be placed into a tray and automatically brought into the scanner one page at a time. Scanners that do not have an automatic document feeder are designed

for graphics and require each page to be manually placed onto the scanner.

Bar code and radio frequency identification (RFID) technology, discussed in Chapters 6 and 7, are also types of scanned data entry. *Bar code* is a coding system consisting of vertical lines or bars set in a predetermined pattern that, when read by an optical reader, can be converted into machine-readable language. In records and information management, bar codes and RFID tags are used for tracking locations of documents, files, or boxes of records. With bar code software, users can print labels from a computer or from a dedi-

cated bar code printer. Bar code labels are placed onto each document or onto the first page of a multipage document that is scanned into a computer. With appropriate software, scanned documents can be separated and assigned to folders much faster than can be done manually. Information assigned to the bar codes can be used for indexing, tracking, and retrieval. Bar codes and RFID tags are also used to check out items in libraries, to record items shipped and received, and to record items stocked on shelves in supermarkets. A bar code reader is a photoelectric scanner that translates bar code symbols into digital forms so that they can be read by a computer.

Optical character recognition (OCR) is machine-reading of printed or written characters through the use of light-sensitive materials or devices. A device, such as a wand or scanner, is used to read special preprinted characters and to convert them into digital form for computer data entry. For example, a department store associate uses OCR scanning to enter prices from a product. A desktop fax machine scans an image and converts it into digital code enabling transmission to another fax machine or to a computer with an internal fax modem and fax software. A fax modem and fax software may be installed as part of a computer system to simulate a desktop fax machine's input and output.



A document feeder allows a scanner to feed a stack of pages to the scanner one page at a time.

optical character recognition (OCR): machine-reading of printed or written characters through the use of light-sensitive materials or devices

Mobile communication devices are handheld computers that may be controlled by a stylus-type pen or by user's fingers to select menu items. Users also use their thumbs to key messages on devices such as a Palm® Prē™. The Blackberry® and the Palm® Prē™ are examples of an integrated device that will handle telephone, wireless e-mail, Internet browser, and organizer functions. A personal digital assistant (PDA) is a similar handheld computer, but it does not have telephone capabilities. Several brands of PDAs are available. Devices that have both PDA features and telephone capabilities are commonly called *smartphones*.

Smartphones and other types of computers can use push technology to deliver e-mail and other data. **Push technology** automatically delivers e-mail and other data to a device based on the user's profile and request for specific data. Push technology allows a server to notify a computer or cell phone when an event occurs. A server is a service such as e-mail or twitter. The event is usually a new piece of content such as a tweet or a new e-mail. Pull technology has been the most common way of transferring content on the web. A computer or cell phone asks the server whether any new content is available, and the server then tells the computer or cell phone whether anything new is available—the user checks for new messages. E-mail program software that has a popup on a computer or cell phone when a new message arrives is an example of push technology.¹



Courtesy of Palm, Inc.

Smartphones combine the features of a PDA and a mobile phone.

What benefit does push technology provide?

Storage and Retrieval Procedures

As the use of electronic records has made electronic media a primary records storage media, storage and retrieval of these records has presented new concerns. Indexing electronic records is just as important as indexing physical records and for the same reason—to locate and retrieve records or information. For electronic records, retrieval is a records retention issue. Information redundancy, media compatibility and stability, and access are also related to records retention.

Indexing

The value of records increases when users are assured that they can be retrieved when needed, especially electronic records. Indexing provides the means to locate, group, retrieve, and manage documents. Having well-indexed

¹Jorge Escobar, "Push Technology Is the Core of the Real Time Web," July 7, 2009, <<http://jungleg.com/2009/07/07/push-technology-is-the-core-of-the-real-time-web/>> (accessed September 9, 2009).



push technology: technology that automatically delivers e-mail and other data to a device based on the user's profile and request for specific data

Why are electronic records indexed?

Why is indexing electronic records important?

How do computer directories, subdirectories, and files benefit electronic records retrieval?

records reduces financial and legal risks, improves standards compliance, and enhances productivity. Unless a good quality indexing system is built into a document or RIM computing application, the system will fail to perform one of its primary purposes—locating and retrieving the document-based information.

Indexing should not be taken lightly. Indexing involves planning and making decisions such as what to index and which index terms to use. In physical storage systems, indexing involves units and sometimes subjects. Indexing computer-based records is similar in that *units* become *fields* and *subjects* become *keywords*. Index fields can be used to categorize documents, to track creation or retention dates, or to enter subject matter. As in a physical system, indexing electronic records is essential for finding and retrieving the *right* information.

Indexing a computer record is the mental process of deciding the name or code by which it will be stored and retrieved. Coding the record is entering the record identifier code or filename for storage. Electronic files are often carelessly identified with abbreviations as filenames that only the record creator could interpret. The filename *brdmtgmins* illustrates a filename that means nothing to anyone other than the person creating it. *Board Meeting Minutes 9-15-09* would be a much clearer filename and would aid retrieval.

Full-text indexing provided by OCR-capable software eliminates the need for someone to read and manually index documents using keywords. OCR software “reads” a scanned document or page and indexes every word to track its location. Consequently, documents can be found using any word or phrase in them.

Physical records are located by looking into a particular file cabinet, into a certain drawer, and into a specific file folder. An electronic storage system should be able to recreate this same type of hierarchical system through multiple levels of nested folders, or directories and subdirectories, as described in Chapter 5, created in the electronic storage system. A well-designed and organized electronic records system makes electronic records retrieval easy.

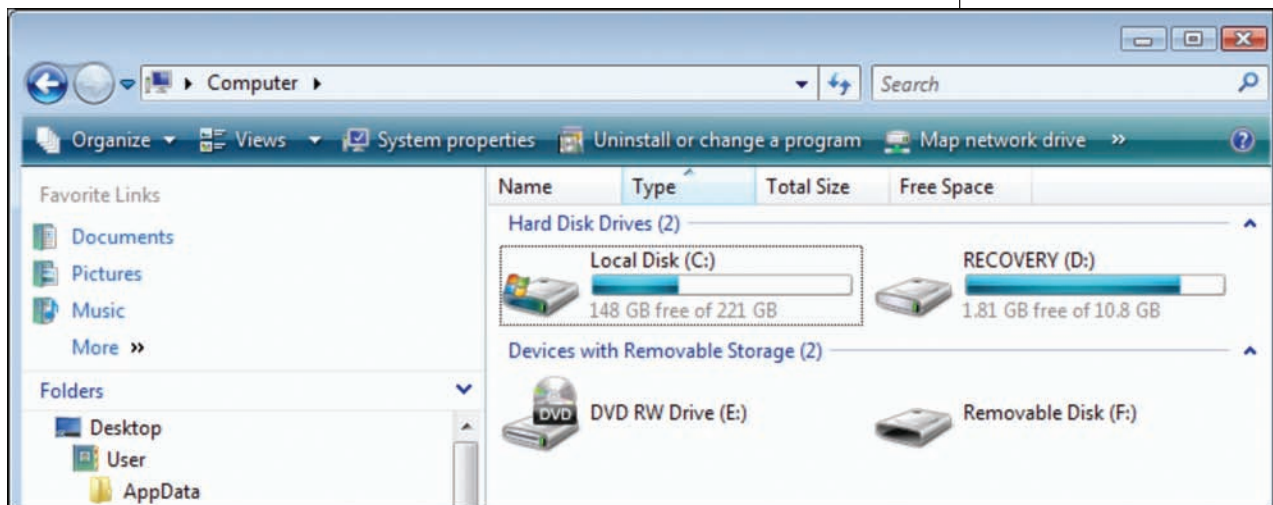
Retrieval

Electronic information is stored on a network hard disk, a user’s local hard disk, an optical disk, or on a removable drive. These files must be identified so that they can be easily retrieved, used, and dispositioned (retained or destroyed). Consequently, users need to identify the categories and subcategories to which the electronic information belongs. They also need to create matching directories and subdirectories on their computers where the information will be stored. Consistency in naming directories, subdirectories, and files is necessary for locating computer records. An index or log of directories, subdirectories, and filename categories should be kept up-to-date and accessible to employees creating and storing electronic records. The *Board Meeting Minutes 9-15-09* file discussed previously could be in a directory named *Board of Directors* with a subdirectory named *Minutes*. The filename could be the specific meeting date. The index or log would show all subdirectory names under the main directory—*Board of Directors*—and would give the uniform file extensions for files in that directory.

Operating system software, such as *Microsoft Windows*, automatically maintains a directory and filename index of files. Computer storage peripherals,

such as removable hard drives and CD, DVD, or optical disk drives, are often represented by labeled icons as shown in Figure 11.3. Storage peripherals and their fixed or removable media are computer-based equivalents of file cabinets. When a storage device is selected, a directory of the device's recording medium is displayed. The root directory is displayed first and provides an overview of the contents. The root directory typically contains subdirectories that are identified by folder icons. Large magnetic tape libraries use similar indexing and retrieval methods; however, files stored on large magnetic tape reels may be indexed by batches or groups of files. For example, one tape may be labeled *accounts receivable records 2008 – 2009*. An online index for offline records speeds retrieval considerably. Software can identify the location of a tape and guide a robotic arm to retrieve the tape in a tape library.

FIGURE 11.3 Removable Storage Devices Are Represented by Icons



A **data warehouse** is a collection of data designed to support management decision making. Data warehouses contain data that present a clear picture of business conditions at a single point in time. A data warehouse includes systems to extract data from operating systems and a warehouse database system that provides flexible access to the data. *Data warehousing*, or *data mining* as it is sometimes called, generally refers to combining many different databases across an entire organization. Records can be assembled from various applications, platforms (operating systems), and storage devices into formats for presentations to management for decision making or other business purposes. For example, executives may retrieve and assemble electronic records from several departments that will help them assess the profitability of their organization.

Magnetic tape cartridges, CDs, DVDs, or other removable data storage devices must be clearly labeled for accurate storage and retrieval. In centralized data processing facilities, much more information may be required on media labels. Information that should be included on these media labels is listed in Figure 11.4 on page 350. All this information will not fit onto small labels. Consequently, label contents may be limited to brief identifiers with more complete information recorded into a logbook.

Why is clear and comprehensive labeling of media important?

data warehouse: a collection of data designed to support management decision-making

RETENTION AND DISPOSITION

As discussed in Chapter 7 and earlier in this chapter, electronic records must be included on an organization's records retention schedule and destroyed according to the schedule. Records and information managers have long recognized the importance of records retention for visible records media such as physical and microfilm. The same controls need to be applied to electronic records as well.

Duplicate Records

In many organizations, users may be able to access the same information in machine-readable and human-readable formats. Storing duplicate copies of the same information is called *information redundancy*. Word processing documents may be created, revised, and edited through several versions before a final document is produced. Each version may be printed for review and corrections and retained to provide a history of development of the document versions. The computer files may also be backed up for protection and retention. Consequently, one document may be available in several versions and formats, which means redundant information and redundant recordkeeping. RIM is affected by space needs—file cabinet, floor space, and media space for electronic records. During the discovery phase of a lawsuit, electronic records, physical records, and microfilm records may be subject to review by opposing parties. Physical records may be routinely purged and destroyed, but electronic records may not be subject to the same controls. Records retention schedules and policies must apply to electronic records as well as to records in other formats.

What is information redundancy?

Media Compatibility and Stability

If you have worked with computers for a number of years, you have probably witnessed changes in electronic storage media. For example, new microcomputers no longer have floppy drives. They have CD or DVD drives and USB

FIGURE 11.4 Label Information—Electronic Records

LABEL INFORMATION FOR ELECTRONIC RECORDS	
Removable Data Storage Devices	Centralized Data Processing Facilities
1. Department, unit, or organization that created the records	1. Complete listing of files contained on the medium
2. Name of records series	2. Manufacture date for the medium
3. Inclusive dates, numeric series, or other identifying information	3. Security precautions and access restrictions
4. Type of computer on which records were created	4. Type of copy—working or storage
5. Software name and version used to create the records	5. Any special attributes of the medium

ports for removable storage devices. Records stored on 5.25-inch floppy disks that are in long-term storage may not be recoverable unless an organization has also stored an older working computer that has a compatible drive and software.

Software also can become obsolete or be discontinued, or an organization can change the software used across the organization. **Media compatibility** refers to how well the media and the equipment needed to access information stored on the media work together. Records created in an obsolete or discontinued software program may no longer be accessible. New software programs that provide backward compatibility with older versions help overcome some software upgrade problems. Current media may not be compatible with future equipment or software. Operating systems may also change, which will prevent access and retrieval. A *Microsoft Windows* operating system may be replaced by a *Linux*[®] operating system or a newer operating system. RIM managers must look toward the future when selecting storage media and equipment. They need to consider whether what they purchase in 2010 will be compatible with records stored in 2015.

Media stability refers to the length of time the media will maintain its original quality so that it can continue to be used. The useful life of paper and photographic media is longer than the retention periods for the information stored in these formats. The useful life of electronic media depends on the number of times the media is accessed. The stable life expectancy of electronic records is often shorter than the required retention period for the information stored on the media. The following practices help to preserve electronic records for longer periods.

- Magnetic and optical media should be inspected regularly. Samples may be inspected in large storage collections. Inspection should include a visual inspection as well as retrieval and playback of the information.
- Diskettes in inactive storage may be refreshed by using defragmentation or disk scanning software, providing that compatible computers are available.
- Magnetic tapes should undergo a slow unwind/rewind cycle (called *retensioning*) to obtain an evenly tensioned tape before they are stored to extend their useful lives.
- Other electronic records can be recopied onto new media at predetermined intervals to extend their lives for the required retention period. Periodic recopying is known as *renewing* the media.
- Copying can also be used to transfer information from deteriorating or obsolete media. Digitally-coded information can be copied an indefinite number of times without degrading the quality. However, video and audio recordings based on analog signals lose image and/or sound quality with copying. Recopying makes managing electronic records difficult and requires a future commitment of labor and resources with no certainty that the technology needed to recopy records onto new media will be available (i.e., media compatibility).
- **Migration** is the process of moving data from one electronic system to another, usually in upgrading hardware or software, without having to undergo a major conversion or re-inputting of data. Electronic records should be inspected and migrated regularly.

Why is media compatibility important?

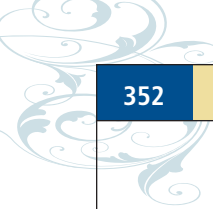
What happens when media are unstable?



media compatibility: how well the media and the equipment needed to access information stored on the media work together

media stability: the time the media will maintain its original quality so that it can continue to be used

migration: the process of moving data from one electronic system to another, usually in upgrading hardware and software, without having to undergo a major conversion or re-inputting data



What is cloud computing?

When is an e-mail message a record?

Access

Users can access physical records by going to storage areas and retrieving them. These records can be removed from cabinets and other storage containers for reference or taken to another work area for use (charged out). Electronic records, however, may be stored in remote locations where users cannot see the records or know what type of media is used.

Cloud computing is the use of remote servers to store and process data. “Clouds are large collections of easily usable and accessible virtualized resources such as hardware, development platforms, and/or services. E-mail and instant messaging were the first solutions offered in the cloud.” Some organizations are experimenting with document management in the cloud.² “Increasingly, consumers and businesses are storing e-mail, photos, medical records, and other data in the faraway data centers of companies and accessing the data via the Internet.”³

Remote workstations connected by a network or intranet allow many users to access data at the same time. Organizations connected to the Internet may allow customers and employees to access forms and other information. Customers may complete forms online and submit them to the organization much faster than by conventional means.

Internet or intranet access also provides the opportunity for creating new records such as online forms. These new records must be incorporated into the records and information management system and retention periods assigned. Freedom of access also raises safety and security concerns, which are discussed later in this chapter.

E-mail Records

E-mail messages, including text and instant messages, transmitted through an organization’s e-mail system are usually considered the organization’s property and, therefore, are subject to management under an organization’s RIM program.⁴ Tweets may also be considered organization property when sent and received at an organization’s offices and containing work-related information. E-mail and Internet use is monitored in many organizations. If e-mail messages contain information about programs, policies, decisions, and important transactions; document oral conversations or meetings during which policy was discussed or formulated; or document planning, discussion, or transaction of other business, they may have ongoing value. Consequently, records retention policies may apply. Users decide whether a message is a record or a nonrecord, based on the information in the message, and file it in appropriate directories and subdirectories.

An e-mail system may provide a way to arrange messages into folders, but it is not a records system. E-mail, text and instant messages, and tweets must be transferred to a proper recordkeeping system for long-term storage. Although e-mail messages may be copied and saved into a *Word* file, some of the

²Brent Gatewood, CRM, “Clouds on the Information Horizon: How to Avoid the Storm,” *Information Management*, Vol. 43 no. 4 (July/August 2009).

