



8E

USING **COMPUTERS** IN THE **LAW OFFICE**

Matthew S. Cornick



To access the demonstration software*:

- MindTap: Software download links* and data files, along with the Hands-On Exercises and software installation instructions, are on the MindTap learning path.
- Print book/student companion website: Software download links* and data files are on the student companion website. See the “Supplemental Teaching and Learning Materials” section of the preface for instructions on accessing the student companion website. (Hands-On Exercises and software installation instructions are in the print text.)

***Please do not download the software programs until your instructor tells you to do so.** Please note that many of the programs expire, and will not work after a certain number of days elapse from when the program was first loaded; other limitations may also apply to certain demonstration software.

Note: Demo access to Microsoft Office applications (Word; Excel; PPT); as well as demo access to the Westlaw and LexisNexis research databases; is not included with the text.

Software Demo	Expiration Date	System Requirements
Clio (cloud-based application)	365 days from registration	Any operating system
HotDocs v. 11.2	120 days from installation	Supported Operating Systems: Windows 7, 8.1, or 10 (32-bit and 64-bit) Hardware: 1 GHz processor (2 GHz or faster recommended); 1 GB RAM (2 GB recommended); 250 MB hard disk space for installation process, 85 MB thereafter Display: 1024 x 768 screen resolution. Note: If you previously set your Windows display options to a font size greater than 100%, you may find that some HotDocs dialog boxes do not display properly. You can check your font size setting in your Control Panel by clicking Appearance and Personalization > Display. Word Processor: <ul style="list-style-type: none">• Microsoft Word 2003, 2007, 2010, 2013, 2016• Corel WordPerfect X3 SP2, X4, X5, X6 or X7 (not X8) Internet Browser: Microsoft Internet Explorer 9, 10, and 11
LexisNexis CaseMap v. 12	120 days from installation	Supported Operating Systems: Microsoft Windows®: 2008 Server, 2012 Server, Vista, 7, 8, 10 Recommended Hardware: 1 GHz or faster 32-bit (x86) or 64-bit (x64) processor; 1 GB RAM (32-bit) or 2 GB RAM (64-bit); 1 GB free disk space; Super VGA (800 x 600) or higher-resolution monitor with 256 colors Internet Browser: Microsoft Internet Explorer® v6.0+ is required for Send to CaseMap functionality
LexisNexis TimeMap v. 6	120 days from installation	Supported Operating Systems: Microsoft Windows 7, 8, or 10 Minimum Hardware Requirements: 1 GHz or faster 32-bit (x86) processor, 128MB RAM, 50MB free disk space
TrialDirector v. 6	140 days from installation	Minimum Requirements: Intel Core 2 Duo Processor 2.0 Ghz (Intel Core i7 Processor 3.0 Ghz or better recommended); Microsoft Windows 7 (English version) (Windows 8 recommended); 4GB System RAM (8GB recommended); Microsoft .NET Frameworks 4.5.1 or higher; 128MB Display Graphics memory (1GB recommended); 1024 x 768 Display Resolution at 32-bit color palette (1920 x 1080 recommended); 32x (or better) CD-ROM Drive (8x DVD Recordable Drive recommended); Sound Card and Speakers/Headphones (Required for audio functions) Supported Operating Systems: Windows® 7, 8*, 10 (English, 32-bit or 64-bit) *Windows 8 RT does not support desktop applications, such as TrialDirector 6. All other editions, such as Windows 8 Pro, are supported.

Technical Support

If you are having problems installing any of the software programs included with this book, contact Cengage Learning Technical Support at <http://cengage.com/support>. Please keep in mind this is third-party software and there is limited support that Cengage can provide.

If you are experiencing issues while using the software, contact your instructor.

Please keep in mind that software is of a changing nature. If the third-party software is updated by the software provider, this can affect the user experience of the hands-on exercises. Therefore, Cengage may periodically provide updates to the demos and to the corresponding hands-on exercises.

See the preface of this book for more information about using the software demos and Hands-On Exercises.



8E

USING **COMPUTERS** IN THE **LAW OFFICE**

Matthew S. Cornick, J.D.
Clayton State University



Australia • Brazil • Mexico • Singapore • United Kingdom • United States

This is an electronic version of the print textbook. Due to electronic rights restrictions, some third party content may be suppressed. Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. The publisher reserves the right to remove content from this title at any time if subsequent rights restrictions require it. For valuable information on pricing, previous editions, changes to current editions, and alternate formats, please visit www.cengage.com/highered to search by ISBN#, author, title, or keyword for materials in your areas of interest.

Important Notice: Media content referenced within the product description or the product text may not be available in the eBook version.

Using Computers in the Law Office,
Eighth Edition
Matthew S. Cornick

SVP, GM Skills & Global Product Management:
Jonathan Lau

Product Director: Matthew Seeley

Associate Product Manager: Kelly Lischynsky

Senior Director, Development: Marah Bellegarde

Senior Product Development Manager:
Larry Main

Senior Content Developer: Anne Orgren

Product Assistant: Mara Ciacelli

Vice President, Marketing Services: Jennifer
Ann Baker

Associate Marketing Manager: Andrew Ouimet

Senior Content Project Manager: Betty Dickson

Managing Art Director: Jack Pendleton

Text Designer: Lumina Datamatics

Cover Designer: Irene Morris

Cover image(s): Keyboard with phone and
tablet pc on wooden desk: Valeri Potapova/
Shutterstock.com

Hands typing on the white wireless keyboard:
Click and Photo/Shutterstock.com

Three lawyers talking in front of a courthouse:
rubberball/Getty Images

Portrait of happy lawyers at table against
bookshelf: Maskot/Getty Images

Printed in the United States of America
Print Number: 01 Print Year: 2017

© 2019, 2015 Cengage Learning

Unless otherwise noted, all content is © Cengage.