³Leslie Harris, “Perils in the Privacy Cloud,” September 15, 2009, <<http://abcnews.go.com/Technology/AheadoftheCurve/privacy-evaporates-computing-cloud/story?id=8573715>> (accessed September 16, 2009).

⁴David O. Stephens and Roderick C. Wallace, *Electronic Records Retention: New Strategies for Data Life Cycle Management* (Lenexa, KS: ARMA International, 2003), p. 25.

metadata will be lost. When e-mail messages are part of an organization's records system—paper or electronic—users may transfer e-mail to a subdirectory (folder) on a local hard drive, network drive, or other electronic storage medium. If RIM software is used to manage and identify information, appropriate metadata must be entered into the records management system when an e-mail message is placed into it. **Metadata** is data about data. Metadata describes how, when, and by whom a particular set of data (an e-mail message, for example) was collected, and how the data is formatted. It also includes sender and receiver information, as well as the date and time the message was sent. Metadata is essential for understanding information stored in data warehouses.



Courtesy of Fellowes, Inc.

Desktop media storage containers allow easy access to records.

Active Records Storage

Data is a valuable organizational resource, and users want and need to have access to that data from many locations, sometimes in different time zones. For effective storage management of electronic media, storage copies need to be differentiated from working copies. *Working copies* are intended for ongoing information processing and reference requirements. *Storage copies* are created to satisfy retention requirements. The most active or working copies of electronic records are usually stored where they can be quickly accessed. That location may be inside a computer on a hard drive or on CDs or DVDs that are stored nearby. CDs and DVDs may be stored in desktop storage boxes or towers or media pages. Optical disk cartridges may also be stored in towers.

What are working and storage copies?

metadata: data about data, such as that which describes how, when, and by whom a particular set of data was collected and formatted

Records Management in Action



Records Management Innovations

Cincinnati-based Proctor & Gamble's Corporate Records Manager, Jane Connerton, CRM, solved several records management problems with the development of a research lab notebook tracking database. The previous database was not user-friendly and required a long training period for new administrators. It did not allow the administrator to view all meta-data in the notebook record, and the annual inventory required the administrator to produce lists for each site and manually send each researcher an e-mail listing of his/her active notebooks to account for.

The in-house micrographics shop entered the same book number four times before the microfilming process was complete. The database automated much of both the notebook administration and the filming process, and it reduced training time to about two hours each for administrators and filmers. Additionally, end users can readily identify whether a notebook with material relevant to their current work is available so that rework is avoided. This development effort and the resulting database won the ARMA Award for Excellence in Innovation.

Inactive Records Storage and Archives

When records are transferred to inactive files or archives, systematic storage according to standard filing procedures apply. Storage copies, sometimes called *master copies*, of electronic records are usually recorded onto removable magnetic or optical media. These copies often contain inactive records that were transferred from hard drives, and they are seldom referenced. Storage copies may be used only for making additional working copies in the event that existing working copies are damaged. Storage copies also are used to recover and restore information if a system failure or other disaster occurs. The long-term quality of magnetic storage media has not been determined. Because magnetic records can be damaged by extreme temperature or proximity to magnetic charges, vital records should be stored on a more permanent medium for archival storage.

Optical disks have a predicted life expectancy of approximately 100 years. However, retrieving records from optical disk storage requires computer equipment and software, which can become obsolete and impact retrieval of records created on that hardware and software. Newer versions of some software and hardware accept earlier versions and save the records in the new version. However, media format or size may change, which will make locating the specific type of disk drive difficult. As a result, microfilm remains a popular medium for long-term storage of vital records. Although many media formats and equipment have been replaced or become obsolete, older media will often be located when a records inventory is conducted. Maintaining a current inventory of electronic records helps RIM managers develop effective retention schedules for those records. They are also better able to make data migration decisions—determining which records need to be migrated and to what media.

Why are master copies not used in daily operations?

Records and information managers should develop total life cycle retention periods. *Online retention* reflects the length of time the data should remain on primary storage devices, usually electronic media. The online retention period may be a few days, weeks, or months, but rarely more than a year. *Nearline retention* reflects the length of time data needs to remain on-site but offline in secondary storage devices, usually optical media. Nearline retention also is usually a short period of time, a few months or a year or so. *Offline retention* reflects the length of time the data needs to be offline, usually offsite, and usually on magnetic tapes. Retention periods should be assigned according to the records series stored on the tapes. A *total retention* period, required for most records retention schedules, reflects the length of time the data should remain in computer-processible form. After that time has expired, all data should be purged from all storage devices supporting the system.⁵

If electronic information is in directories and subdirectories, a software file manager can sort the files by date and identify records due for disposition (retain or destroy). Ways to dispose of electronic records are presented in Figure 11.5. To dispose of information on a magnetic disk, the file(s) must be deleted, and the space the files occupied on the disk must be overwritten to make recovering the information almost impossible. When users delete files, the space is marked for re-use, but the information is not physically removed or erased from a disk. With the help of commonly used utility programs, a user may restore deleted files that have not been overwritten.

FIGURE 11.5 Disposition of Electronic Records

DISPOSITION PROCEDURES FOR ELECTRONIC RECORDS

- Magnetic disks—Delete file(s) from the disk and overwrite the space with new information. Defragmentation and disk scanning software can overwrite areas of a hard disk or diskette that are no longer being used.
- Magnetic tapes—Mark files for deletion and overwrite the space. Usually, all files must be restored to a hard disk, the marked files deleted, and the remaining files written to the tape. Delete the files restored from the hard disk after they are written to the tape. Use defragmentation and disk scanning software to overwrite the disk.
- CD-ROM disks—Restore all files to a hard drive, delete selected files, write remaining files onto a new CD-ROM. Destroy original CD-ROM by shredding.
- CD-R, CD-RW disks—Restore all files to a hard drive, delete selected files, rewrite remaining files to the same disk.

⁵Ibid.

What are total life cycle retention periods?

How are files and information on magnetic disks erased?

RECORDS SAFETY AND SECURITY

Safeguarding records against intentional or unintentional destruction or damage and protecting records confidentiality is known as *records protection*. Protecting records, regardless of their media, and their proper use and control are essential. Networked computer records systems are vulnerable to outside intruders through Internet access. Safety and security of electronic records are discussed in this section.

Records Safety

Records safety refers to protecting records from physical hazards existing in an office environment such as electrical surges, physical damage to CDs and DVDs, high humidity, extreme heat or cold, and natural disasters. The procedures discussed in the following sections apply to controlling and protecting records from physical hazards.

Protective Measures

Users should adopt protective measures for hardware, software, and media. These measures include using surge protectors to protect computer equipment from changes (surges) in electrical voltage and installing locks to areas containing computer files and equipment to protect against misuse or theft.

Optical and magnetic media should not be stored in direct sunlight, placed near radiators, or exposed to heat sources. CD-R media that are not housed in cartridges may be damaged by exposure to light. They should be stored in containers that are stored in closed cabinets. High humidity, extreme heat or cold, exposure to light, electromagnetic sources, dust, smoke, and various storage conditions can damage electronic records; therefore, controlling temperature and humidity and other storage conditions helps protect these records. Dust and other contaminants can infiltrate high-density media housings and render portions of recorded information unreadable. Air conditioning is usually required to control temperature and humidity and to remove pollutants. Media storage areas should be cleaned regularly.

Adequate preparation for and protection from natural disasters, such as floods, fires, and earthquakes, should be provided for all records. Protection from natural disasters involves advance planning to select a second equipment site for emergency operation and for making duplicate copies of vital records for the alternate location. See Chapter 12 for more on disaster preparation and recovery.

Records Conversion and Backup

Records stored on magnetic media should be converted to hard copy, optical disks, or microforms for long-term storage. The life expectancy of magnetic records may be limited because of storage conditions. Controlled environmental conditions for long-term storage of magnetic tapes are very important. Vital records should not be on magnetic media for long-term storage.

Backing up computer files and storing the copies in fireproof cabinets or in an offsite location help to protect against the loss of files. Duplicate electronic records made from back-up copies can be created quickly and inexpensively.

What is records safety?

Why are the right storage environmental conditions important for magnetic and optical media?

Why is backing up computer files important?

My Records



Reduce the Flow of Unsolicited Information

Is your e-mail in-box overflowing with unwanted offers? Are telemarketers calling at all hours?

While you may not be able to stop completely the ever-increasing flood of information, taking the following steps will help to reduce the volume of unwanted junk mail, spam, and telemarketing calls you receive:

Decrease Junk Mail

- Access the Direct Marketing Association's DMA Choice website to add your name and address to the residential file of customers who do not wish to receive promotional mail at home.
- When you enter a sweepstakes, fill out product warranty cards, or provide personal information on a form for any reason, write on the form: "Please do not sell my name or address."

Decrease Spam

- Do not fill out an online registration form (newsletters and mailing lists usually require them) unless the site's privacy policy clearly states that the data will not be shared with other people without your approval.
- Read any online form carefully before you transmit personal information through a

website. Some sites require you to deselect a check box to opt out of future communications with that particular company or related companies.

- Don't display your e-mail address in public forums such as newsgroup postings, chat rooms, or websites.
- Use two e-mail addresses—one for personal messages and one for newsgroups and chat rooms.
- Report unwanted spam e-mail to the Federal Trade Commission (FTC), and send a copy of the offending e-mail to your ISP (Internet service provider).

Stop Unwanted Telemarketing Calls

- Register your telephone number(s) on the National Do-Not-Call Registry to block calls permanently. Remember to include your cell phone number. A link to this site is provided on the website for this textbook.
- If you receive an unwanted telemarketer call, interrupt the caller and say, "Please permanently remove my number from your calling list." If the same company calls again, they are violating the law.

Protection Against Computer Viruses

Taking measures to prevent computer viruses from destroying data is an essential part of records security. A virus is a computer program that replicates itself into other programs that are shared among systems with the intention of causing damage. The opportunity for the introduction of viruses increases when computer users access electronic records from remote locations. Viruses transmitted over the Internet and through e-mail can be particularly destructive. Safety measures involve (a) using virus detection software programs regularly, (b) making back-up copies of new software programs onto large storage capacity CD-R or CD-RW disks before installing them onto a computer, and (c) making daily back-up copies of data entered. Some removable hard drives will automatically make daily data backups. Using virus

What can computer users do to prevent viruses from entering their computers via e-mail?

software that scans for viruses in e-mail and on data disks from outside sources helps eliminate data damage from viruses. Keeping the virus software updated is essential.

Records Security

Records security refers to protecting records from unauthorized access. Electronic transmission and distribution of records require special security precautions. With wide use of the Internet to conduct business, organizations take careful measures to provide records security and protection from unauthorized access to the information stored on electronic media. Generally accepted safety measures are discussed in the following sections.

Security Policies and Checks


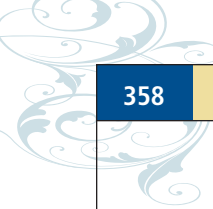
Implementing a security policy helps to ensure safe, reliable operation of the records system. Such a policy is based on a detailed study of equipment used, records functions performed, information contained in the principal records, employees having access to the records, and current security devices. In many organizations, employees have access only to selected computer drives. These drives may be their shared department drive and their own working drive. Employees must have usernames and passwords to access their computers before they can access files on their personal drive or their department's shared drive.

Conducting security checks and, when necessary, bonding personnel who use hardware and software in the system help ensure the safety of records. The electronic records security policy should include close supervision of records work plus holding employees personally accountable for the proper maintenance of company equipment and information.

Security Measures

As a deterrent to crime, some firms have a security warning programmed into their computers for display onto terminal screens. An effective method of controlling access to a computer room is a card reader/combination lock system into which employees must insert their access cards and key in a personal code before the door will open. Other security systems scan and save the scan of each person's eyes, which is matched each time the same person tries to enter a secure area. Voice prints are also used in a similar manner. Individuals may pass their hands under scanners or place their thumbs on a thumb pad to gain approval for access to secure areas.

A **firewall** is a combination hardware and software buffer that many organizations place between their internal networks and the Internet. A firewall allows only specific kinds of messages from the Internet to flow in and out of the internal network. This limitation protects the internal network from intruders or hackers who might try to use the Internet to break into these systems. To prevent spyware from being secretly installed onto computers,



What is a shared computer drive?



firewall: a combination hardware and software buffer that many organizations place between their internal network and the Internet to protect the internal network from outside intrusion



Photographer's Choice/Getty Images

Security systems limit access to areas that contain sensitive data.

many companies incorporate spy detection software as part of their system security measures.

Data Protection

To protect data stored on disks or tapes against unauthorized use, safeguards such as passwords, digital signatures, encryption, or call-back may be used.

- A password is a string of characters known to the computer system and a user, who must specify it to gain access to the system. Passwords alone are not sufficient protection because they can be stolen or guessed. You should not use a real word or variation of your name, your pets' or children's names, your date of birth, a word that can be found in a dictionary, or a word that might logically be guessed such as a pet's or a child's name. The best password is a mix of letters, numbers, and punctuation marks in a random sequence of at least eight characters. Some security experts recommend developing a meaningful sentence and selecting a combination of letter, numbers, and symbols to represent that sentence in one word—your password.
- A digital signature, electronic signature, or *e-signature*, consists of a string of characters and numbers added as a code on electronic documents being transmitted by computer. The receiving computer's special software performs a mathematical operation on the character string to verify its validity. The Electronics Signature in Global and National Commerce Act, passed in 2000, sets national standards for electronic signatures and records and gives them the same legal validity as written contracts and documents. The law provides that no contract, signature, or record shall be denied legally binding status just because it is in electronic form. A contract must still be in a format capable of being retained and accurately reproduced. Credit card companies accept e-signatures at check-out counters in supermarkets, department stores, and other point-of-sale locations.

Why is being able to attach an electronic signature to a document a benefit in business transactions?

What types of data are usually encrypted before being sent over the Internet?

Why do e-mail users need to be cautious about what they write in e-mail on their employer's computers?

.....
encryption: the process of converting meaningful information into a numeric code that is only understood by the intended recipient of the information

- **Encryption** is a method of scrambling data in a predetermined manner at the sending point to protect confidential records. The destination computer decodes the data. Encryption is the process of converting meaningful information into a numeric code that is only understood by the intended recipient of the information. The receiving computer and Internet browser understand the mathematical formulas that turn the information into numeric code and back again into meaningful information. *International-Grade encryption*, also called *40-bit encryption*, uses billions of possible keys to secure information. *Domestic-Grade encryption*, also called *128-bit encryption*, uses thousands of times more key combinations than International-Grade encryption. The Internet is a major tool for commercial, proprietary, or sensitive information transmission, and data encryption is a vital security measure. With encryption, organizations can use EDI to transmit highly sensitive information. The most identity-sensitive data are encrypted first. Encrypting data backups that will be shipped offsite is also a priority.⁶
- A call-back system is a records protection procedure requiring an individual requesting data from a computer system to hang up after making a telephone request and wait for the computer to call back. In call-back systems, telephone numbers are checked by the computer before information is released to the requesting party to be sure that only authorized persons have access to the requested information.

Security for Faxed Documents

Transmitting documents by fax is one of the most widely used methods of correspondence between companies, medical offices, hospitals, and other types of organizations. Unfortunately, many workers in offices where medical documents and other confidential information are received fail to take necessary precautions to prevent unauthorized individuals from access to the fax machine. A fax machine dedicated for confidential material only and located in a less open area or calling ahead to alert the message receiver to watch for a fax provides some security.

E-mail Retention Policies

As mentioned previously, e-mail, text messages, and tweets may be obtained as evidence in lawsuits. Damaging evidence can often be found in messages that senders or receivers thought were deleted. Because the main computer makes daily backups of all files, including e-mail messages of any type, copies of messages sent and deleted may still be in the back-up file. In addition, software programs often make several copies of files and place them in different addresses. Computer forensic experts may be able to recover these files.

Security issues stemming from unsuspected file copies call for the following measures: (1) Implement an organization-wide e-mail policy that requires regular purging of files that are no longer active nor needed for future operations or historical records. (2) Follow the established e-mail policy and do

⁶Sandra Gittlen, "Stolen data? No biggie," *Network World*, June 27, 2005, <<http://www.networkworld.com/supp/2005/ndc4/062705-storage-encryption.html>> (accessed January 4, 2010).

Career Corner



Job Description for Records and Information Manager III

The following job description is an example of a career opportunity with a management services company.

General Information

The RIM III will serve as full-time supervisor and the technical lead for a staff of five Records Management Specialists (RMS) IIIs.

Responsibilities

- Provide supervision and oversight to the staff of five RMS IIIs to ensure that their assigned tasks are completed on time and in accordance with the requirements of the work assignment
- Provide recommendations and improvements to the records center
- Provide expertise in the development of filing systems, manuals, and file plans
- Assist with electronic records management system implementation
- Supervise the compilation of special collections in physical and electronic media

- Provide support for the development and implementation, as required, for disaster preparedness functions such as the Operations Continuation Plan and the Vital Records Plan

Education and Experience

- College degree and three years of records management experience, or a high school diploma and four years of records management experience
- Experience as team leader with supervisory skills
- Experience with records inventories; file maintenance and disposition plans; and archiving of inactive records
- Understanding and experience with developing disaster and vital records plans
- Knowledge of records tracking systems and scanning applications

not put anything into an e-mail message that you would not want repeated or used in court. (3) Protect your password. (4) Always log off the system properly so that no one else can create, change, or damage records on your computer.

IMAGE MEDIA

As you have already learned, records or documents may be stored in physical or electronic formats. Records may also be stored in photographic format. Photographic documents include conventional photographic negatives and medical X-rays. Microforms are photographic document storage media. **Microform** is the collective term for all microimages such as microfilm, microfiche, aperture cards, and microfilm jackets. Microfilm contains photographic reproductions of documents that are greatly reduced in size from the original on fine grain, high-resolution film that requires a reader for viewing. Because the photographic image is greatly reduced in size, it is



microform: the collective term for all microimages such as microfilm, microfiche, aperture cards, or microfilm jackets.

What makes a microform a unitized microform?

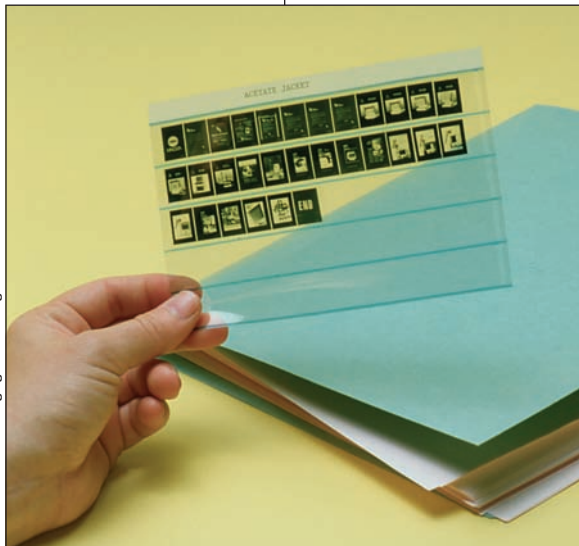
micrographics: the technology by which recorded information can be reduced to a microform, stored, and retrieved for reference and use

called a *microimage*, and it cannot be read without magnification. The miniaturized image of a document is called a *microrecord*. *Microfilming* is the process of photographing documents to reduce their size. Microforms offer compact storage for active and inactive phases of the records life cycle.

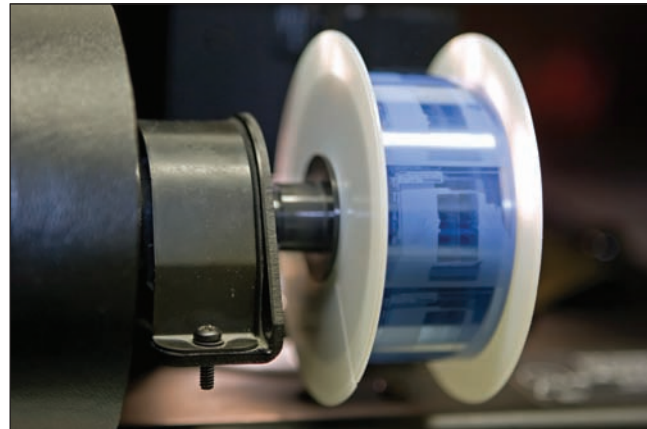
All microforms originate from roll microfilm. Microforms can be produced from physical documents, called *source documents*, or from computer-generated information. The most common microforms are roll film (open reels and cartridges) and unitized or flat microforms (microfiche, microfilm jackets, and aperture cards). These flat forms contain one unit of information such as one report or one document. Because roll film can hold a large number of images, unrelated documents may be stored on one roll. Therefore, microfilm on reels or cartridges are nonunitized microforms. The main advantage of using microforms is that they provide compact storage and, therefore, reduce storage space requirements.

Many organizations use microforms for long-term records storage. Microforms may be produced in an in-house micrographics department, or documents may be sent to an outside vendor for production.

Micrographics is the technology by which recorded information can be quickly reduced to a microform, stored conveniently, and then easily retrieved for reference and use. Micrographics technology miniaturizes recorded information. Reducing storage space requirements is often the main



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Roll microfilm and microfiche are popular choices for long-term records storage.

reason for implementing micrographics technology. Microform production equipment costs are the major implementation costs for microrecords systems. For long-term storage, equipment costs may be offset by savings in storage cost and retrieval efficiency. Types of microforms are listed in Figure 11.6 on page 364.

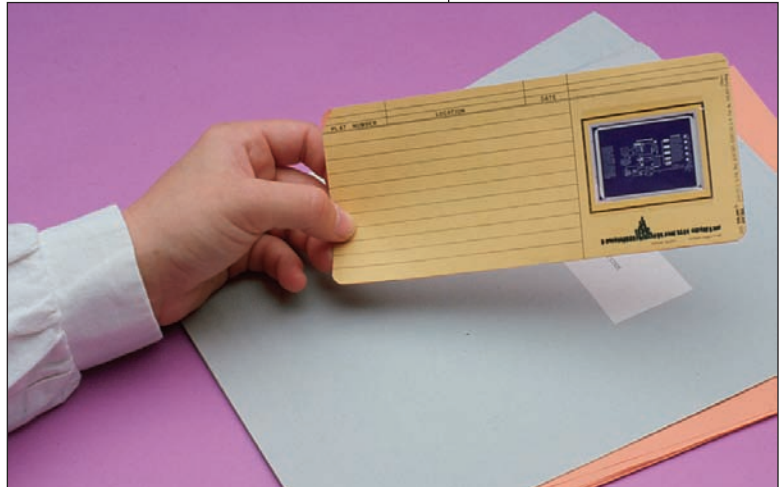
Important considerations for using microfilm include size and quality, which is determined by the resolution, density, reduction ratio, and magnification ratio of the microfilm. **Resolution** is a measure of the sharpness or fine detail of an image. Good resolution requires high-quality film and a camera with a good lens. High resolution means that a microimage is clear and easily readable when magnified on a reader with a viewing screen and a light source or when printed from the reader.

Density is the degree of optical opacity of a material that determines the amount of light that will pass through it or reflect from it. A densitometer is used to measure the contrast between the dark and light areas of microfilm. A high-quality microimage has a wide variation in the dark and light areas of the microfilm. *Line density* indicates the opacity of characters, lines, or other information in a microimage. *Background density* refers to the opacity of noninformation areas. The higher the contrast, the easier the images are to read. If too little difference exists between line and background densities, microimages may look faded. If background density is too high, fine lines may widen, and interline spaces may fill in. Uniform densities are important for microforms used in automated duplicators, enlarger/printers, and scanners. Contrast sharpness depends on the quality of the source document as well as the proper lighting during filming.

The **reduction ratio** is the relationship between the dimensions of the original or master and the corresponding dimensions of the photographed image. The ratio also is a measure of the number of times a dimension of a document is reduced when photographed. For example, a reduction ratio expressed as 1:24 (or 24 \times) means that the image is 1/24th the size of the original record, both horizontally and vertically.

Reduction ratios range from 5 \times to 2400 \times , with 24 \times being the most commonly used reduction. Higher reduction ratios result in smaller images; consequently, a greater number of images can be photographed on one square inch of microfilm. For example, 8,100 regular-size bank checks can be photographed on 100 feet of microfilm at 24 \times reduction; 16,600 checks, at 50 \times . Some banks use microfilm in 2,000-foot lengths. For easy retrieval, however, the film is cut into 100-foot or 215-foot lengths after developing.

A microimage must be enlarged or magnified for reading. Magnification is the opposite of reduction. It measures the relationship between a given



An aperture card has an opening designed as a carrier for film image(s).

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resolution: a measure of the sharpness or fine detail of an image

density: the degree of optical opacity of material that determines the amount of light that will pass through it or reflect from it

reduction ratio: the relationship between the dimensions of the original or master and the corresponding dimensions of the photographed image

FIGURE 11.6 Types of Microforms

MICROFORMS

- Roll microfilm—The most widely used and least expensive microform to create.
 - Records are placed in sequential order on the microfilm.
 - Roll microfilm is available in 16mm (millimeter), 35mm, and 105mm widths.
 - Microfilm in 16mm width is preferred for documents measuring up to 11" by 17".
 - Microfiche is created on 105mm microfilm.
 - Microfilm in 35mm width is primarily used for engineering drawings.
- Microfiche—A microform in the shape of a rectangular sheet having one or more microimages arranged in a grid pattern with a heading area across the top. The eye-readable heading strip is called a *header*; it does not require magnification. Also called simply *fiche* (pronounced as "feesh").
 - Microfiche is created from 105mm width microfilm cut into 148mm lengths.
 - Fiche is a unitized microform because it contains one unit of information such as a financial report. It is good for grouping information.
 - Records are arranged on the fiche by filming documents in a continuous series by rows.
 - The index is usually in the lower right corner.
- Microfilm jacket—A flat, transparent, plastic carrier with single or multiple film channels made to hold single or multiple film strips.
 - A jacket has one or more sleeves or channels for inserting and protecting strips of 16- or 35-mm microfilm.
 - Jackets can be updated by inserting new microfilm into a channel.
 - Jackets keep related records together.
- Aperture card—An electronic data processing card (7 3/8" by 3 1/4") with a rectangular hole (aperture) specifically designed as a carrier for a film image(s).
 - Aperture cards are used primarily for holding engineering drawings or blueprints on 35-mm microfilm.
 - A record is easily updated by removing an obsolete card and inserting a new one into the storage unit.
- Computer-output microform or microfilm (COM)—Computer output converted directly into microform without a paper printout as an intermediary. Using a tape-to-film photographic device called a *recorder*, computer records on magnetic tape are converted into a microimage on roll film or microfiche.
 - COM is used for long-term data retention.
 - COM is popular for archival storage.

linear dimension of an enlarged microimage as displayed on a screen or on a printed copy and the corresponding dimensions of the microimage itself. Magnification is expressed as 24×, 48×, and so on. Magnification can also be expressed as a ratio—1:24, 1:48, and so on. The **magnification ratio**, also called the *enlargement ratio*, is a method of describing the relationship between the size of an image and the original record when viewed on a microfilm reader screen. For example, a one-inch square microrecord that is magnified ten times (10×) appears in its enlarged form as ten square inches. An image filmed at 24× reduction must be magnified at 24× to produce an original-size copy.

Microfilming Procedures and Equipment

An image system is a combination of procedures and equipment that form an efficient unit for creating and using records in microform or electronic images. Figure 11.7 identifies records procedures used in the three stages of an image records system: preparation, processing, and use of records. The procedures and equipment used in an image system are described in the next section.

Document Preparation

Preparing source documents for microfilming is one of the most time-consuming and labor-intensive aspects of microfilming. Document preparation is entirely manual work necessary for preparing documents and placing them into proper sequence for filming. Correspondence and other documents must be removed from file cabinets or other containers and folders and stacked neatly in correct sequence. Documents must be checked carefully; all paper clips and staples removed; torn pages mended; and attachments

FIGURE 11.7 Stages of an Image System

STAGES OF AN IMAGE SYSTEM

- Preparation
 - Prepare records for imaging
- Processing
 - Index and code records
 - Microfilm or scan records
 - Process microfilm
 - Make duplicate copies for use
- Use
 - Store records
 - Retrieve records
 - View/read records
 - Print hard copy (optional)

.....

magnification ratio: the relationship between the size of an image and the original record when viewed on a microfilm reader screen

What is an index of microrecords?

What type of information is on a flash target?

What is the difference between a blip code and a bar code?

to records, such as envelopes, routing slips, and sticky notes, removed. Source documents are usually prepared for microfilming in batches so that an entire 100- or 215-foot roll can be filmed at one time.

Indexing Procedures

Recording information to serve as a location directory for microforms or electronic records is referred to as *indexing*. An index attaches identification data, called an *address*, to microrecords or electronic records. The term *index* refers to a list of microrecords on roll film, microfiche, microfilm jackets, or aperture cards. An index may be handwritten or created with a computer. Microrecord indexing may be prepared manually during filming or after filming.

To index manually during filming, a computer operator stationed beside a microfilm camera assigns identifiers during filming. To index microrecords after filming, an operator places a roll of microfilm into a reader, views each image, and assigns an identifier by keying the identifier and sequential number of the microimage into a computer. Commonly used methods of indexing roll microfilm during filming include:

1. **Flash target indexing**—Specially prepared pages, called *flash targets*, are inserted between source documents during preparation. The targets precede and describe the microimages that follow them.
2. **Sequential frame numbering**—Sequential numbers are assigned to each frame within a 16mm or 35mm microfilm reel or a 16mm cartridge for manual retrieval of microimages. A two-part number identifies the roll and frame address of each microimage. For example, the number *24-1264* identifies a microimage recorded on reel or cartridge number 24 at frame number 1264. The next image would be numbered 24-1265.
3. **Blip coding**—An optical mark, usually rectangular, that is recorded onto microfilm below each image. The mark is used for counting images or frames automatically for specially designed retrieval devices. Blip coding is an automated variation of sequential frame numbering.
4. **Bar coding**—Bar codes help automate the indexing for scanned or microfilmed documents. Bar code labels may be affixed to documents before they are scanned or microfilmed. If the identifiers are sequential numbers, bar code labels can be computer-generated in order and printed on adhesive tape or printed on a bar code printer.

Unitized or flat microforms may be indexed in various ways. Microfiche, jackets, and aperture cards can be indexed by adding a title (header) at the top of the microform. The header usually includes the name of the document and microrecord sequence number. A bar code may also be affixed to the header. Microfiche and jackets may have a color band on the header for color coding. A color code represents a batch of records or an entire file and identifies a particular type of record. Color coding helps filers locate misfiled microrecords quickly.

Microfilming Equipment

Records are captured on microfilm through the use of microfilm cameras. The following cameras are commonly used.

1. **Rotary camera**—This microfilm camera uses rotating belts to carry documents through the camera. It can create images on 16-mm film at a speed of over 500 documents a minute. It is used primarily for filming large-volume records such as checks and invoices.
2. **Planetary camera**—A planetary camera uses 35-mm microfilm to film large engineering drawings, hardbound books, and other large documents. Documents are placed on a flat (plane) surface for filming. Because documents remain stationary during filming and are photographed one at a time, microfilming is slower with a planetary camera.
3. **Step-and-repeat camera**—This camera produces a series of separate images on 16- or 35-mm film, usually in orderly rows and columns, to produce microfiche. An updatable microfiche camera may be used to add new images to a previously prepared microfiche if any unexposed space is available on the fiche. This camera can also overprint existing images with *VOID* or *PAID* if desired.
4. **Aperture card camera**—This microfilm camera records miniaturized images of engineering drawings or other large source documents onto 35-mm film frames that are premounted into tabulating-size cards. The camera cards contain unexposed film that the camera uses to photograph a drawing or other source document. A source document is placed face-up onto a flat copyboard, and the camera takes a picture of it. After exposure, the camera card passes through a processing chamber and is delivered, fully developed, in about 1 minute.
5. **Filmer/Scanner**—This type of camera also operates as a scanner, and it is also called a *camera/scanner* or *scanner/filmer*. Source documents are microfilmed and digitized in one operation. Records can be scanned and filmed at the same time. This dual process creates an electronic image file as it produces microfilm for legal, archival, or historic purposes. Electronic images provide immediate access; the microfilm provides a record for long-term retention.

Why is using the right camera important when creating microforms?



Courtesy of Canon U.S.A

The Canon RF 550 DII rotary camera automatically feeds, films, and endorses up to 500 checks per minute.

Processing, Duplicating, and Production Equipment

After records are microfilmed, the film is processed. A microfilm processor applies heat and chemical treatments to make microimages visible for display, printing, or other purposes. Because exposed film is protected by a cover on the processor, a darkroom is not required.

Why are copies of microforms referred to as generations?

A master microform may be a camera-original microform produced directly from source documents or a copy that is one or more generations removed from the original. The term *generation* is used to indicate the relationship of a copy to the original source document. Camera-original microforms are first-generation microforms. Copies made from camera-original microforms are second-generation microforms. Copies of those copies are third-generation microforms, and so on. The master microform is the storage copy, and it is not circulated for use. Duplicates are used as working copies. Working copies may be distributed for use or serve as intermediate copies from which more copies will be produced. A duplicate may also be made by simultaneously exposing two rolls of film in the film unit of the camera.