ALL RIGHTS RESERVED. No part of this work covered by the copyright herein may be reproduced or distributed in any form or by any means, except as permitted by U.S. copyright law, without the prior written permission of the copyright owner.

HotDocs 11 is a registered trademark of HotDocs, Ltd.

CaseMap and TimeMap are registered trademarks of CaseSoft, a division of LexisNexis.

TrialDirector is a registered trademark of inData Corporation.

Unless otherwise noted within the chapter, screen shot sources are as follows:

- Chapters 1-3: Microsoft
- Chapters 4-6: Themis Solutions Inc. (for Clio software)
- Chapter 7: Microsoft
- Chapters 8-9: LexisNexis
- Chapter 10: inData Corporation

For product information and technology assistance, contact us at
Cengage Learning Customer & Sales Support, 1-800-354-9706.

For permission to use material from this text or product, submit all
requests online at **www.cengage.com/permissions**.

Further permissions questions can be e-mailed to
permissionrequest@cengage.com.

Library of Congress Control Number: 2017948589

ISBN: 978-1-3376-2498-5

Looseleaf Edition ISBN: 978-1-3376-8896-3

Cengage Learning

20 Channel Center Street
Boston, MA 02210
USA

Cengage Learning is a leading provider of customized learning solutions with employees residing in nearly 40 different countries and sales in more than 125 countries around the world. Find your local representative at **www.cengage.com**.

Cengage Learning products are represented in Canada by
Nelson Education, Ltd.

To learn more about Cengage Learning, visit **www.cengage.com**

Purchase any of our products at your local college store or at our
preferred online store **www.cengagebrain.com**

Notice to the Reader

Publisher does not warrant or guarantee any of the products described herein or perform any independent analysis in connection with any of the product information contained herein. Publisher does not assume, and expressly disclaims, any obligation to obtain and include information other than that provided to it by the manufacturer. The reader is expressly warned to consider and adopt all safety precautions that might be indicated by the activities described herein and to avoid all potential hazards. By following the instructions contained herein, the reader willingly assumes all risks in connection with such instructions. The reader is notified that this text is an educational tool, not a practice book. Since the law is in constant change, no rule or statement of law in this book should be relied upon for any service to the client. The reader should always refer to standard legal sources for the current rule or law. If legal advice or other expert assistance is required, the services of the appropriate professional should be sought. The publisher makes no representations or warranties of any kind, including but not limited to, the warranties of fitness for particular purpose or merchantability, nor are any such representations implied with respect to the material set forth herein, and the publisher takes no responsibility with respect to such material. The publisher shall not be liable for any special, consequential, or exemplary damages resulting, in whole or part, from the readers' use of, or reliance upon, this material.

For Renda, Peter, and Julia



BRIEF CONTENTS

- 1 Overview of Computers and Technology in the Law Office | 1
- 2 Word Processing and Document Assembly | 26
- 3 Spreadsheet Software | 106
- 4 Legal Timekeeping and Billing Software | 165
- 5 Databases, Case Management, and Docket Control Software | 213
- 6 The Cloud and Social Media | 254
- 7 Electronic Discovery | 274
- 8 Litigation Support Software | 297
- 9 The Internet, Computer-Assisted Legal Research, and Electronic Mail | 379
- 10 The Electronic Courthouse, Automated Courtroom, and Presentation Graphics | 455

GLOSSARY / 507

INDEX / 513

CONTENTS

PREFACE / XII

ACKNOWLEDGMENTS / XVII



CHAPTER 1

Overview of Computers and Technology in the Law Office | 1

Introduction / 1
Introduction to Technology and the Law / 1
Computers and Technology / 2
Elementary Computer Concepts / 3
Computer Components / 4
Peripheral Devices / 4
Introduction to Computer Software / 8
How Computers Can Help the Paralegal / 12
Legal Technology Trends / 15
Legal Ethics and Computer Technology / 18
Summary / 21
Key Terms / 22
Internet Sites / 23
Test Your Knowledge / 24
On the Web Exercises / 24
Questions and Exercises / 25
Ethics Question / 25

CHAPTER 2

Word Processing and Document Assembly | 26

Introduction / 26
Centralized and Decentralized Word Processing / 26
Legal Word-Processing Programs: Microsoft Word vs. Corel WordPerfect / 27
Legal Word-Processing Fundamentals / 28
Merging and Document Assembly in Word Processors / 37
Microsoft Word Online Training and Word Templates / 38
PDF Files / 38
Document Assembly Programs / 39
Ethical Considerations / 40
Summary / 43
Key Terms / 43
Internet Sites / 44
Test Your Knowledge / 44

On the Web Exercises / 44
Questions and Exercises / 45
Ethics Question / 45
Hands-On Exercises / 46
Hands-On Exercises 86

CHAPTER 3

Spreadsheet Software | 106

Introduction / 106
What Is a Spreadsheet? / 106
“What If” Analysis / 108
Spreadsheet Structure and Organization / 108
Spreadsheet Fundamentals / 110
Spreadsheet Planning / 122
Spreadsheets in the Legal Environment / 125
Excel in Office 365 / 129
Ethical Considerations / 129
Summary / 131
Key Terms / 131
Internet Sites / 132
Test Your Knowledge / 132
On the Web Exercises / 132
Questions and Exercises / 133
Ethics Question / 133
Hands-On Exercises / 134

CHAPTER 4

Legal Timekeeping and Billing Software | 165

Introduction / 165
Introduction to Timekeeping and Billing / 165
Manual versus Computerized Billing Systems / 166
The Computerized Timekeeping and Billing Process / 169
Kinds of Legal Fee Agreements / 171
Legal Expenses / 178
Timekeeping and Billing for Paralegals / 178
Functions of a Successful Billing System / 181
Computerized Timekeeping and Billing: Software / 182
Integrating Timekeeping and Billing,
Accounting, and Case Management / 187
What to Look for in Timekeeping
and Billing Software / 188
The Ethics of Timekeeping and Billing / 189
Summary / 193
Key Terms / 193
Internet Sites / 194
Test Your Knowledge / 194
On the Web Exercises / 195
Questions and Exercises / 195
Ethics Question / 197
Hands-On Exercises / 198