The most frequently used method of making multiple copies of microforms is contact printing. This process makes a duplicate copy of microfilm by placing the emulsion side of the developed original film in contact with the emulsion side of the copy film and directing a light beam through the original image to the copy. Developing the copy film then produces a duplicate. *Print films* or *copy films* are used for microform duplication.

After 16-mm roll microfilm is processed and duplicated, it may be inserted into cartridges. A jacket viewer/scanner, viewer/filler, or a reader/filler is used to identify microimages for insertion into microfilm jackets. Magnified images are displayed onto a screen for examination and selection. When the last image to be inserted is displayed, the operator pushes a button or presses a lever that activates a knife. The knife cuts the film and pushes it into the jacket sleeve. This process is repeated until all sleeves or channels are filled. Aperture card mounters operate in a similar manner.

What benefits do commercial imaging service companies offer organizations?

Commercial Imaging Services

Because equipment costs necessary for in-house microfilming and processing can be quite high, commercial service bureaus provide a practical alternative. Such a service may offer microfilming, processing, duplicating, inspecting and testing, cartridge loading and labeling, and producing microfilm jackets and aperture cards. Micrographics service bureaus are often used for microform scanning and related services to integrate micrographics and electronic document imaging technologies. Commercial records storage centers often are used to store the master copies of vital records.

Why is creating working copies of microforms important?

Microform Storing, Retrieving, and Viewing

Microform storage copies are intended for retention purposes, and they are seldom referenced. Working copies are prepared for reference and use. Figure 11.8 on page 369 contains information about storing microforms.

Because working copies are used to conduct normal work activities, they are subjected to dust, skin oils, fingerprints, liquid spills, contamination by foreign materials, and exposure to excessive light and temperatures. Microfiche may be folded or torn. Microfilm in jackets or aperture cards may become separated from their carriers. Microfilm cartridges can crack or come apart. All microforms may be damaged by readers or display devices, printing

FIGURE 11.8 Microform Storage Recommendations**MICROFORM STORAGE RECOMMENDATIONS**

- Store storage and working microform copies in a vertical, upright position to prevent warping.
- Avoid stacking or subjecting microforms to pressure or weight.
- Use drawer cabinets for microform reels and cartridges.
- Store microfilm reels and cartridges in boxes on shelves or in drawer cabinets partitioned to fit the boxes.
- Store cartridges in carousels partitioned to fit the boxes.
- Store flat microforms in drawer cabinets, separated by tabbed dividers similar to guides in paper records files.
- Store flat microforms upright in open or closed trays for desktop use or place them into cabinets for security.
- Use microform storage panels with pockets to insert microfiche or microfilm jackets (optional). Multiple panels may be inserted into binders.

equipment, duplicators, scanners, or storage equipment. Additionally, environmental conditions can affect the long-term storage of microfilm and microforms. Environmental and other storage recommendations are listed in Figure 11.9 on page 370.

Microforms are duplicated so that one or more working copies are created for viewing, printing, or scanning. Special equipment is necessary for viewing, printing, and scanning microforms. Microforms must be removed from their storage containers before they can be viewed, printed, or scanned. For manual location of microforms on reels and cartridges, extra equipment is not required. Human-readable headers on flat microforms—microfiche, microfilm jackets, and aperture cards—make retrieval easy, and no special equipment is necessary for manual retrieval.

Computers may be used to locate and/or retrieve microforms as well as electronic records. Microforms may be stored onto cartridges and retrieved from a microfilm drive, called an *M drive*, in a microcomputer. Images are displayed onto a computer screen for viewing and selection for printing. Types of display devices for microforms include:

- Microform readers
- Viewers
- Projectors
- Reader/printers
- Microfilm drives (M drives)

Some reader/printers are capable of scanning microfilm or microfiche to a CD or USB flash drive. Other digital scanners can scan microfilm directly to a PC and a LAN printer. Combined with software, users can access stored microfilm from any location with an Internet connection.

Why is special equipment needed to read and print microforms?

FIGURE 11.9 Storage Environment Recommendations

STORAGE ENVIRONMENT RECOMMENDATIONS

1. Microform work areas—Prohibit eating, drinking, and smoking. Keep storage containers and equipment clean when using working copies.
2. Microrecord long-term retention storage conditions—Maintain a maximum temperature of 70 degrees Fahrenheit and relative humidity less than 50 percent. Assure constant temperatures between 50 and 70 degrees Fahrenheit and humidity between 20 and 40 percent. Any change in a 24-hr. period should not be greater than 10 degrees temperature or 5 degrees humidity.
3. Microfilm medium-term retention storage conditions—Maintain a maximum temperature no greater than 77 degrees Fahrenheit (preferably 70° F.). Relative humidity may range from 20 to 50 percent; variations not to exceed 10 percent a day.
4. Microform storage copies—Store in a fire-resistant room or vault. Use noncombustible and noncorrosive storage equipment. Vital microrecord storage copies may be stored in insulated cabinets within fire-resistant storage areas. Store duplicate vital microform copies in another location with the same storage conditions for the retention period for maximum protection.
5. Microfilm storage copies—Store in closed containers such as drawer cabinets or shelving units with doors to prevent damage by light. Store in boxes if open shelving or storage racks are used. Use an air-conditioning or air-filtration system that will remove abrasive particles and gaseous impurities that can harm the film.
6. Film reels, storage boxes, and paper enclosures or attachments—Use acid-free products because acids and other contaminants can cause destructive chemical reactions on film.
7. Deteriorating microforms—Remove from storage areas immediately. Replace with duplicate copies as soon as deterioration is noticed.
8. Microfilm safety and security—Use the same safety and security protection for storage copies as for other types of records. Limit access to authorized users. Safeguard procedures against damage or loss must be in place for storage or master copies.

IMAGE RECORDS RETENTION

Microfilm records in a carefully controlled environment can be protected and preserved for decades with estimates extending to hundreds of years. Optical disks, including CDs and DVDs, have useful life spans ranging from 10 to 100 years. To ensure their protection, the master copies of microfilm or electronic records are not circulated for use. Working copies are made for everyday use or for loan. In some organizations, optical disk records are transferred to new disks every ten years to assure their continued high-quality condition. The process of making new copies of a master record is called *remastering*, and it helps extend the life span of electronic records.

Other equipment can scan images and text files to microfilm for permanent archival storage. Documents are protected from technological changes that affect magnetic and optical storage media. Preserved digitized images can be allowed to expire, according to the retention schedule. Stored images can be redigitized and returned to the RIM system at any time if needed.⁷

Why is microfilm used for vital records storage?

⁷William Saffady, *Digital Document Management*, (Lenexa, KS: ARMA International, 2007).

Additional retention guidelines include:

- Records kept for three years or less may be kept as paper records or on magnetic or optical disk storage.
- Records kept from 7 to 15 years should be considered for optical disk storage or microfilming. These records can be kept accessible and stored in less space.
- Vital and archival records are often kept on microfilm because of its established durability.

Microfilm records remain in original text format, just reduced in size. Reading the text requires only projection and magnification. The standardized format of microfilm protects records from technological obsolescence that could occur over long periods with electronic records. In addition, long-standing federal law permits acceptance of microfilmed records as legal documents, admissible as evidence in a court of law. Multimedia storage containers are used to store electronic and image media.

SOFTWARE

RIM software has the capability to track and manage physical, electronic, and image records. Records centers or RIM departments usually have one software program that performs all necessary functions for the records system. However, some organizations may use a retention software program in addition to a RIM program. A software program may allow users to build a

What RIM functions can be done by using software?

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Storage containers keep electronic and image media organized.



Why is the software used for RIM so important?

representation of a microfilm storage unit on a computer screen and assign numbers or bar codes to microfilm boxes and other records storage boxes. Indexes for physical, electronic, and microfilm records may be stored online as part of the indexing function. Using software to manage electronic records provides much needed control. Controlling records through computer software increases rapid access to records and reduces the number of misplaced records. RIM software packages or customized software developed for an organization can be used to maintain records location files, charge-out files, and retention and destruction records. Less work is involved with charging out microimage records because microforms are copied for use.

Software programs may be single-function programs that manage only one aspect of the records management area such as offsite records storage. Other software options include integrated packages that address the total records management of an organization and modular programs that have separate modules for each records system function. Selection of appropriate software should be determined by several factors:

1. Complexity of the software and amount of training required for employee proficiency
2. Well-written training manuals that accompany the software
3. Reliability and experience of the vendor
4. Initial cost and future costs of the software and installation
5. Maintenance, backup, and support services offered

Chapter Review and Applications

KEY POINTS

- An electronic record is a record stored on electronic storage media that can be easily accessed or changed.
- An image record is a digital or photographic representation of a record on any medium such as microfilm or optical disk.
- Electronic media include magnetic and optical media.
- Electronic records must be included on an organization's records retention schedule and destroyed according to the schedule.
- Safeguarding records against intentional or unintentional destruction or damage and protecting records confidentiality are known as records protection.
- Microforms are photographic document storage media.
- RIM software may be used with electronic and image media.

TERMS

data warehouse	metadata
density	microform
electronic record	micrographics
encryption	migration
firewall	optical character recognition (OCR)
flash drive	optical media
image record	push technology
magnetic media	RAID
magnification ratio	reduction ratio
media compatibility	resolution
media stability	

REVIEW AND DISCUSS

1. Define *electronic record* and *image record* and describe the relationship between the two records media. (Obj. 1)
2. Define *magnetic media* and *optical media* and list three types of each media. (Obj. 2)
3. List two advantages of using removable data storage devices. (Obj. 2)

9. Prepare a list of three retention guidelines for long-term retention of image records. (Obj. 8)

10. List three functions typically served by RIM software used for electronic and image records. (Obj. 9)

APPLICATIONS

11-1 Electronic Records Retention Issues (Obj. 3)

You are an employee in an organization that recently organized its electronic records and installed RIM software. Your assignment is to identify issues that will affect retrieval and retention of the records.

1. Work with another student in your class to complete this application.
2. Prepare a list of issues that will affect access, retrieval, and long-term retention of the electronic records. These listed items should relate to one or more of the following: hardware, software, and/or procedures for records and information management.

11-2 Classify E-Mail Messages (Obj. 3)

E-mail messages may be considered records or nonrecords depending on their content and continuing value to an organization. Work with a classmate to complete the following:

1. Read the description of each e-mail message below and decide whether the message should be considered a record and stored in the records and information system.
2. Create a directory system for storing the e-mail files that you decide are records. For all these messages, create a meaningful filename for the record and a meaningful name for the directory where the record will be stored on a hard drive. Assume that your operating system allows the use of long filenames.

	Message Date	Message Contents
a.	11/04/20--	Message from a coworker indicating that a meeting at 9 a.m. next Friday is convenient for her
b.	11/04/20--	Message from your supervisor describing new procedures for handling purchase orders
c.	11/04/20--	Message from the vice president of Human Resources explaining the new medical savings plans available to all employees
d.	11/05/20--	Message from a coworker wishing you happy birthday
e.	11/05/20--	Message from a coworker providing routing instructions for a report you are preparing
f.	11/05/20--	Message from a vendor, Broadway Computer Services, Inc., listing details of a new contract being negotiated
g.	11/06/20--	Message from an outside contractor, Kingsmill Roofing, giving an estimate for completing a roofing project
h.	11/06/20--	Message from a coworker who is having trouble accessing online files and wonders whether you are having the same problem
i.	11/07/20--	Message to Broadway Computer Services, Inc., with questions regarding the contract being negotiated
j.	11/07/20--	Message from the Finance Department's administrative assistant summarizing decisions made at a department meeting and listing action items
k.	11/07/20--	Message to Monica Ortega, CPA, requesting a bid for the annual tax audit
l.	11/07/20--	Message from your supervisor informing all employees that she will be out of the office next Wednesday

11-3 Electronic and Image Records Database (Obj. 9)

Key index information into a database used for locating electronic and image records.

1. Locate the *Access* file *11-3 Records Index* in the data files. Copy the file to your working folder on a hard drive or removable storage device. Open the file.
2. Add the records shown below to the Electronic and Image Records Index database table. Two records are provided in the database table as examples. Record ID is an AutoNumber field and will be filled automatically by the software.
3. Use the Report Wizard to create a report based on the Electronic and Images Records Index table. Include all the fields in the report. Group data by the Media field and then by the Location field. Sort the records in ascending order by the Name field. Choose **Stepped** layout and **Landscape** orientation. Save the report as **Electronic and Image Records Index Report**.
4. Change the report margins or style, if needed, so the report fits on one page. Print the report.



Data File



Access Activity

11-4 Research Electronic and Image Records

Name	Record Date	Storage Date	Media	Location
Pradhan Bipin	05-24-2005	06-01-2006	Microfilm	Offsite
Santoro Renovation Drawing	07-23-2007	07-25-2008	Aperture Card	Active
Santoro Engineering Services	06-15-2007	06-17-2008	CD-ROM	Active
Tecumseh Engineering Services	05-14-2007	05-17-2008	CD-ROM	Active
FDC Technology	03-21-2008	04-01-2009	Microfiche	Offsite
Articles of Incorporation	11-15-1995	12-01-2005	Microfilm	Archives
Franz Auto Parts	12-26-2005	12-26-2005	Microfiche	Active
Tecumseh Renovation Drawing	08-20-2009	08-23-2009	Aperture Card	Active

Topics (Obj. 1)

Using the search engine of your choice, search the Internet for information on RAID and microforms.

1. Look for new information about RAID (redundant array of independent disks) that is not provided in this chapter. Write a brief paragraph about what you find.
2. Search for information about government agencies, libraries, or companies that use microforms. Write a brief paragraph about what these organizations store on microforms.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

For More Activities Go To:
www.cengage.com/officetech/read

The Records and Information Management Program

LEARNING OBJECTIVES

1. List components of a records and information management (RIM) program.
2. List responsibilities of a RIM program.
3. Define and describe the purpose of a records audit.
4. Explain the purpose of a records and information manual.
5. List guidelines for constructing a well-designed form.
6. Explain the phases of a disaster recovery plan.
7. Define and describe knowledge management.
8. Discuss the use of RIM software.
9. List actions taken to implement a retention schedule.

ON THE JOB

Diane K. Carlisle, CRM, Director, Professional Resources, ARMA International, understands that “records and information management standards serve a number of key roles. One of the most important benefits is that standards help to establish a baseline for expected performance and anticipated results. Standards are developed through a consensus-building process in which individuals representing various segments of the profession and different types of organizations participate. At the end of the process, the standard will represent the critical elements on which the differing viewpoints can agree—the most important elements of a process.”

“Organizations that implement and routinely follow standards-based records management programs bring consistency into their management of records. This consistency is a key benefit in day-to-day operations, as employees can spend more time using information than they have to spend finding the information in the first place. In addition, the consistency that records management programs bring helps the organization in legal and government investigatory matters. Organizations more easily meet their legal discovery obligations because records are easier to locate and preserve when the company establishes enterprise-wide records practices. Those practices are easier to defend if they are based on national and international standards. The RIM standards define requirements for documenting records management policies, practices, and activities.”

Printed with permission of Diane Carlisle.



Courtesy of Diane Carlisle

RIM PROGRAM COMPONENTS

A comprehensive RIM program includes responsibility for storing records on all media; records retention and destruction; compliance with laws and regulations, managing active and inactive records, and protecting vital records.¹ Other responsibilities may include micrographics technology (discussed in Chapter 11); the records audit; forms management; disaster prevention, preparation, and recovery; knowledge management; RIM software selection, implementation, and management; and RIM policy implementation and enforcement.

Records Storage

The records storage component of the RIM program is based on the record and information life cycle presented in Chapter 1. The storage method—alphabetic, subject, numeric, or geographic—is determined after a records inventory is completed. (See Chapter 7 for more on the records inventory.) Managing records storage includes not only making decisions about storage supplies and equipment for storing active and inactive records, but also managing the safety, security, and the environment for all stored records. Active records are consulted frequently soon after they are created. They are consulted less often as they age. As records become inactive, the concern becomes records preservation, space conservation, and reducing storage costs. Offsite storage and microfilming provide solutions that address these concerns.

Records Retention and Destruction

Determining which records should be kept, how long they should be kept, and how they are dispositioned (destroyed or stored permanently) are critical activities that are governed by approved policies and procedures. Records retention procedures and policies are valuable components of a comprehensive RIM program. Through these procedures and policies, an organization can assure that records are available for recommended periods.

A basic records control tool is the records retention schedule, which is a listing of an organization's records along with the stated time that categories of records must be kept. The records retention schedule is illustrated and discussed in Chapter 7.

Records Retention Schedule Development

After records inventory surveys completed by each department in an organization are collected, a tentative records retention schedule is prepared. Members of each department, members of the legal staff, and others involved with regulatory requirements review the schedule and verify suggested retention periods. When all parties agree, the records retention schedule is finalized and approved by senior management.