CHAPTER 5

Databases, Case Management, and Docket Control Software | 213

Introduction / 213
What Is a Database? / 214
Database Structure / 215
Common Database Terms / 216
Calendar, Docket Control, and Case Management / 216
Introduction to Docket Control/Case Management / 217
Manual Docket Control / 219
Types of Computerized Docket Control Systems / 220
Overview of Computerized Legal Case Management and Docket Control / 221
Implementing Case Management Systems—Why They Fail / 227
The Docket Cycle / 227
Ethical and Malpractice Considerations / 228
Summary / 230
Key Terms / 230
Internet Sites / 230
Test Your Knowledge / 231
On the Web Exercises / 231
Questions and Exercises / 232
Ethics Question / 232
Hands-On Exercises / 233

CHAPTER 6

The Cloud and Social Media | 254

Introduction / 254
What Is the “Cloud”? / 254
Encryption in the Law Office / 259
Online Security / 261
Virtual Law Offices / 263
Social Media / 263
Geolocation / 268
Summary / 271
Key Terms / 271
Internet Sites / 271
Test Your Knowledge / 272
On the Web Exercises / 272
Questions and Exercises / 273
Ethics Question / 273

CHAPTER 7

Electronic Discovery | 274

Electronic Discovery Overview / 274
The Federal Rules of Civil Procedure and Electronically Stored Information / 276
Producing and Receiving ESI / 280
Ethical Considerations / 292
Summary / 294
Key Terms / 294

Internet Sites / 295
Test Your Knowledge / 295
On the Web Exercises / 296
Questions and Exercises / 296
Ethics Question / 296

CHAPTER 8

Litigation Support Software | 297

Introduction / 297
Tracking Information and Documents Used in Litigation / 297
Why Litigation Support? / 300
Manual Litigation Support Methods / 301
Overview of Computerized Litigation Support / 301
Types of Computerized Litigation Support Systems / 305
The Litigation Support Process / 319
Searching and Retrieving Litigation Support Data / 322
Litigation Support Tips / 324
Questions and Fears about Computerized Litigation Support / 325
Ethical Considerations / 327
Summary / 328
Key Terms / 328
Internet Sites / 329
Test Your Knowledge / 329
On the Web Exercises / 329
Questions and Exercises / 330
Ethics Question / 330
Hands-On Exercises / 331
Hands-On Exercises / 364

CHAPTER 9

The Internet, Computer-Assisted Legal Research, and Electronic Mail | 379

Introduction to the Internet / 379
Use of the Internet in Legal Organizations / 382
Searching and Finding Information on the World Wide Web / 383
Performing Legal Research on the Internet / 388
Electronic Mail / 397
Introduction to Computer-Assisted Legal Research / 400
Manual Legal Research / 401
Calr: Online Legal Databases / 401
Fee-Based Computer-Assisted Legal Research Services / 402
Westlaw / 403
Lexis Advance / 411
Other Calr Fee-Based Service Providers / 415
Increased Productivity on Calr Systems / 415
Ethical Considerations / 416
Summary / 418
Key Terms / 419
Internet Sites / 420
Test Your Knowledge / 420
On the Web Exercises / 421

Questions and Exercises / 421
Ethics Question / 422
Hands-On Exercises / 423
Hands-On Exercises / 443

CHAPTER 10

The Electronic Courthouse, Automated Courtroom, and Presentation Graphics | 455

The Electronic Courthouse / 455
The Automated Courtroom / 457
Overview of Presentation and Trial Presentation Software / 458
Creating Legal Presentations with Microsoft Powerpoint / 459
Creating Presentations with TrialDirector / 464
Courtroom Presentation Tips / 467
Ethical Considerations / 470
Summary / 470
Key Terms / 471
Internet Sites / 471
Test Your Knowledge / 471
On the Web Exercises / 471
Questions and Exercises / 472
Ethics Question / 472
Hands-On Exercises / 473
Hands-On Exercises / 494
Presentation Software / 494

GLOSSARY / 507

INDEX / 513



PREFACE

ORGANIZATION OF THE TEXT

This textbook is organized into ten chapters. The first chapter introduces students to computers and technology. The objective is to give students a rudimentary understanding of basic computer terminology and systems on which the rest of the book can build.

The next nine chapters represent the heart of the book. They cover word processing, spreadsheets, time-keeping and billing, case management/docket control, electronic discovery, the cloud and social media, litigation support, the Internet and electronic mail, computer-assisted research, and the electronic courthouse/automated courtroom and presentation graphics. Each topic is presented in a clear and organized manner and includes many examples of how the relevant software is actually used by paralegals in legal organizations.

The only certainty in this area of the law is change. And to that end, I am pleased that all of the software applications and data files needed to complete the Hands-On Exercises are available online at the student companion website. Please be sure to check the website before beginning any exercises to check for the latest updates to the exercises and the software applications.

CHANGES TO THE EIGHTH EDITION

Technology in the legal field continues to grow at an astounding rate. Some of the changes to this edition include:

- Revised and updated Hands-On Exercises designed to impart the practical skills required in a modern law office.
- Updated screen shots reflecting the newest versions of the applicable software.
- Software updates:
 - Tabs3 and AbacusLaw chapter content and Hands-On Exercises replaced by Clio.
 - Hands-On Exercises for older versions of Microsoft Office (2013, 2010, and 2007) moved to the student companion website.
 - Westlaw chapter content and Hands-On Exercises updated for the newest version of Westlaw.

I should make a confession. There was a time (many years ago) when I believed that I could be successful in the law office without knowing much about computers. That was then. This is now. Let me state this as plainly as I can: a successful legal professional must know how to use a computer and the applications commonly used in a law office. With the advent of all things “e”—e-mail, e-discovery, e-filing, and so on—it is essential that you gain the skills this text seeks to impart. The 21st century is well under way and computer literacy is a basic competency in law offices. Using *Computers in the Law Office*, Eighth Edition, is designed to give students both theoretical understanding and practical experience with common law-office computer applications. These include both widely used applications, such as Microsoft Word, Excel, PowerPoint, and HotDocs; and programs specific to the law office, such as Clio, CaseMap, TimeMap, Westlaw, LexisNexis, and TrialDirector. I hope that students will learn not only the specific uses of these programs, but also that they should not doubt their abilities or fear the prospect of working with computers.

TO THE STUDENT

If I could give you only one piece of advice, it would be this: be patient. Do not rush through the Hands-On Exercises. I can tell you from personal experience that haste is a sure path to mistakes and frustration. If you are a novice to these applications, I hope (and expect) that you will find you can do far more than you ever thought possible. If I could give you a second piece of advice, it would be to keep learning. Technology is always evolving. Never more so than today, knowledge is power. For years, I have been telling my students that the surest way to make themselves invaluable to their employers is to know how to do something the employer does not know. Learn the skills emphasized throughout this text and then keep learning, and your success is almost a certainty.

- Lexis chapter content and Hands-On Exercises updated for the newest version of LexisAdvance.
- Chapter-Level Changes:
 - Chapter 1: New chapter title; new discussion of “What Is a Computer”—how tablets, smart phones, and other devices are also computers.
 - Chapter 2: New brief discussion about the preference for Microsoft/PC vs. Apple/Mac in the law office; expanded discussion of PDF files and Adobe Acrobat; new discussion of password-protecting confidential word-processing files that will be emailed; new Hands-On Exercises for Word 2016.
 - Chapter 3: Updated Hands-On Exercises for Excel 2016
 - Chapter 4: Clio replacing Tabs3 in exhibits and Hands-On Exercises.
 - Chapter 5: Clio replacing AbacusLaw in exhibits and Hands-On Exercises; new discussion of Microsoft Outlook in “Generic Calendaring and Personal Information Manager Programs” section.
 - Chapter 6: New topics: Encryption in the Law Office, Online Security (Passwords, Two-Factor Authentication), Authenticating Social Media Evidence.
 - Chapter 7: Expanded discussion of “Litigation Holds”.
 - Chapter 8: Updated CaseMap Hands-On Exercises for Version 12.
 - Chapter 9: New chapter title; discussion of new versions of Westlaw and LexisAdvance; updated Hands-On Exercises for Legal and Factual Research on the Internet; new discussions of the Deep Web, the Dark Web, and spear phishing.
 - Chapter 10: Updated Hands-On Exercises for Microsoft PowerPoint.
- Internet sites are referenced, and useful and relevant ones are listed near the end of each chapter.
- Key terms are boldfaced in the body of the text, and definitions appear in the margin for easy review and reference. (A comprehensive glossary appears at the end of the book.)
- Numerous illustrations, including screen shots, legal documents, tables, and other graphics, are included throughout the text.
- Test your Knowledge exercises are included in each chapter.
- On the Web exercises are included in each chapter.
- Questions and Exercises are included in each chapter to challenge students to apply the information learned in the chapter.
- An Ethics Question is included for each chapter.
- Hands-On Exercises are included for most chapters to give students actual experience on a computer.

HANDS-ON EXERCISES

About the Hands-On Exercises

Hands-On Exercises are included for 10 different applications; there are 72 exercises in all. These tutorial exercises assume that the student has access to a computer and to application software, but no prior computer experience is necessary to complete the tutorials.

The Hands-On Exercises include step-by-step instructions that guide the student through the application. There are literally hundreds of screen shots to guide the student and act as reference points. All of the Hands-On Exercises are completely interactive, allowing the student to gain hands-on experience with the software. In addition, all of the Hands-On Exercises are specifically related to legal organizations and legal applications, so the student not only learns how to operate the computer and software, but also learns how to use them in the legal environment.

LEARNING FEATURES

Chapter features include the following:

- Chapter objectives open each chapter to focus the student’s attention on the main elements of the chapter.

Accessing the Hands-On Exercises Through MindTap

Students and instructors using MindTap will find everything that they need for the Hands-On Exercises right on the MindTap learning path: the exercises; software download links* and installation instructions; and data files.

***Please do not download the software programs until your instructor tells you to do so.** Please note that many of the programs expire, and will not work after a certain number of days elapse from when the program was first loaded; other limitations may also apply to certain demonstration software.

Accessing the Hands-On Exercises Through the Student Companion Website

Students and instructors not using MindTap will find the Hands-On Exercises and software installation instructions in the print text. Software download links* and data files are on the student companion website. See the “Supplemental Teaching and Learning Materials” section of this preface for instructions on accessing the student companion website.

***Please do not download the software programs until your instructor tells you to do so.** Please note that many of the programs expire, and will not work

Full tutorials are included for the following applications:

Chapter(s)	Application	Application Provided?	Expiration	Data Files?
2	Microsoft Word*	No	N/A	Yes
2	HotDocs (v. 11)	Yes	120 days after installation	Yes
3	Microsoft Excel*	No	N/A	Yes
4, 5	Clio	Yes (web-based)	365 days after installation	No
8	LexisNexis CaseMap (v.12)	Yes	120 days after installation	No
8	LexisNexis TimeMap (v.5)	Yes	120 days after installation	No
9	WestLaw	No	N/A	No
9	LexisAdvance	No	N/A	No
10	Microsoft PowerPoint*	No	N/A	Yes
10	TrialDirector (v 6.5)	Yes	140 days after installation	No

*For Microsoft Word, Excel, and PowerPoint: The exercises in the print book are for the 2016 versions. Exercises for the 2013, 2010, and 2007 versions of Microsoft Word, Excel, and PowerPoint are provided on the student companion website and in MindTap.