Records Retention Schedule Implementation

To assure that all organization members are aware of and adhere to records retention schedules, they are distributed to each department along with

What is the basis for records storage?

Why is having a records retention schedule important?

¹William Saffady, *Records and Information Management: Fundamentals of Professional Practice* (Lenexa, KS: ARMA International, 2004), p. 9.

detailed instructions for their use. Special meetings may be held to explain further if necessary.

Compliance

As stated previously in this text, various laws and regulations have an impact on records and information management. In addition to meeting records retention requirements to comply with local, state, and federal tax laws, the Health Insurance Portability and Accountability Act (HIPAA) of 1996, the Privacy Rule of 2001, and the Sarbanes-Oxley Act of 2002, also affect RIM. (See Chapter 1 for more details about these important acts.) Other regulations are specific to certain industries. As a consequence of the need to comply with appropriate laws and regulations, organizations must develop and implement policies and procedures to assure compliance.

Many organizations have also made adjustments to their policies and procedures to adhere to ISO 15489, the international records management standard. If an organization is involved in international trade, it must adhere to ISO 9000 guidelines. These guidelines specify how product development procedures are documented and how the records are maintained. Emphasis is placed on quality.

Active Records Management

Cost containment is an important element of managing active records—physical and electronic. One way to reduce costs is to implement an electronic document imaging system, also known as a *digital imaging system*.

Cost Containment

Managing the volume of physical and electronic records, as pointed out in Chapters 1 and 7, carries with it tremendous costs. These costs include salaries, storage space, equipment, and supplies.

Labor costs represent the largest percentage of total RIM costs. This cost factor includes managerial, supervisory, and operating personnel salaries along with employee benefits such as retirement plans, Social Security



by nicholas/iStockphoto.com

Salaries for records management personnel are a large part of the RIM costs for an organization.

What is the meaning of compliance?

contributions, and various types of insurance. Installing automated RIM systems can help reduce long-term labor costs. Electronic media costs have declined, but storage and management costs have increased. A clearly defined and implemented records retention policy prevents an organization from retaining unnecessary data that keeps storage costs high.

Steps commonly taken to reduce costs include:


1. Identify and assign cost figures to the four main cost categories—salaries, space, equipment, and supplies. Include hourly rates for all records personnel, cost of equipment, and cost of the space that equipment occupies. Then, calculate the costs of maintaining typical files (such as five-drawer vertical file cabinets) and use this information in cost-reduction studies.
2. Compare labor costs for storing and retrieving records in-house and using offsite or commercial storage facilities. Evaluate the cost of picking up records, storing records, using a pick list to retrieve records, delivering records to the company, and destroying records. Include costs incurred by emergency records requests and fast delivery.

Costs of equipment, space, salaries, and supplies can be controlled by (1) eliminating unnecessary records, (2) carefully supervising the use of equipment and supplies, and (3) selecting equipment and media that require less space and less time to operate.

Electronic Document Imaging

Organizations and institutions have been using a form of electronic document imaging for several years as a way to reduce and in some cases eliminate copying and postage costs. For example, a letter may be created in a word processing program, an electronic signature is inserted into the signature block, and the letter is printed onto company letterhead. The letter is then scanned into PDF (portable document format) and sent to the intended receiver as an e-mail attachment. With a networked combination printer/copier/scanner that has all company e-mail addresses entered into its directory, this letter could be sent via e-mail to several people inside the company directly from the device after it is scanned. The extra step of attaching the letter to an e-mail is not necessary. The filename may be “document.pdf,” which does not enlighten receivers as to its contents. They need to open the file to see the document they have received. Software programs that allow users to convert word processing documents to PDF format without scanning are available. *Adobe® Acrobat®*, as shown in Figure 12.1, is a popular program for creating PDF files.

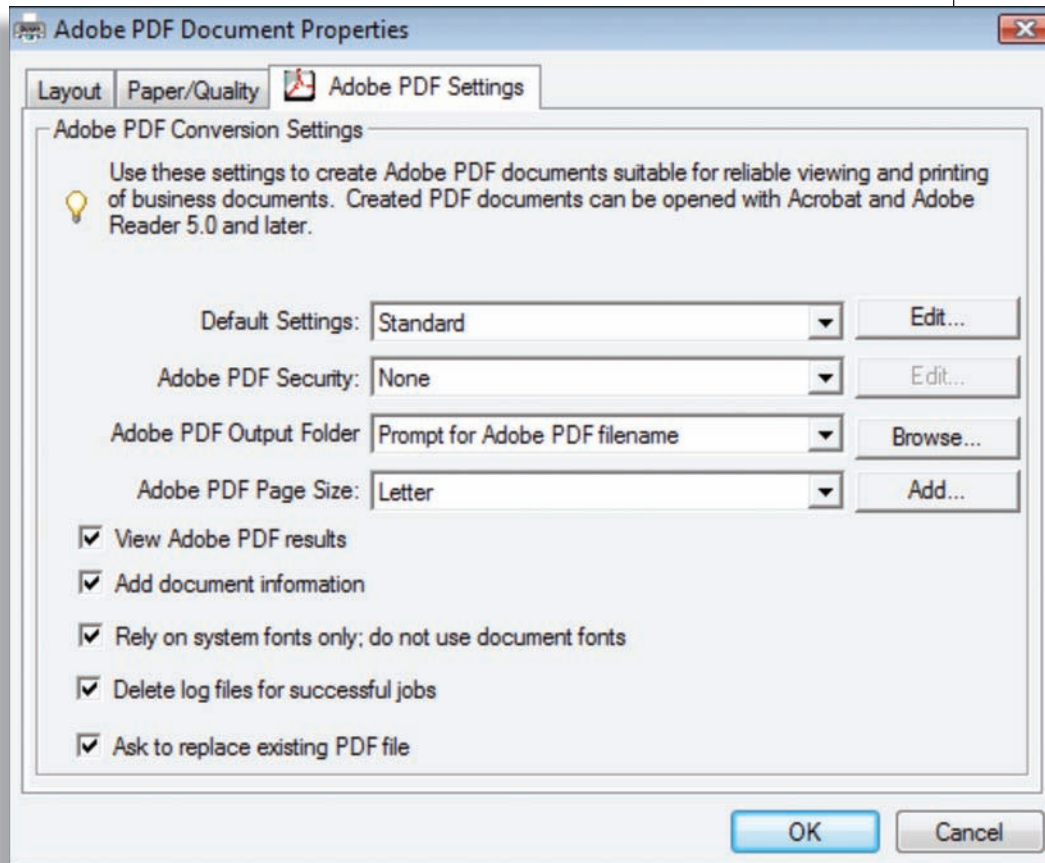
Electronic document imaging systems are designed to be computerized replacements for physical or micrographics systems. Electronic document images are usually produced by scanning. Microfilm, microfiche, and aperture card document images, in addition to physical documents, may be scanned for conversion to electronic images.²



How can signed letters be transmitted via e-mail?

²Ibid, p. 181.

FIGURE 12.1 Adobe Acrobat can Create PDF Files from Word Processing and Other Types of Documents.



Before installing and implementing an electronic document imaging system, the organization needs to conduct a thorough analysis and evaluation of all aspects of their business operations to assure compatibility with current systems and operations. Areas that should be analyzed and evaluated include:

- Inventory of existing records
- Network support
- Costs and benefits
- Projected growth in number of records
- Records retention
- Legal requirements

The application selected for the digital imaging system needs to be compatible with the existing automated systems and to communicate with other systems outside the organization if required. The system administrator needs to be knowledgeable of the technology and fully understand how the system will interact with other systems. The technical process for converting records to a digitized format should be carefully and thoroughly documented. An operations manual is recommended. Careful indexing is essential for accessing electronic records. Classifying and indexing records scanned into the system need to be clearly explained in the system manual.

Records Retention and Migration

Retention periods established during preparation of the organization's records retention schedule will still apply when physical records are converted to electronic or digital records. Stored digital records should still be maintained in accordance with the retention schedule and disposed of as part of a compliant records and information management program. Storage media are most often hard drives and optical disks. As discussed in Chapter 11, media stability and life expectancy limits require migration to new media to assure that records can be accessed throughout the full term of their retention periods. Hardware and software that conform to open system architecture will facilitate migration and software upgrades more easily than proprietary systems. Obsolescence is a part of technology, and organizations need to keep up-to-date with changes and improvements. New applications should be backward compatible with existing applications.

Legal Issues

When making the decision to convert to an electronic or digital document imaging system, laws and regulations concerning acceptance of digital or electronic records as evidence in court need to be thoroughly researched. All records actions and the technical process of converting the records should be documented to assure that the information and the system generating it satisfy the rules of evidence.

In some cases, the system will be required to expunge (erase all traces of) images and their related index entries. Consequently, the potential for expungement orders must be considered when planning the conversion and the application. Another consideration when selecting a system is that confidential portions of documents or indexes may occasionally need to be masked or hidden (redacted) from public inspection. Will the system be capable of allowing redaction?

Media Handling and Storage

Disk labeling is essential for accessing records stored on optical disks and removable hard disks, especially if records and their indexes are stored on different media. Security copies need to be appropriately labeled with company name, system and hardware used, manufacture date for the media (for retention), and any access restrictions. The operations manual should include details needed to access backup disks and other media. Environmental conditions required for the backup storage media, as discussed in Chapter 11, apply to media used for backing up the digital document image records.³

Advantages of Converting to Electronic Images

Electronic document imaging is particularly suited to active records that will be consulted frequently and must be available immediately. Being able to identify and retrieve documents quickly for online display or printing is an

What legal issues may arise when using a digital document imaging system?

³Karen C. Handel, *Electronic Document Imaging Systems Guidelines*, <http://www.sos.ga.gov/archives/who_are_we/rims/publications/electronic_document_imaging_systems_guidelines/default.htm> (accessed 10/29/09).

important advantage of converting to an electronic document image system. Other advantages include:

- **Productivity improvement.** Rapid online searches reduce the amount of time required to access and retrieve requested records.
- **File integrity.** Images are not removed from files as in physical filing systems. Therefore, when properly indexed, electronic images cannot be lost or misfiled.
- **Remote access.** Images can be accessed from any location with a computer/network connection and at any time of the day or night.
- **Document security.** Access to electronic document images can be restricted to specific individuals, and access can be controlled by usernames, passwords, and other security measures. The number of physical documents retained in offices is reduced, which minimizes unauthorized access to sensitive data.
- **Fewer copies.** With online access for reference, fewer copies are needed, and images can be routed as e-mail attachments, or downloaded onto mobile devices for travel.⁴

Inactive Records Management

As you studied in Chapter 7, inactive records are not accessed frequently. Consequently, they do not need to be stored near filers and users. They may be stored in a records center—either in-house, offsite, or in a commercial records storage facility. By implementing and adhering to established retention and destruction schedules, inactive records that need to be available for long periods are maintained for the time periods dictated by the schedules.



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Electronic images can be accessed remotely by computer.

⁴Saffady, *Records and Information Management*, pp. 181–182.

What are mission-critical records?

What information does a records audit provide?



records audit: a periodic inspection to verify that an operation is in compliance with a records and information management program

Vital Records Protection

First mentioned in Chapter 1 and discussed again in Chapter 7, vital records are sometimes described as *mission-critical records* because their existence is critical for the continued operations and purposes of an organization. As a consequence of their importance, organizations implement special procedures for protecting their vital records. Vital records stored on microfilm or electronic media are subjected to specific environmental, security, and safety controls to assure their continued usefulness for as long as they are needed—permanently for some documents and records. As discussed later in this chapter, developing and implementing a disaster preparedness and prevention program is part of the protection plans for all stored records.

RIM PROGRAM RESPONSIBILITIES

A RIM program in a large organization encompasses a variety of responsibilities, including the records audit; preparation and distribution of the RIM manual; disaster preparedness, prevention, and recovery; knowledge management; RIM software selection, implementation, and management; and RIM policy implementation and enforcement. Each of these responsibilities is discussed in the following sections.

Records Audit

A **records audit** is a periodic inspection to verify that an operation is in compliance with a records and information management program. From the audit, managers look for ways to improve the program's performance. Large organizations may use their own trained staff to undertake such an audit, or they may hire outside consultants that have more experience and are likely more objective. Small firms often use outside auditors because they usually do not have a qualified records auditor on staff.

A records audit provides three kinds of information about a records and information management program:

1. **Information about current operations.** This information includes how well the objectives are being achieved, whether written policies and procedures are available and followed by all personnel, whether policies and procedures reflect the way documents are processed, and the scope of RIM activities and any problems associated with them.
2. **Analysis of the current system and its needs.** This analysis includes the layout of files, effectiveness and validity of policies and procedures, qualifications of the staff, uses of available equipment, active and inactive storage systems, costs of operating the system versus projected costs, and security measures for preserving and protecting records.
3. **Recommended solutions for improving the RIM program.** These solutions also include cost estimates for implementing the recommendations.

Software can be used to provide audit trails for tracking document use and, consequently, staff productivity. A system administrator can monitor

Career Corner



Job Description for Records Information Manager V

The following job description is an example of a supervisory position in records management.

General Information

The Records Information Manager requires extensive records management expertise and/or responsibility for successful operation of the records and scanning center. The appropriate level of Records Information Manager for a specific project will depend on the levels of staff being supervised, the level of records management expertise needed, and the complexity of the records management assignments.

Responsibilities

- Ensure accuracy in storage and ease of retrieval of all physical and electronic documents
- Be responsible for the successful operation of the records and scanning center, other ongoing information service functions, and supervising exempt and non-exempt staff
- Assist in planning and program development, analysis of records information management problems, and design of strategies and procedures to meet ongoing records information management needs
- Perform technical duties as required, including, but not limited to: records and information service, development of procedures, management of collections, records inventories or audits, organization and classification, indexing, and training staff in use

of records information management systems using approved off-the-shelf software

- Prepare budget and cost estimates, research equipment supply costs, procure materials and supplies, present records information management training, research new technologies, and other duties as required

Experience and Education

- Master's degree in a relevant field
- A minimum of five years' experience (three of which must be in a supervisory role) with records management, or a bachelor's degree in a relevant field and eight years' experience (three of which must be in a supervisory role) with records information management
- Must be knowledgeable of records information management principles and practices, organizational planning, project management, and have strong oral and written communication skills
- Ability to analyze and solve complex problems, organize, manage, and plan
- Ability to perform resource forecasting and develop budgets
- Ability to train others and to communicate effectively, patiently, and courteously with others
- Must be detail-oriented

electronic image and electronic records use by determining who has been viewing which documents, where, and when. Monitoring sensitive case documents that need to be kept secure, tracking staff productivity, and tracking search activity among public records can be done using audit logs generated by the software.

Why is a records and information manual needed?

Records and Information Manual

The most important reference for a RIM staff is a records and information manual. This manual contains all information necessary for managing a RIM program (e.g., policy statements; records retention schedules; indexing, coding, and filing procedures; vital records storage and access procedures; records inventory procedures; general policies and procedures; records and information manual distribution and use; administrative responsibilities; disaster prevention and recovery plan; and so on). The contents of a typical records and information manual are listed in Figure 12.2.

Especially useful in conducting the records audit, this manual is the official handbook of approved policies and procedures for operating the RIM program. Responsibility for various phases of the program, standard operating procedures, and aids for training employees are included in the manual. Some organizations may also include information about their knowledge management and ISO 9000 activities.

Forms Management

A RIM manager's responsibilities may include forms management to assure consistency in forms design and form number assignment across all

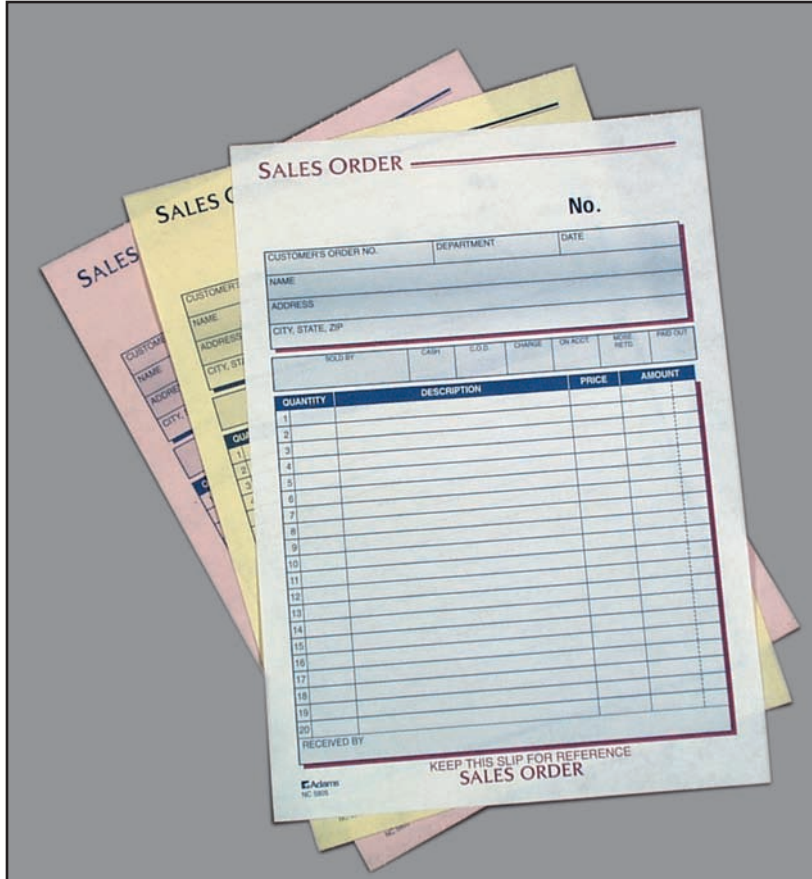
FIGURE 12.2 Records and Information Manual Contents

MAIN SECTIONS	CONTENTS
1. RIM program overview	Definition, goals, policies, personnel responsibilities, records retention schedules, disaster prevention, and recovery plan
2. Classification system	Records classifications—transaction and reference documents; internal and external records; important, useful, nonessential, and vital records—alphabetic, master, and relative indexes; subject records classification codes; retention and disposition codes
3. Storage procedures for records on all media	What records to store and when, preparing records for storage, classifying and coding, preparing cross-references, sorting, storing, restricting access, retrieving, charging-out, following up borrowed records, maintaining folders and containers
4. Records retention schedules	Short-term and long-term retention periods, retention schedules for specific departments, electronic records retention (if necessary), guidelines for retaining e-mail messages and website records
5. Storage locations	Department sites, central sites, offsite locations
6. Annual program evaluation or audit	Purposes and requirements for each program evaluation or audit
7. Records disposition	Disposition functions, implementing records retention schedules, packing records, labeling boxes, transferring records, retrieving inactive records, destroying inactive records
8. Disaster recovery plan	Preparation steps for potential disasters, plan activation, recovery and resumption of operations
9. RIM software	Summary of software capabilities and uses

departments in an organization. Forms management includes version control to assure that the latest revised form for a specific purpose is the one available for users. A **form** has a fixed arrangement of predetermined spaces designed for entering and extracting prescribed information or variable data on a physical or electronic document. Forms are efficient data-collection instruments when properly designed. A large amount of information can be collected from a one-page form. In large corporations, schools, universities, and other organizations that use a large number of forms, this responsibility may be delegated to a forms manager and staff who are part of the RIM program. When the majority of forms are available on an organization's website or its intranet, someone in IT may be responsible for form number assignment and for posting the forms to the Web or the intranet. Ideally, each department designs its own forms to meet its data-collection needs.

A form contains two types of data:

1. **Constant data** are data that are preprinted on a form. Constant data do not require rewriting each time the form is filled in. Examples of constant data include the word *Date* and the phrase *Pay to the order of* on a bank check, and the words *Quantity*, *Description*, *Price*, and *Amount* on an invoice.
2. **Variable data** are data that change each time a form is filled in. Examples of variable data on a bank check are the filled-in date, the payee's name, the amount of money, and the signature.



Preprinted forms speed creation of routine documents.

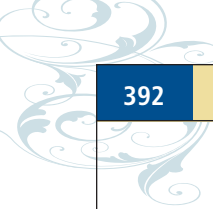

Who might be responsible for forms management?



form: a physical or electronic document with a fixed arrangement of predetermined spaces designed for entering and extracting prescribed information or variable data

constant data: data that do not change such as that printed on a form

variable data: data that change each time a form is completed

What are some commonly used single-copy forms?

Typical goals of forms management are to:

- **Determine the number and use of forms.** This information is obtained as a part of a records inventory.
- **Eliminate unnecessary forms.** This goal includes: (a) eliminating forms that overlap or duplicate each other by combining them, (b) eliminating forms that collect unused information, and (c) eliminating forms no longer needed.
- **Standardize form size, paper quality, typefaces, and design features such as company logos and form numbers.** Standardization results in lower form costs because one type and size of paper can be used throughout the organization.
- **Ensure efficient forms design.** Apply sound design principles (see Figure 12.3 on page 393).
- **Establish efficient, economical procedures for printing, storing, and distributing forms.** These procedures should include an inventory control program to allow sufficient time to revise forms before reordering them.
- **Determine which forms can be completed online.** Organizations that use online forms are able to reduce paper costs and save time usually spent in printing forms prepared in word processing programs, completing the forms, and submitting them to the appropriate departments or offices.

Types of Forms

Single-copy forms, such as telephone message forms, are used within one department for its own needs. Telephone message forms are also available in spiral booklets that create a copy when they are written by the person who answers the telephone. Multicopy forms, such as a four-copy purchase order, are used to transmit information outside the creating department. These pre-assembled sets of forms are glued together at the top for easy removal of each copy. Electronic forms can be downloaded onto a computer screen, filled out, and attached to an e-mail. Users can sign forms with an electronic signature or just type their names on provided signature lines, according to the Electronic Signature in Global and National Commerce Act (E-Sign) of 2000. Often, forms are created using office productivity software, such as *Microsoft Word* or *Microsoft Access*, and are easily revised or updated as data collection needs or procedures change. Unlike paper forms, electronic forms are not printed and stocked. Instead, they may be filled in online and either transmitted to another workstation or printed. If additional copies are needed, they are printed or photocopied.

Buying standard forms from an office supply store is less expensive than custom-designed forms as long as a standard form, such as a sales receipt form in a small pad format, meets the needs of an office. Standardized forms are used in large numbers because they are capable of handling large quantities of information in the least amount of time, effort, and space. As forms continue to be an efficient way of gathering and transmitting information, their design, use, cost, and storage require managerial approval and periodic evaluation. Forms management features of software can help users

FIGURE 12.3 Forms Design Guidelines

FORMS DESIGN GUIDELINES

- Eliminate excessive graphic features such as borders or drawings.
- Avoid requesting unnecessary or unlawful information.
 - Ask for age or date of birth, not both.
 - Avoid asking for personal information or information that could be used illegally such as religion or ethnicity.
- Eliminate horizontal lines when the form will be filled in on a computer.
- Give each form a name that indicates its function; “form” is not a necessary part of a form name—Application, not Application Form.
- Assign each form a sequential number within the creating department.
- Include the revision date with the form number—RM205 Rev. 05/10.
- Arrange items in the normal reading pattern of left to right and top to bottom.
- Arrange items in the same order in which data will be filled in or extracted.
- Use black ink to facilitate scanning or microfilming.
- Use a small font size such as 10 point for captions.
- Allow sufficient space for fill-ins.
- Use check boxes to save user time.
- Use box design style for constant data.

Name

- Place instructions for filling in at the top of the form.
- Place distribution and filing information at the bottom of the form.
- Key instructions consisting of several lines or paragraphs in lowercase and initial caps.

Source: Adapted from Marvin Jacobs and Linda I. Struder, *Forms Design II: The Course for Paper and Electronic Forms* (N. Olmstead, Ohio: Words and Pictures Publishing, 1991).

design or modify forms. Well-designed forms assist in maintaining an efficient and productive forms management program.

Forms Design

A forms designer needs to know: (1) how the form will be used; (2) the types of items to be filled in and their sequence; (3) the size, color, and weight of paper stock to be used; and (4) the amount of space needed for each fill-in item. The main objectives in forms design are to make the form efficient to fill in—manually or electronically, efficient to read and understand, and efficient to store and retrieve. These objectives can be met by applying the design guidelines shown in Figure 12.3. Ideally, in multicopy form sets, each receiving department copy is a different color. However,

What is the difference between an emergency and a disaster?

when forms are downloaded from websites, they are usually printed on white paper and photocopied for other departments. Forms design books and office suite software programs help office workers design professional-quality forms. Programs that have forms templates can be used to design commonly used forms such as invoices and purchase orders. An example of an invoice template is shown in Figure 12.4 on page 395. More information about forms design is available from the Business Forms Management Association (BFMA). Their website address is available on the website for this textbook.

Disaster Prevention, Preparedness, and Recovery

Organizations all over the world adopt plans for dealing with emergencies caused by weather disasters or other events as well as internal emergencies such as broken water pipes and small electrical fires. Some organizations have developed plans for terrorist attacks. **Disaster recovery plans** may also be referred to as *contingency plans*, *emergency plans*, or *disaster plans*. Whatever their title, these plans are developed and implemented to provide guidance for protecting records and information and continuing business operations when emergencies and disasters occur.

An emergency is an unforeseen event that calls for immediate action. Examples of an emergency include a broken water pipe, a bomb threat, or a sudden storm that requires actions but does not usually result in major loss or disruption of operations for an organization. A disaster is a sudden emergency event that results in major loss of resources or disruption of operations for an organization. Disasters can result in significant financial damage. Examples of disasters include a destructive fire, a flood causing major facility or product loss, or a tornado that causes major damage to one or more facilities.

Disaster prevention is the first phase of the disaster plan in which measures are taken to reduce the probability of loss resulting from an emergency. If an emergency occurs, these measures reduce the likelihood that they will turn into RIM disasters.⁵

Preparedness, the second phase, is simply being prepared to respond when an emergency occurs. Once an emergency is recognized, personnel know what to do and whom to call. Preparedness activities include developing a response team, developing and updating the plan, testing emergency systems, training employees, stocking emergency supplies, arranging for recovery vendors, and establishing hot sites (locations where a complete computer operation is set up and ready). Responding to an emergency event means activating resources necessary to protect the organization from loss. These activities occur before, during, or directly after an emergency and include contacting the response team, notifying appropriate authorities, securing facilities, and notifying RIM recovery vendors.

.....

disaster recovery plan:
a plan developed and implemented to provide guidance for protecting records and information and continuing business operations when emergencies and disasters occur

⁵Virginia A. Jones and Kris E. Keyes, *Emergency Management for Records and Information Management Programs* (Prairie Village, KS: ARMA International, 2001), p. 5.

FIGURE 12.4 Microsoft Excel Invoice Template

INVOICE

Your Company Name
Your Company Slogan

Street Address
 City, ST ZIP Code
 Phone (509) 555-0190 Fax (509) 555-0191

DATE: December 30, 2009
INVOICE # 100

Bill To: Name Company Name Street Address City, ST ZIP Code Phone	Ship To: Name Company Name Street Address City, ST ZIP Code Phone
--	--

Comments or Special Instructions:

SALESPERSON	P.O. NUMBER	SHIP DATE	SHIP VIA	F.O.B. POINT	TERMS
					Due on receipt

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
			\$ -
SUBTOTAL			\$ -
TAX RATE			8.60%
SALES TAX			-
SHIPPING & HANDLING			-
TOTAL			\$ -

Make all checks payable to **Your Company Name**
 If you have any questions concerning this invoice, contact Name, Phone Number, E-mail Address

THANK YOU FOR YOUR BUSINESS!

Recovery, the third phase, involves necessary activities to restore operations quickly, especially vital systems and processes that will keep producing products and services as well as retaining customers. These activities include dehumidifying records, restoring data onto computers, and returning vital records from offsite storage.⁶ A disaster recovery plan is a written and approved course of action to take when disaster strikes, ensuring an organization's ability to respond to an interruption in services by restoring critical business functions. The plan also details how records will be handled before and during a disaster and after in the recovery stage. Procedures for the immediate resumption of business operations after a disaster are included as

⁶Ibid., p. 6.

What activities take place in the recovery phase?

well. How an organization prepares for a disruption to its business determines how well, or if, it survives. Flooding from leaking roofs, leaking air conditioners, overflowing toilets, broken water mains, broken water pipes, overflowing sewer systems, and other water sources is a commonly occurring type of business interruption. Equipment outages and power outages are also common causes of interruption to business activity. Fire or explosion, earthquake, hurricane, and building outage resulting from construction or environmental problems are more serious causes of business interruption. Hurricanes, earthquakes, bombings in major cities, and terrorist attacks have alerted all businesses to the critical importance of a disaster recovery plan.

A disaster recovery plan is the basis for the following activities:

- Identifying preventive measures against records and information loss
- Initiating a company-wide response to disasters that threaten records and information
- Identifying response personnel and their roles
- Estimating cost of and various types and lengths of business disruptions
- Providing offsite storage for vital records and backup computer data storage
- Designating alternative sites for mission-critical tasks including computer-related operations
- Establishing recovery procedures for damaged records and information
- Establishing recovery priorities
- Identifying sources of supplies, equipment, and services for recovery and restoration of damaged records and media
- Testing the plan through mock disasters and making appropriate changes

What are some ways to protect electronic records?

Records can be lost and/or damaged when necessary precautions are not taken to protect them. Routine precautions are taken to protect electronic data such as controlling extremes in temperature and humidity, backing up valuable data, installing antivirus programs that detect and remove computer viruses, installing firewall programs to prevent unauthorized network intrusions, installing surge protectors to minimize damage caused by electrical variances, and removing magnetic items from around hard drives and removable drives. Discussions in Chapter 11 include procedures for controlling and protecting records from physical hazards, controlling environmental conditions necessary to ensure safe storage of all records, and protecting records from unauthorized access. The test of a sound disaster recovery plan—and any other precautionary procedures and safety measures taken to protect records and business operations—is whether it allows business activity to resume within a few days after a disaster. Such a plan includes not only a recovery of records but also a recovery of the work site, essential equipment, and the work force.

Knowledge Management

If an organization recognizes that it is a part of the knowledge economy and that it employs knowledge workers, it may be engaged in knowledge management activities to make effective use of its knowledge resources.

My Records



Records Safety in an Emergency

If the fire alarm went off in your home, which records would you decide to save? If you must be evacuated from your home, what records should you take with you?

The most important task in any emergency is for the personal safety of you and your family. The American Red Cross website contains many suggestions for coping with emergencies, including how to prepare for them.

Throughout this text, the My Records sections have given tips about managing your personal records. These tips are helpful to you in case of an emergency. The next step in safeguarding your records is to act on the tips.

- Identify your vital records and make certified copies (see Chapter 1 My Records).
- Document the original vital records (and you may have many) with addresses, phone numbers, contact people, and the location where you have stored these records offsite.
- Store the originals in a safety deposit box or similarly safe offsite location (see Chapter 6 My Records).
- Store the certified copies in a weather-proof container that you can take with you as you leave your house.
- Store the container that holds the copies with your personal survival kits stocked with food, water, medical supplies, and a change of clothing.
- Store the most recent computer backup in the same weather-proof container.
- Update the records in the storage container at least once a month.

Be prepared: Plan and then implement the plan.

Knowledge management is an interdisciplinary field that is concerned with systematic, effective management and utilization of an organization's knowledge resources. It encompasses creation, storage, retrieval, and distribution of an organization's knowledge—similar to records and information management.

A knowledge resource may be explicit knowledge or tacit knowledge. Explicit knowledge is contained in documents, databases, e-mail, or other records. Tacit knowledge is acquired through observation, practice, and imitation. It relies on experience, judgment, and intuition and is exhibited through employee skills or “know-how.”⁷ Employee knowledge, skills, and experience are valuable resources that, with proper management, can be fully utilized. The first step in managing knowledge is to conduct a knowledge inventory to determine what knowledge, skills, and experience employees have and where they are located. Once that information is collected, organized, and stored in a knowledge database, employees can be used in areas where their knowledge, skills, and experience are needed. Sometimes a department or



knowledge management: an interdisciplinary field concerned with systematic, effective management and utilization of an organization's knowledge resources

⁷William Saffady, *Knowledge Management: A Manager's Briefing* (Prairie Village, KS: ARMA International, 1998) p. 4.

What is the main objective for using RIM software?

Can retention schedules be developed with the aid of RIM software?

office borrows an employee from another department for a short time to perform specialized duties.

RIM Software

As discussed previously in this book, automating many of the manual processes in the RIM function is the main objective in choosing a software program. Small RIM departments and small organizations may use word processing or database software to prepare searchable databases or indexes. They may also select a vendor system for a specific function of their RIM program. Large organizations that have large volumes of records are more likely to use integrated software programs to administer several processes involved in the RIM function such as records retention. Some RIM software, such as Iron Mountain's *Accutrac*[®] provides organizations with more options for automating physical and electronic records and information management throughout the record life cycle. RIM software can manage records through active, inactive, archives, and destruction.

RIM software is often used to facilitate a compliant records and information management program by incorporating applicable laws and regulations that apply to an organization's records retention policy. Some features that may be provided with RIM software are listed below.

- Allows management of e-mail, images, and faxes, and other electronic documents in the same manner as physical records
- Automates the records retention process and assures implementation and compliance of an organization's records retention policy
- Allows tracking of patent, trademark, and copyright records
- Facilitates eDiscovery through the ability to search electronic and physical documents
- Provides statutory and regulatory research needed for preparing and updating records retention schedules
- Provides online backup if requested

Some RIM programs are organized into modules that provide different features. Organizations may purchase only those modules needed in their organizations.