Supplements At-A-Glance

Supplement:	What it is:	What's in it:
Student Companion Website	Resources for instructor and students Log in to cengagebrain.com	<ul style="list-style-type: none"> • Downloadable software demo links • Data files • Updates to the text
Instructor Companion Website	Resources for the instructor, via Cengage SSO	Instructor's Manual with syllabus and lesson plans, chapter objectives and outlines, teaching suggestions, grading rubrics answers to text questions, testbank, and answer key <ul style="list-style-type: none"> • PowerPoint® presentations • Test bank
MindTap (separate purchasing option)	To learn more go to www.cengage.com/mindtap or ask your instructor to try it out	<ul style="list-style-type: none"> • eBook with ReadSpeaker, highlighting, note-taking and more • Updates to the text incorporated into eBook • Downloadable software demo links • Data files • Lecture notes • Case studies • Customizable flashcards • Assignments • Chapter quizzes • Additional resources

after a certain number of days elapse from when the program was first loaded; other limitations may also apply to certain demonstration software.

SUPPLEMENTAL TEACHING AND LEARNING MATERIALS

Student Companion Website

The student companion website includes resources for instructors and students. The card in the text includes an access code for this book's student companion website. Go to login.cengagebrain.com to access the downloadable software demos and updates to the text.

Creating a CengageBrain Account to Access the Student Companion Website

If you do not already have a CengageBrain account, use the following process to create one:

1. Go to the website www.cengagebrain.com.
2. Click on Log In, then click the "Register" button.

3. Click "I Don't Have an Access Code or Course Key." This will bring up a search box to search free products by ISBN.
4. Enter the ISBN **9781337624985** into the search box, and click Search.
5. Using Computers in the Law Office will appear as a search result. Click "Add."
6. Fill in the registration screen with your email address, name, password, security question and answer, and time zone. Check the agreement boxes and click "Create My Account."
7. The Using Computers in the Law Office student companion site will now show up under "My Courses & Materials" on your home page.
8. Going forward, log into your CengageBrain account at www.cengagebrain.com by using the email address and password that you have just created. The Using Computers in the Law Office student companion site will show up under "My Courses & Materials" on your home page.

Adding *Using Computers in the Law Office* to Your Existing CengageBrain Account

If you already have a CengageBrain account, follow these steps to add the *Using Computers in the Law Office* student companion website to your account:

1. Go to the website www.cengagebrain.com.
2. Log into your account using the email address and password that you used when you set up the account.
3. Search for the ISBN **9781337624985** and click on [Using Computers in the Law Office](#) when it pops up.
4. Scroll down to the bottom of the [Using Computers in the Law Office](#) information screen, click on the “Free Materials” tab, then click “Save to MyHome.”
5. The [Using Computers in the Law Office](#) student companion site will now show up under “My Courses & Materials” on your home page when you log into your CengageBrain account.
6. Going forward, the student companion site will already be on your home page; you will not need to add it again.

Instructor Companion Website

The online Instructor Companion Site provides the following resources:

Instructor’s Manual The Instructor’s Manual provides comprehensive teaching support. The Instructor’s Manual contains the following:

- Syllabus and lesson plans
- Chapter objectives and outlines
- Teaching suggestions and class discussion ideas
- Sample grading rubrics
- Answers to exercises in the text
- Testbank and answer key

PowerPoint Presentations Customizable Microsoft PowerPoint® Presentations focus on key points for each chapter. (Microsoft PowerPoint® is a registered trademark of the Microsoft Corporation.)

Test Bank An editable test bank is provided in rich text format, which can be edited in Microsoft Word or other word processing programs.

MindTap MindTap®

MindTap: Empower Your Students MindTap is a platform that propels students from memorization to mastery. It gives you complete control of your course, so you can provide engaging content, challenge every learner, and build student confidence. Customize interactive syllabi to emphasize priority topics, then add your own material or notes to the eBook as desired. This outcomes-driven application gives you the tools needed to empower students and boost both understanding and performance.

Access Everything You Need in One Place Cut down on prep with the preloaded and organized MindTap course materials. Teach more efficiently with case studies, assignments, quizzes, and more. Give your students the power to read, listen, and study on their phones, so they can learn on their terms.

Empower Students to Reach their Potential Twelve distinct metrics give you actionable insights into student engagement. Identify topics troubling your entire class and instantly communicate with those struggling. Students can track their scores to stay motivated towards their goals. Together, you can be unstoppable.

Control Your Course—and Your Content Get the flexibility to reorder textbook chapters, add your own notes, and embed a variety of content including Open Educational Resources (OER). Personalize course content to your students’ needs. They can even read your notes, add their own, and highlight key text to aid their learning.

Get a Dedicated Team, Whenever You Need Them MindTap isn’t just a tool, it’s backed by a personalized team eager to support you. We can help set up your course and tailor it to your specific objectives, so you’ll be ready to make an impact from day one. Know we’ll be standing by to help you and your students until the final day of the term.

ACKNOWLEDGMENTS



This book was made possible by many individuals. This book required an enormous amount of work from a superb team of talented professionals. To all of you, many thanks.

REVIEWERS

Special thanks go to the reviewers of the text for their ideas and suggestions:

Diana Blake

Portland Community College
Portland, OR

Jennifer Carpenter

San Jacinto College and Lone Star College
Houston, TX

Barry J. Dalnekoff

Anne Arundel Community College
Arnold, MD

Linda Gosnell

Eastern Kentucky University
Richmond, KY

Pat Lyons

Bristol Community College
Fall River, MA

Judith Quinby

Kennesaw State University
Kennesaw, GA

Tonya McCreary Williams

Columbus State Community College
Columbus, OH

Wendie L. Witzke

Western Technical College
LaCrosse, WI

MY FAMILY

I am so grateful to my family. I have been writing and re-writing this book for the better part of a decade. I appreciate all of their love and support. I love you all very much and appreciate your patience and encouragement. This is for you.