Policy Implementation and Enforcement

A records retention program includes not only retention and destruction schedules but also policies for implementing those schedules. In organizations in which records retention policies have been established, the RIM manager is responsible for implementing the policies and assuring that all employees are complying with the policies. In order to achieve organization-wide implementation, each department may appoint RIM coordinators to assume responsibility for organizing and supervising retention activities in that department. Possible retention actions are listed in Figure 12.5.

FIGURE 12.5 Retention Implementation Actions**RETENTION SCHEDULE IMPLEMENTATION**

- Identify records series eligible for retention actions.
- Destroy records with elapsed retention periods.
- Transfer inactive paper or photographic records to offsite storage.
- Transfer inactive electronic records from hard drives to removable media for offline or offsite storage.
- Destroy physical copies after records are microfilmed or scanned.

Source: Adapted from William Saffady, *Records and Information Management: Fundamentals of Professional Practice* (Lenexa, KS: ARMA International, 2004), pp. 6–7.

Records coordinators will locate records eligible for retention actions and remove them from cabinets, shelves, and other containers. They will locate electronic records in hard drive directories and subdirectories. These manual activities are time-consuming and labor-intensive. To comply with specified retention periods, records in some records series will need to be subdivided by dates such as the end of a calendar or fiscal year.⁸


What types of policies are implemented and enforced as part of the RIM program?

Records Management in Action

**Records Retention Management Software**

Records retention management software was developed and became accessible through Proctor & Gamble's LAN to all its US employees in 2004. It was later rolled out globally with virtual and computer-based training. Initially administered through trained records representatives in each department or division, records retention management has evolved so that employees can access the program and navigate through it to manage their own records. Users now have the flexibility of determining when to conduct their annual records review, and it allows detailed reporting for completion percentages. This software development, coupled with the previous award of excellence, brought the RM department an ARMA Award of Excellence for Overall Program.

⁸David O. Stephens and Roderick C. Wallace, *Electronic Records Retention: New Strategies for Data Life Cycle Management* (Lenexa, KS: ARMA International, 2003) pp. 48–49.



Why are e-mail policies important?

Implementing and enforcing the e-mail policy may also be the RIM manager's responsibility. An e-mail policy may include the following statements:

- All e-mail is the property of the organization and is subject to management controls.
- Employees can assume no right to privacy regarding e-mail—the organization has the right to inspect all e-mail files.
- E-mail must be professional and must not include any derogatory remarks.
- E-mail will be retained for 30 days (or 60, or 90) after it is opened, read, and acted on. E-mail older than the specified retention period will be automatically purged (deleted).
- E-mail to be retained longer than the specified retention period needs to be printed and stored into an appropriate paper file, or migrated from the e-mail active files to inactive storage, and kept for the retention period indicated on the records retention schedule.
- Any e-mail related to current or pending litigation may not be destroyed without approval from the organization's Legal Department.
- Employees who violate these rules are subject to disciplinary action.⁹

RIM employees who have studied and gained experience in all topics discussed in *RECORDS MANAGEMENT*, Ninth Edition, can look forward to long, successful careers in the records and information management profession.

⁹David O. Stephens and Roderick C. Wallace, *Electronic Records Retention: New Strategies for Data Life Cycle Management* (Lenexa, KS: ARMA International, 2003) pp. 48-49.

Chapter Review and Applications

KEY POINTS

- RIM program components include records storage, records retention and destruction, compliance, active and inactive records management, and protecting vital records.
- Records storage is based on the record life cycle.
- The records retention schedule is a basic records control tool.
- Many organizations must manage their RIM function to comply with federal and state laws and regulations.
- The RIM program is responsible for conducting the records audit; preparing and distributing the records and information manual; and managing forms.
- Preparing a disaster recovery plan and implementing it in the event of a disaster is another responsibility of the RIM program.
- Knowledge management helps an organization fully use all skills and abilities of its employees.
- Integrated RIM software can automate many manual RIM processes and control records throughout their life cycle.
- RIM policy implementation and enforcement are important responsibilities of the RIM program.

TERMS

constant data
disaster recovery plan
form

knowledge management
records audit
variable data

REVIEW AND DISCUSS

1. List three elements of a comprehensive records and information management program. (Obj. 1)
2. List three responsibilities of the RIM program. (Obj. 2)
3. Define *records audit* and describe its purpose. (Obj. 3)

7. What is knowledge management? Describe explicit knowledge and implicit knowledge. (Obj. 7)
8. Discuss the use of RIM software. What is the main reason for using RIM software? (Obj. 8)
9. List three actions necessary for implementing a records retention schedule. (Obj. 9)

APPLICATIONS

12-1 Design an Information Form (Obj. 5)

Assume that you are a property manager for a condominium complex called Green Gables. You need to collect information about the automobiles owned by condo residents. Your goal is to keep track of all automobiles that regularly park in the condo parking lot by issuing preprinted parking stickers for each vehicle. Review the guidelines for creating forms in Figure 12.3 on page 393 to help you complete this application.

1. Design a form that will be printed and given to residents to complete by hand. Include the complex name and the form title **Automobile Registration** at the top of the page.
2. Provide brief instructions for completing the form and indicate that the completed form should be returned to the management office. Indicate that residents should complete and submit a form for each vehicle that will be parked in the condo complex parking lot. Remind residents to submit new forms if they change vehicles.
3. Provide space on the form for residents to write the following information:
 - Current Date
 - Owner Name
 - Unit No.
 - Telephone No.
 - Automobile Make
 - Automobile Model
 - Automobile Color
 - License Plate No.
 - State of Registration
4. Include a space for the parking sticker number to be recorded and indicate that the number will be assigned by the manager.
5. At the bottom of the form, key the form identification code **AUTO** and the current month and year as the revision date. For example: *AUTO Rev. 07/09.*
6. Save the form as *12-1 Auto Form*. Print the form.



Access Activity

12-2 Enter Data Using a Database Form (Obj. 5)

In application 12-1, you created a form to collect data for the Green Gables condo complex. Now you will create an *Access* database to store and organize the automobile information.

1. Create a new database file named *12-2 Automobile Registration*.
2. Create a new database table named Automobile Registration. Include the following fields in the table:
 - Form Date
 - Owner Name
 - Unit #
 - Telephone #
 - Make
 - Model
 - Color
 - Plate #
 - State
 - Sticker #
3. Select **Number** as the field type for the Unit # and Sticker # fields. Select **Text** as the field type for all other fields. Select **Sticker #** as the primary key.
4. Create an AutoForm based on the Automobile Registration table. Enter the data shown on the following page for six residents using the AutoForm. Enter the current year in dates.
5. Add two more records using the AutoForm. Assume that two of your classmates live in Units 403 and 708. Interview your classmates and enter their auto information using the form. Assign sticker numbers 158 and 159 to their autos. Close the form without saving it.
6. Create a report based on the Automobile Registration table using the Report Wizard. Include all fields in the report except the Form Date field. Sort by the Unit # field in ascending order. Choose **Landscape** orientation, if needed, to have all fields show on one page.
7. Name the report Automobile Registration. Print the report.

Form Date: 05/06/--	Form Date: 05/04/--
Owner Name: Jose Rodriguez	Owner Name: Andrea Phillips
Unit #: 907	Unit #: 312
Telephone #: 513.555.0198	Telephone #: 513.555.0120
Make: Toyota	Make: Jeep
Model: Camry	Model: Cherokee
Color: White	Color: White
Plate #: CRL 5534	Plate #: DDM 6589
State: OH	State: KY
Sticker #: 153	Sticker #: 155
Form Date: 05/05/--	Form Date: 05/06/--
Owner Name: Joshua Gibson	Owner Name: Sarah Fields
Unit #: 401	Unit #: 611
Telephone #: 513.555.0156	Telephone #: 513.555.0134
Make: Ford	Make: Chevrolet
Model: Focus	Model: Impala
Color: Silver	Color: Black
Plate #: 23 DV 56	Plate #: ORK 3448
State: IN	State: OH
Sticker #: 154	Sticker #: 152
Form Date: 05/07/--	Form Date: 05/05/--
Owner Name: C. J. Andrews	Owner Name: Frank Patruso
Unit #: 205	Unit #: 710
Telephone #: 513.555.0167	Telephone #: 513.555.0123
Make: Ford	Make: Lexus
Model: 500	Model: ES300
Color: Navy Blue	Color: Pearl White
Plate #: RCT 1562	Plate #: XMV 2198
State: KY	State: OH
Sticker #: 156	Sticker #: 157

12-3 Learn More about RIM Software (Obj. 8)

Some information about the RIM software *Accutrac* is presented in this chapter. More information about RIM software is available on the vendor websites.

1. Access the Iron Mountain website to learn about *Accutrac*. You can find the URL for the website at the Links tab at the website for this textbook. If you cannot access information about *Accutrac*, use a search engine to find a website for another RIM software.
2. Click an appropriate link to learn about the company's products and services.
3. Look specifically for information about cloud data backup. Write a brief paragraph that summarizes the information provided.
4. If you are using the Iron Mountain website, select a link on the **Solutions for** tab. Write a brief paragraph that summarizes the information provided.

E-STUDY GUIDE

For self-assessment and additional activities, go to the study guide within Records Management CourseMaster.

For More Activities Go To:
www.cengage.com/officetech/read

RULE 1: Indexing Order of Units

A. Personal Names

A personal name is indexed in this manner: (1) the surname (last name) is the key unit, (2) the given name (first name) or initial is the second unit, and (3) the middle name or initial is the third unit. If determining the surname is difficult, consider the last name written as the surname. (You will learn how to handle titles that appear with names in a later rule.)

A unit consisting of just an initial precedes a unit that consists of a complete name beginning with the same letter—*nothing before something*. Punctuation is omitted.

B. Business Names

Business names are indexed *as written* using letterheads or trademarks as guides. Each word in a business name is a separate unit. Business names containing personal names are indexed as written.

RULE 2: Minor Words and Symbols in Business Names

Articles, prepositions, conjunctions, and symbols are considered separate indexing units. Symbols are considered as spelled in full. When the word *The* appears as the first word of a business name, it is considered the last indexing unit.

Articles:	a, an, the
Prepositions:	at, in, out, on, off, by, to, with, for, of, over
Conjunctions:	and, but, or, nor
Symbols:	&, ¢, \$, #, % (and, cent <i>or</i> cents, dollar <i>or</i> dollars, number <i>or</i> pound, percent)

RULE 3: Punctuation and Possessives

All punctuation is disregarded when indexing personal and business names. Commas, periods, hyphens, apostrophes, dashes, exclamation points, question marks, quotation marks, underscores, and diagonals (/) are disregarded, and names are indexed as written.

RULE 4: Single Letters and Abbreviations

A. Personal Names

Initials in personal names are considered separate indexing units. Abbreviations of personal names (Wm., Jos., Thos.) and nicknames (Liz, Bill) are indexed as they are written.

B. Business Names

Single letters in business and organization names are indexed as written. If single letters are separated by spaces, index each letter as a separate unit. An acronym (a word formed from the first, or first few, letters of several words, such as NASDAQ and ARCO) is indexed as one unit regardless of punctuation or spacing. Abbreviated words (Mfg., Corp., Inc.) and names (IBM, GE) are indexed as one unit regardless of punctuation or spacing. Radio and television station call letters (KDKA, WNBC) are indexed as one unit.

RULE 5: Titles and Suffixes

A. Personal Names

A title before a name (Dr., Miss, Mr., Mrs., Ms., Professor, Sir, Sister), a seniority suffix (II, III, Jr., Sr.), or a professional suffix (CRM, DDS, Mayor, M.D., Ph.D., Senator) after a name is the last indexing unit.

Numeric suffixes (II, III) are filed before alphabetic suffixes (Jr., Mayor, Senator, Sr.). If a name contains a title and a suffix (Ms. Lucy Wheeler, DVM), the title *Ms* is the last unit.

Royal and religious titles followed by either a given name or a surname only (Princess Anne, Father Leo) are indexed and filed as written.

B. Business Names

Titles in business names (Capt. Hook's Bait Shop) are indexed as written. Remember, the word *The* is considered the last indexing unit when it appears as the first word of a business name.

RULE 6: Prefixes, Articles, and Particles

A foreign article or particle in a personal or business name is combined with the part of the name following it to form a single indexing unit. The indexing order is not affected by a space between a prefix and the rest of the name (Alexander La Guardia), and the space is disregarded when indexing.

Examples of articles and particles are: a la, D', Da, De, Del, De La, Della, Den, Des, Di, Dos, Du, E', El, Fitz, Il, L', La, Las, Le, Les, Lo, Los, M', Mac, Mc, O', Per, Saint, San, Santa, Santo, St., Ste., Te, Ten, Ter, Van, Van de, Van der, Von, Von der.

RULE 7: Numbers in Business Names

Numbers spelled out (Seven Lakes Nursery) in business names are filed alphabetically. Numbers written in digits are filed before alphabetic letters or words (B4 Photographers comes before Beale Building and Loan).

Names with numbers written in digits in the first units are filed in ascending order (lowest to highest number) before alphabetic names (229 Club, 534 Shop, First National Bank of Chicago). Arabic numerals are filed before Roman numerals (2 Brothers Deli, 5 Cities Transit, XII Knights Inn). Names containing Roman numerals are filed in ascending order according to their Arabic number equivalencies. VIII-Ball Club, XL Days & XL Nights Motel, C-Note Lounge (8, 40, 100); Lucky VII Casino, Lucky X Car Wash, Lucky LX Drive-In (7, 10, 60). A chart of Roman numerals is shown in Figure A.1.

FIGURE A.1 Table of Roman Numerals

I	1	XX	20
II	2	XXX	30
III	3	XL	40
IV	4	L	50
V	5	LX	60
VI	6	LXX	70
VII	7	LXXX	80
VIII	8	XC	90
IX	9	C	100
X	10	D	500
		M	1000

Names with inclusive numbers (20-39 Singles Club) are arranged by the first digit(s) only (20). Names with numbers appearing in other than the first position (Pier 36 Cafe) are filed alphabetically and immediately before a similar name without a number (Pier 36 Cafe comes before Pier and Port Cafe).

When indexing names with numbers written in digit form that contain *st*, *d*, and *th* (1st. Mortgage Co., 2d Avenue Cinemas, 3d Street Pest Control), ignore the letter endings and consider only the digits (1, 2, 3).

When indexing names with a number (in figures or words) linked by a hyphen to a letter or word (A-1 Laundry, Fifty-Eight Auto Body, 10-Minute Photo), ignore the hyphen and treat it as a single unit (A1, FiftyEight, 10Minute).

When indexing names with a number plus a symbol (55+ Social Center), treat it as a single unit (55Plus).

RULE 8: Organizations and Institutions

Banks and other financial institutions, clubs, colleges, hospitals, hotels, lodges, magazines, motels, museums, newspapers, religious institutions, schools, unions, universities, and other organizations and institutions are indexed and filed according to the names written on their letterheads.

RULE 9: Identical Names

Retrieving the correct record when there are identical names of people or businesses is easy when using a computer database. A records management database typically contains a unique field with information specific to a particular person or business name—often a phone number, a special identification number, or an assigned number generated by the database software. Because each person or business has a unique identifier, there is no need to look for other information to determine which person is which.

In correspondence files, determining which person or business is the correct one when there are others with identical names can be a challenge. When personal names and names of businesses, institutions, and organizations

are identical (including titles as explained in Rule 5), the filing order is determined by the addresses. Compare addresses in the following order:

1. City names.
2. State or province names (if city names are identical).
3. Street names, including *Avenue*, *Boulevard*, *Drive*, and *Street* (if city and state names are identical).
 - a. When the first units of street names are written in digits (18th Street), the names are considered in ascending numeric order (1, 2, 3) and placed together before alphabetic street names (18th Street, 24th Avenue, Academy Circle).
 - b. Street names written as digits are filed before street names written as words (22nd Street, 34th Avenue, First Street, Second Avenue).
 - c. Street names with compass directions (North, South, East, and West) are considered as written (SE Park Avenue, South Park Avenue).
 - d. Street names with numbers written as digits after compass directions are considered before alphabetic names (East 8th Street, East Main Street, Sandusky Drive, South Eighth Avenue).
4. House or building numbers (if city, state, and street names are identical).
 - a. House and building numbers written as digits are considered in ascending numeric order (8 Riverside Terrace, 912 Riverside Terrace) and placed together before spelled-out building names (The Riverside Terrace).
 - b. House and building numbers written as words are filed after house and building numbers written as digits (11 Park Avenue South, One Park Avenue).
 - c. If a street address and a building name are included in an address, disregard the building name.
 - d. ZIP Codes are not considered in determining filing order.