Please note that the Internet resources are of a time-sensitive nature and
URL addresses may often change or be deleted.



Overview of Computers and Technology in the Law Office

CHAPTER OBJECTIVES

After completing this chapter, you should be able to do the following:

1. Identify how computers and technology are being used in legal organizations.
2. Identify the various computer-system components.
3. Recognize the essential elements of a computer.
4. Distinguish among the various forms of computer software.
5. Understand the concept of metadata.
6. Recognize the ethical issues raised by the use of technology in the law office.

INTRODUCTION

Computers are an important part of our society. They are used in nearly every facet of our lives, including our jobs, to automate services and products; our health, to enhance medical treatment; our government, to maintain, organize, and analyze information; our education, to help children read and write; our financial institutions, to track and maintain our banking, credit, and investment-related information; our entertainment, including the Internet, movies, music, and the arts; and our transportation, to control the electronic systems in cars and public transportation systems such as subways.

Just as the use of computers in our society has grown, so has the use of computers in the practice of law. The application of computers in large, medium, and small law firms, corporate law departments, and government offices has increased dramatically over the past few decades. It is imperative for paralegals entering the job market to have an understanding of computers and technology, because that knowledge (1) allows a paralegal to be more productive and efficient, (2) can give an attorney and paralegal a competitive advantage in court, (3) simplifies complicated tasks, and (4) allows the user to stay competitive in the job market.

INTRODUCTION TO TECHNOLOGY AND THE LAW

Prior to the early 1980s, computers had little effect on the practice of law. A few extremely large firms used them for “back-office” functions such as accounting or billing, but other than that, computers were not used much in legal organizations. A legal professional’s tools of the trade were pen, legal pad, law books, typewriter, and copy machine. After the introduction of personal computers in the mid-1980s, all of that began to change. Now computers and technology are involved in nearly every facet of

a legal professional's job. Virtually all legal professionals use a desktop, laptop, and/or handheld computer, with Internet and email access, and a printer. It is now possible—indeed, often required—to stay in contact with colleagues no matter where they are.

A computer revolution has taken place in the legal industry. An industry that started out rejecting technology has now embraced it. Much of the rise in computer use in legal organizations is due to the increased power, decreased cost, and increased ease of use and efficiency of computers, all of which contribute to the competitive advantage that they give the user. Computers are being used for everything from word processing, timekeeping, and billing to legal research on the Internet to website management. This holds true for all types and sizes of law firms, whether a solo practitioner, a thousand-attorney global law firm, or a corporate or government legal department. The cost of technology has decreased so much that even solo practitioners, small law offices, and legal aid offices can afford state-of-the-art computers.

Computers are used to organize documents, not just in large cases involving tens of thousands of documents, but in smaller cases as well. Computers are used to communicate with clients, often via email, and to exchange documents. Attorneys take depositions of witnesses by using videoconferencing. Laptop and tablet computers are used in the courtroom to search for documents, track exhibits, and make presentations to juries. Laptop and tablet computers are used in the courtroom to conduct legal research right at the counsel table.

The Internet has had a profound impact on the practice of law and on how paralegals perform their jobs. The **Internet** is one of the world's largest computer networks; actually, it is a "network of networks." It connects hundreds of millions of computers around the world and allows them to share information. Legal organizations and paralegals, in particular, can send and receive electronic messages, research both legal and nonlegal information, send documents, and do much more. The pervasive and expanding use of the Internet is clearly driving some of the need for paralegals to have good technology skills.

Technology is also being used by courts in a variety of ways. Many courts allow parties to file documents electronically, using the Internet, and allow attorneys and paralegals online access to the courts' computer systems. Courts use computers to track currently pending cases. Such systems can automatically set scheduling deadlines for each case and alert judges to scheduling concerns or problems, particularly for criminal cases in which defendants have the right to a speedy trial. In some courts, court reporters can store information electronically, within seconds of it being presented, so that it can be displayed immediately for jurors, judges, and parties to view the information.

In short, all types of legal organizations and legal professionals, including paralegals, are using computers and technology on a daily basis in a variety of ways. Given this overwhelming move toward technology use and computerization, all types of legal organizations are looking for legal professionals who not only have good legal skills, but also have the skills to use the organization's computer systems with little additional training.

COMPUTERS AND TECHNOLOGY

Now would be a good time to make the distinction between "computers" and "technology." When you think of a computer, you may think of the bulky desktop computers in your school's computer lab. Or perhaps you think of a sleek ultra-thin laptop or tablet. But do you think of your smartphone, your fitness tracker, your automobile, or your programmable thermostat? They may all be considered computers. It is often noted that a modern smartphone is more powerful than the computers NASA had when it sent Apollo 11 to the moon and back. And perhaps even more importantly, these new devices have the ability to communicate—with us and with each other.

Internet

One of the world's largest computer networks; actually a "network of networks." It allows hundreds of millions of users around the world to share information.

Perhaps the first question before us is: what is a computer? At first, this might seem to be a foolish question; we all know what a computer is. But consider the essential elements of any computer:

- The ability to receive data (input)
- The ability to process data
- The ability to store data
- The ability to provide the processed data (output)

So, picture in your mind the traditional notion of a “computer.” You see the user typing on a keyboard (input); the computer processes that data and converts it to a word-processing document; the user sees the document on the screen and can print or email it (output); and, the document can be stored by the computer for later use. Now try to see in your mind someone using a smartphone or a digital camera. They could also be thought of as computers, as they both also allow for input, processing, output and storage. When you visualize this, you probably see someone physically interacting with the device. What most people do not think of are devices that can receive data passively—without any action on the part of the user.