RULE 10: Government Names

Government names are indexed first by the name of the governmental unit—city, county, state, or country. Next, index the distinctive name of the department, bureau, office, or board. A discussion of local and regional, state, federal, and foreign government names follows.

A. Local and Regional Government Names

The first indexing unit is the name of the county, city, town, township, or village. *Charlotte Sanitation Department* is an example. *Charlotte* (a city) would be the first indexing unit. Next, index the most distinctive name of the department, board, bureau, office, or government/political division. In this case, *Sanitation* would be the most distinctive name of the department. The words *County of*, *City of*, *Department of*, *Office of*, etc., are retained for clarity and are considered separate indexing units. If *of* is not a part of the official name as written, it is not added as an indexing unit.

B. State Government Names

Similar to local and regional political/governmental agencies, the first indexing unit is the name of the state or province. Then index the most distinctive name of the department, board, bureau, office, or

government/political division. The words *State of*, *Province of*, *Department of*, etc., are retained for clarity and are considered separate indexing units. If *of* is not a part of the official name as written, it is not added as an indexing unit.

C. Federal Government Names

Use three indexing “levels” (rather than units) for the United States federal government. Consider *United States Government* as the first level. The second level is the name of a department or top-level agency that is rearranged to show the most distinctive part first; for example, *Agriculture Department (of)*. Level three is the next most distinctive name; for example, *Forest Service*. The words *of* and *of the* are extraneous and should not be considered when indexing.

D. Foreign Government Names

The name of a foreign government and its agencies is often written in a foreign language. When indexing foreign names, begin by writing the English translation of the government name on the document. The English name is the first indexing unit. Then index the balance of the formal name of the government, if needed, or if it is in the official name (China Republic of). Branches, departments, and divisions follow in order by their distinctive names. States, colonies, provinces, cities, and other divisions of foreign governments are followed by their distinctive or official names as spelled in English.

Cross-Referencing

Some records of persons and businesses may be requested by a name that is different from the one by which it was stored. This is particularly true if the key unit is difficult to determine. When a record is likely to be requested by more than one name, an aid called a cross-reference is prepared. A **cross-reference** shows the name in a form other than that used on the original record, and it indicates the storage location of the original record. The filer can then find requested records regardless of the name used in the request for those records.

Cross-references for data stored in an electronic database are often not needed. Because the search features of database software are extensive, a record can usually be found easily using any part of the filing segment. Also, entire records are often visible when a search result shows on the screen. There may be instances, however, when a cross-reference is needed under an entirely different name. In these instances a cross-reference database record can be created.

Four types of personal names should be cross-referenced:

1. Unusual names
2. Hyphenated surnames
3. Alternate names
4. Similar names

Also, nine types of business names should be cross-referenced.

1. Compound names
2. Names with abbreviations and acronyms
3. Popular and coined names
4. Hyphenated names
5. Divisions and subsidiaries
6. Changed names
7. Similar names
8. Foreign business names
9. Foreign government names

A

accession log A serial list of numbers assigned to records in a numeric storage system; also called an *accession book* or *numeric file list*.

active records Frequently used records needed to perform current operations.

alphabetic index A reference to a numeric file, organized alphabetically, that is used when the name or subject is known but not the assigned number.

alphabetic records management A method of storing and arranging records according to the letters of the alphabet.

alphanumeric coding A coding system that combines letters and numbers, in combination with punctuation marks, to develop codes for classifying and retrieving information.

archive records Records that have continuing or historical value and are preserved permanently by an organization.

archives Facilities where records of an organization are preserved because of their continuing or historical value.

ARMA International An association for information management professionals.

ASCII A character code that was developed as a standard

and logical way to recognize character data on computers.

B

backup A copy of electronic files and/or folders as a precaution against the loss or damage of the original data.

block-numeric coding A coding system based on the assignment of number ranges to subjects.

blog A shared, online journal.

C

caption A title, heading, short explanation, or description of a document or records.

charge-out A control procedure to establish the current location of a record when it is not in the records center or central file, which can be a manual or automated system.

charge-out and follow-up file A tickler file that contains requisition forms filed by dates that records are due back in the inactive records center.

charge-out log A written or electronic form filed by dates that records are due back in the inactive records center.

chronologic storage A method by which records are filed in date sequence, either in reverse

sequence (with the most recent date on top) or forward sequence.

coding The act of assigning a file designation to records as they are classified.

color accenting The consistent use of different colors for different supplies in the storage system, such as guides, folders, OUT indicators, and labels.

color coding Using color as an identifying aid in a filing system to divide the alphabetic sections in the storage system.

compass point Any of 32 horizontal directions indicated on the card of a compass.

compass term A compass point used as part of a company name or subject.

consecutive numbering method A method in which consecutively numbered records are arranged in *ascending* number order—from the lowest number to the highest number.

constant data Data that do not change such as that printed on a form.

cross-reference Shows the name in a form other than that used on the original record and indicates the storage location of the original record.

cross-reference guide A special guide that serves as a permanent marker in storage indicating that all records pertaining to a correspondent are stored elsewhere.

cross-reference sheet A sheet placed in an alternate location in the file that directs the filer to a specific record stored in a different location other than where the filer is searching.

D

data warehouse A collection of data designed to support management decision-making.

database A collection of related data stored on a computer system.

decimal-numeric coding

A numeric method where records are classified by subject in units of ten and coded for arrangement in numeric order.

density The degree of optical opacity of material that determines the amount of light that will pass through it or reflect from it.

destruction date file A tickler file containing copies of forms completed when records are received in a records center.

destruction file A file that contains information on the actual destruction of inactive records.

destruction notice

A notification of the scheduled destruction of records.

destruction suspension

A hold placed on the scheduled destruction of records.

dictionary arrangement

A single alphabetic filing arrangement in which all types of entries (names, subjects, titles, etc.) are interfiled in alphabetic order.

direct access A method of accessing records by going directly to the file without

first referring to an index or a list of names for location in the files.

disaster recovery plan A plan developed and implemented to provide guidance for protecting records and information and continuing business operations when emergencies and disasters occur.

document imaging An automated system for scanning, storing, retrieving, and managing images of physical records in an electronic format.

duplex-numeric coding

A coding system using numbers (or sometimes letters) with two or more parts separated by a dash, space, or comma.

E

e-commerce An electronic method to communicate and to transact business over networks and through computers.

electronic data interchange (EDI)

A communication procedure between two companies that allows the exchange of standardized documents through computers.

electronic fund transfer (EFT)

Electronic payments and collections.

electronic mail A system that enables users to compose, transmit, receive, and manage electronic documents and images across networks.

electronic record Data stored on electronic media that can be readily accessed or changed.

encryption The process of converting meaningful information

into a numeric code that is only understood by the intended recipient of the information.

encyclopedic arrangement (subject)

A subject filing arrangement in which records are filed under the specific subtitle to which they relate.

encyclopedic arrangement

The alphabetic arrangement of major geographic divisions plus one or more geographic subdivisions also arranged in alphabetic order.

enterprise content management (ECM)

The technologies, tools, and methods used to capture, manage, store, preserve, and deliver content across an enterprise.

external record A record created for use outside an organization.

F

field A set of one or more characters treated as a unit of information.

filename A unique name given to a file stored for computer use that must follow the computer's operating system rules.

filing method The way in which records are stored in a container such as a filing cabinet or a folder on a hard disk or removable storage device.

filing segment The name by which a record is stored and requested.

firewall A combination hardware and software buffer that many organizations place between their internal network and the Internet to protect

the internal network from outside intrusion.

flash drive A read/write external storage device that attaches to a computer via a USB port and consists of a small printed circuit board encased in a hard plastic covering.

folder or directory A subdivision of storage space created by the operating system of a computer.

follower block (compressor) A device at the back of a file drawer that can be moved to allow contraction or expansion of the drawer contents.

follow-up A system for assuring the timely and proper return of materials charged out from a file.

form A physical or electronic document with a fixed arrangement of predetermined spaces designed for entering and extracting prescribed information or variable data.

G

general folder A folder for records to and from correspondents with a small volume of records that does not require an individual folder.

geographic filing system The classification of records by geographic location usually arranged by numeric code or in alphabetic order.

geographic information system A computer system designed to allow users to collect, manage, and analyze large volumes of data referenced to a geographic location by some type of geographic coordinates such as longitude and latitude.

geographic records management A method of storing and retrieving records by location using a geographic filing system.

guide A rigid divider used to identify a section in a file and to facilitate reference to a particular record location.

I

image record A digital or photographic representation of a record on any medium such as microfilm or optical disk.

important record A record that assists in performing business operations and is usually replaceable but at great cost.

inactive records Records that do not have to be readily available but which must be kept for legal, fiscal, or historical purposes.

inactive records index An index of all records in the inactive records storage center.

index A systematic guide that allows access to specific items contained within a larger body of information.

indexing The mental process of determining the filing segment (or name) by which a record is to be stored and the placing or listing of items in an order that follows a particular system.

indexing order The order in which units of the filing segment are considered.

indexing rules Written procedures that describe how filing segments are ordered.

indexing units The various words that make up the filing segment.

indirect access A method of access to records that requires prior use of an external index.

individual folder A folder used to store the records of an individual correspondent with enough records to warrant a separate folder.

inspecting Checking a record to determine whether it is ready to be filed.

internal record A record that contains information needed to operate an organization.

Internet A worldwide network of computers that allows public access to send, store, and receive electronic information over public networks.

Internet forum An online place where people can post and read messages; also called a message board.

ISO 15489 A standard for records management policies and procedures.

K

key unit The first unit of a filing segment.

knowledge management An interdisciplinary field concerned with systematic, effective management and utilization of an organization's knowledge resources.

L

label A device that contains the name, subject, or number assigned to the file folder or section contents.

leading zeros Zeros keyed at the beginning of a number so that all numbers in a group are the same number of digits.

lettered guide plan

An arrangement of geographic records with primary guides labeled with alphabetic letters.

location name guide plan

An arrangement of geographic records with primary guides labeled with location names.

M

magnetic media A variety of magnetically coated materials used for computers for data storage; e.g., hard disk, magnetic tape, redundant array of independent disks (RAID), videotape.

magnification ratio The relationship between the size of an image and the original record when viewed on a microfilm reader screen.

management The process of using an organization's resources to achieve specific goals through the functions of planning, organizing, leading, and controlling.

master index A printed alphabetic listing in file order of all subjects used as subject titles in the filing system.

media compatibility How well the media and the equipment needed to access information stored on the media work together.

media stability The time the media will maintain its original quality so that it can continue to be used.

metadata Data about data, such as that which describes how, when, and by whom a particular set of data was collected and formatted.

microform The collective term for all microimages such as microfilm, microfiche, aperture card, microfilm jacket, or microfilm roll.

micrographics The technology by which recorded information can be reduced to a microform, stored, and retrieved for reference and use.

middle-digit storage

A numeric storage method in which the middle digits are used as the primary division for organizing the filing system.

migration The process of moving data from one electronic system to another, usually in upgrading hardware and software, without having to undergo a major conversion or reinputting data.

N

name index A listing of correspondents' names stored in a subject file.

nonconsecutive numbering

A system of numbers that has blocks of numbers omitted.

nonessential record A record that has no predictable value after its initial use.

nonrecord An item that is not usually included within the scope of official records such as a day file, reference materials, and drafts.

numeric index A current list of all files by the file numbers.

numeric records management

Any classification system for arranging records that is based on numbers.

O

office of record An office designated to maintain the *record* or *official copy* of a particular record.

official record A significant, vital, or important record of continuing value to be protected, managed, and retained according to established retention schedules.

on-call/wanted form A written request for a record that is out of the file.

one-period transfer method

A method of transferring records from active storage at the end of one period of time, usually once or twice a year, to inactive storage.

operating system An organized collection of software that controls the overall operations of a computer.

optical character recognition (OCR)

Machine-reading of printed or written characters through the use of light-sensitive materials or devices.

optical media A high-density information storage medium where digitally encoded information is both written and read by means of a laser.

OUT indicator A control device, such as a guide, sheet, or folder, that shows the location of borrowed records.

P

path A notation that includes the drive, the folder, and filename where a file is stored.

periodic transfer method

A method of transferring active records at the end of a stated period of time—usually one year—to inactive storage.

perpetual transfer method

A method of transferring records continuously from active to inactive storage areas whenever they are no longer needed for reference.

personal digital assistant (PDA)

A small handheld computer that can share data with other computers.

pick list A list containing specific records needed for a given program or project.

podcast A broadcast sent over the Internet to receivers who hear and/or view the information via computers, MP3 players, or other electronic devices.

position The location of the tab across the top or down one side of a guide or folder.

primary guide A divider that identifies a main division or section of a file and always precedes all other material in a section.

push technology Technology that automatically delivers e-mail and other data to a device based on the user's profile and request for specific data.

Q

query A database object used to instruct the program to find specific information.

R

radio frequency identification (RFID) A technology that

incorporates the use of an electromagnetic or electrostatic radio frequency to identify an object, animal, or person.

RAID (redundant array of independent disks)

A computer storage system containing many hard disk drives that send data to a computer over parallel paths.

record Stored information made or received by an organization that is evidence of its operations and has value requiring its retention for a specific period of time.

record (computer record)

A set of fields in a database table that relate to one person, object, or organization.

record and information life cycle

The life span of a record as expressed in the five phases of creation, distribution, use, maintenance, and final disposition.

record copy The official copy of a record that is retained for legal, operational, or historical purposes.

records audit A periodic inspection to verify that an operation is in compliance with a records and information management program.

records center A low-cost centralized area for housing and servicing inactive records whose reference rates do not warrant their retention in a prime office space.

records center box A box designed to hold approximately one cubic foot of records, either legal or letter size.

records destruction The disposal of records of no further value beyond any possible reconstruction.

records disposition The final destination of records after they have reached the end of their retention period.

records inventory A detailed listing that could include the types, locations, dates, volume, equipment, classification systems, and usage dates of an organization's records.

records management The systematic control of all records from their creation or receipt, through their processing, distribution, organization, storage, and retrieval, to their ultimate disposition.

records retention program

A program established and maintained to provide retention periods for records in an organization.

records retention schedule

A comprehensive list of records series titles, indicating for each the length of time it is to be maintained.

records series A group of related records filed and used together as a unit and evaluated as a unit for retention purposes.

records system A group of interrelated resources acting together according to a plan to accomplish the goals of the records and information management program.

records transfer The act of changing the physical custody of records with or without change of legal title or moving them from one storage area to another.

reduction ratio The relationship between the dimensions of the original or master and the corresponding dimensions of the photographed image.

reference document Contains information needed to carry on the operations of a firm over long periods.

relative index A dictionary-type listing of all possible words and combinations of words by which records may be requested.

release mark An agreed-upon mark such as initials or a symbol placed on a record to show that the record is ready for storage.

requisition A written request for a record or information from a record.

resolution A measure of the sharpness or fine detail of an image.

retention period The time that records must be kept according to operational, legal, regulatory, and fiscal requirements.

retrieval The process of locating and removing a record or file from storage or accessing information from stored data on a computer system.

S

SEE ALSO cross-reference

A notation on a folder tab or cross-reference sheet that directs the filer to multiple locations for related information.

sorting Arranging records in the sequence in which they are to be stored.

special folder A folder that follows a special guide in an alphabetic arrangement.

special (auxiliary) guide

A divider used to lead the eye quickly to a specific place in a file.

storage The placement of records, according to a plan, on a shelf or in a file drawer or saving an electronic record.

storage method A systematic way of storing records according to an alphabetic, subject, numeric, geographic, or chronologic plan.

storing Placing records into storage containers.

subject records management

An alphabetic system of storing and retrieving records by their subject or topic.

suspension (hanging)

folder A folder with built-in hooks on each side that hang from parallel metal rails on each side of a file drawer or other storage equipment.

synchronization The process of bringing items into agreement, such as updating the data on a laptop computer to match the data on a PDA.

T

tab A projection for a caption on a folder or guide that extends above the regular height or beyond the regular width of the folder or guide.

table A database object that contains fields that hold data.

terminal-digit storage

A numeric storage method in which the last two or three digits of each number are used as the

primary division under which a record is filed and groups of numbers are read from right to left.

tickler file A date-sequenced file by which matters pending are flagged for attention on the proper date.

transaction document

A record used in an organization's day-to-day operations.

tweet A short message posted on the Twitter social network website.

U

useful record A record that is helpful in conducting business operations and is usually replaceable at slight cost.

V

variable data Data that change each time a form is completed.

vital record A record that is necessary for the continuing operation of the organization and is usually not replaceable.

W

wiki A page or collection of web pages that allows people who access it to contribute or modify content.

World Wide Web A part of the Internet that contains HTML documents that can be displayed and searched using web browser programs.

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