Perhaps the two most notable changes in technology in the past few years are the advent of wireless mobile technology and the concurrent ability of these new wireless devices to receive data passively. For example, most smart phones are enabled with various geolocation devices—these allow for continuous tracking of the location of the smart phone, and presumably, its owner. All without any direct action on the part of the user. And by constantly receiving and processing information, it is possible for the device to learn. If you were to enter the time and location of an appointment in your mobile calendar, many devices are capable of detecting its location and calculating how long it would take you to get to the appointment based on current traffic conditions. And the device could warn you if traffic is bad enough to require you to leave earlier than planned.

Many people today wear fitness trackers—these devices keep track of how many steps are walked, how many flights of stairs are climbed, how many times the user’s heart beats per minute, even how many times the user tosses and turns while asleep. That information is constantly being received by the fitness tracker and is processed to provide the user with a realtime picture of her health. This information may then be shared with friends or health care professionals and can be stored on the fitness tracker’s website. All with no direct action by the user.

One more example—there are programmable thermostats (the most notable of these being the Nest, sold by a division of Google) that can be adjusted from anywhere via the Internet. These devices also have sensors that can monitor the movement of people in and out of the home and adjust the temperature accordingly. Over time, the thermostat “learns” when the family will be coming home and can raise or lower the temperature of the house—without any direction from the user.

The lesson to be learned here is that data can be found on a variety of devices beyond the desktop computers we have traditionally looked to for such data. Knowing where to look and what to look for is a skill that law firms seek and value highly.

ELEMENTARY COMPUTER CONCEPTS

This text is not concerned with imparting technical and scientific information on how a computer operates; rather, its focus is on how paralegals can use computers in a practical way to carry out their duties. Nevertheless, it is necessary to cover some basic computer concepts as background for users. Here is a quick tour of the common computer components.

computer

An electronic device that accepts input data, processes data, outputs data, and stores data electronically.

input

Data or information that is entered or transferred into a computer (including by keyboard, mouse, scanner, voice, etc.).

output

Information or computer results that are produced or transmitted from a computer to a user as a result of the computer's operations (including to monitor, printer, etc.).

Hardware

The physical equipment of a computer system, as opposed to programs or software.

Software

Computer programs that instruct the computer hardware how to function and perform tasks.

storage

Retention of electronic information for future use (using storage devices such as hard disks, flash drives, and other media).

COMPUTER COMPONENTS

As noted above, a **computer** is an electronic device that receives, processes, outputs, and stores information. Information that is entered into a computer is called **input**. Information that comes out of a computer is called **output**. **Hardware** is the actual physical components of a computer system. **Software** refers to instructions that make the computer hardware function. A computer system works together with peripheral devices, such as auxiliary **storage** and input, output, and communication devices (hardware), to accomplish the information-handling tasks. The system contains a central processing unit and a main memory.

Central Processing Unit

The **central processing unit (CPU)** organizes and processes information. It is the “brain” of the computer. It performs logical operations—in accordance with the operating system software—and coordinates and communicates with auxiliary storage devices and input, output, and communication devices.

At the heart of the CPU is the **processor chip**. One or more processor chips perform the actual arithmetic computations and logic functions. The speed of the processor, and thus of the computer, is determined by how many bits or bytes of information the chip can process at a time and how fast it acts to process the information. The more bits that can be processed in one cycle, the faster the computer will be. For example, a processor that processes 64 bits at a time is considerably faster than one that processes only 32 bits.

The number of bytes of information a computer can hold is measured in kilobytes (KB), megabytes (MB), gigabytes (GB), terabytes (TB), or petabytes (PB) (see Exhibit 1–1).

PERIPHERAL DEVICES

Peripheral devices are pieces of equipment that are connected to a computer to perform specific functions. They include auxiliary storage devices, input devices, output devices, and communication devices.

Auxiliary Storage Devices

An **auxiliary storage device** is used to permanently store information. Auxiliary storage devices and RAM (random access memory) are sometimes confused with one another, because they both use megabytes and gigabytes to refer to their respective **storage capacities**, and they both store information, albeit for different purposes. RAM is where information is stored temporarily, while the user is working with it, and is erased every time the computer is turned off. In contrast, an auxiliary storage device stores information permanently.

Hard Disk For permanent storage, most personal computers contain a rigid magnetic disk or **hard disk drive**. Hard disks are very reliable and have fast access times (the time it takes the computer to locate a single piece of information and make it available for processing). They can also read and write data. It is possible, however,

Exhibit 1–1 Storage capacities

Kilobyte (K)	=	One thousand bytes	(1,000)
Megabyte (MB)	=	One million bytes	(1,000,000)
Gigabyte (GB)	=	One billion bytes	(1,000,000,000)
Terabyte (TB)	=	One trillion bytes	(1,000,000,000,000)
Petabyte (PB)	=	One quadrillion bytes	(1,000,000,000,000,000)

© Cengage

for them to crash if they are handled roughly (e.g., if the computer is dropped) or if they are defective or old. When a crash occurs, some or all of the information on the hard disk is lost or destroyed. Crashing often causes physical damage to the surface of the disk, making data retrieval difficult even for experts. Sometimes, it seems that hard drives crash for no reason at all. This alone is a good reason to get in the habit of backing up your data on a regular basis.

At least one hard disk drive is usually mounted inside the computer; usually a small light turns on when information is either accessed from or saved to the drive. Most hard disks are permanently sealed and are fixed inside the drive; thus, they cannot be removed. Large-capacity hard disks are standard equipment on most computers produced today. Many people use external hard drives for backup purposes; these auxiliary devices are literally freestanding hard disk drive units.

Removable Drives A large amount of data can be stored using **removable drives**, such as a flash drive. Flash drives, thumb drives (so called because they are about the size of a human thumb), or sticks are extremely small and portable, and are also fairly fast. A flash drive simply plugs into a computer's USB port and is immediately accessible by the computer once it has been loaded. Flash drives are typically used to move large files from one system to another. Many MP3 players also use this technology.

Magnetic Tape In a **magnetic tape system**, data are written to and stored on a spool of magnetic tape. The magnetic tape can be stored either on large tape reels or in tape cartridges.

Magnetic tape systems store data sequentially. (This is similar to an old VHS tape: if you wanted to access a particular section of the tape, you typically had to fast-forward or rewind the tape to the desired section.) For this reason, access times are quite slow. This is why magnetic tape is usually used only for making backup copies of information residing on other storage devices. However, although their access times are slow, they have large capacities, up to a terabyte or more.

Optical Storage Devices Using laser beams, **optical storage devices** can record data on and retrieve data from small plastic disks, such as DVDs. Optical storage devices can store hundreds of megabytes of data on a single disk. This has allowed manufacturers to store everything from music and video/multimedia presentations to large software programs on a single disk. The space saving made possible by these technologies has been immensely beneficial to law offices, which often must keep large numbers of records for long periods of time. And while the trend may now be to store data in the cloud (computer storage accessible through the Internet), many legal professionals still prefer to use these more tangible storage devices.

Input Devices

Input devices are used to enter information into a computer. Input devices include the mouse, keyboards, scanners, voice recognition devices, digital cameras, and so on.

Scanners A scanner has the ability to bring hard-copy documents into a computer. Many scanners look like small office copiers. Scanners shine light on the document and translate the reflected light into digital signals that a computer can recognize and store. The scanner allows the image of a document, such as a photograph or a microfilm frame, to be put into a computer; this is called imaging.

central processing unit (CPU)

The part of a computer that contains the processor chip and main memory. The CPU organizes and manipulates information, in addition to coordinating with peripheral devices.

processor chip

The part of the computer that performs the actual arithmetic computations and logic functions.

Peripheral devices

Pieces of equipment that are connected to a computer to perform specific functions, such as storing information (auxiliary storage devices), inputting information (input devices), outputting information (output devices), and communicating with other computers (communication devices).

auxiliary storage device

A device that stores information so that it can be retrieved for later use. Auxiliary storage devices retain data after power to the computer has been turned off. Auxiliary storage devices include flash drives, hard disk drives, and others.

storage capacity

The maximum amount of data that can be stored on a device.

hard disk drive

A reliable and fast auxiliary storage device that stores data on a rigid magnetic disk; may be built into the computer (internal) or a freestanding peripheral device (external).

removable drives

A small portable device that stores a large amount of data; often used to transfer information between computers.

magnetic tape system

Storage device that records data on magnetic tape.

optical storage devices

Devices that use laser beams to write data onto small plastic disks. Optical storage devices can record hundreds of megabytes of data on a single disk.

Input devices

Devices used to enter information into a computer; include the mouse, keyboards, scanners, voice recognition devices, digital cameras, and others.

imaging

Scanning a document into a computer so the user can see an exact picture of the document on the computer.

optical character recognition (OCR)

A technology that allows the text of documents to be read or scanned into a computer so the text of the document can be searched or brought into a word processor to be edited.

More specifically, **imaging** refers to the ability to scan a document into a computer so the user can see the exact image of the original document on the computer. Imaging is similar to taking a photograph of a document: you can see the image of the document, but you cannot change it or edit the text. To edit the text of a document, you would need optical character recognition software (see below).

Scanners can also translate the text of a document into an electronic format so that the text can then be electronically searched or manipulated with a word processor. This is called **optical character recognition (OCR)**. Using a scanner and OCR software, users can “read” printed material into a computer so the text of the document can be searched (like searching in Westlaw or Lexis databases) or brought into a word processor for text editing. In OCR, the scanner reflects light onto the printed text, compares the shapes of the letters in the text to the letters in the scanner/computer memory, and writes the information into the computer. Through the use of OCR technology, it is possible to scan printed information into a computer much faster than a keyboard operator could enter the information. Large OCR scanners can scan thousands of pages of text into a computer in a relatively short time.

However, if the printed text that is being scanned does not exactly match the letters in the scanner’s memory, an error will occur, and the right letter will not be entered. This potential for inaccuracy can be a problem. Even if a document is scanned in with 99 percent accuracy, that can still leave plenty of errors in the scanned version of the document. For example, if a user scans in a 10,000-word document, that would leave 100 errors in the document. The accuracy rating drops dramatically if a document is not clear or has non-standard type. OCR scanners can be very useful, but accuracy must be checked carefully.

Imaging and OCR are similar yet different. Imaging allows the user to see the document in its original state, but the user cannot search for words using imaging. OCR allows the user to search for words and word patterns, but not to see the exact image of the original document, only the text it contained.

Speech Recognition The ability of a computer to understand spoken words is called **speech recognition**. The user speaks into a microphone that is connected to the computer. Using sophisticated software, the computer is able to interpret the speech and translate it into computer commands and into text for use with word processors, email, and other software. Typically, speech recognition software leads the user through exercises that are designed to teach the software the nuances of that particular person’s voice.

Although speech recognition accuracy is quite good—typically greater than 95 percent—it is still absolutely necessary to proofread the text created by the software. For this reason, among others, many legal organizations do not make much use of speech recognition technology.

Digital Cameras Digital cameras allow the user to take photographs or full-motion video and sound and download or transfer them directly into a computer or upload them to the cloud. The software accompanying these devices also allows the user to easily edit, enhance, and view the information. Many legal organizations use these devices to cut and paste data directly into presentation graphics programs for displaying evidence to juries. Many legal organizations are rediscovering the old adage that “a picture is worth a thousand words.” Video evidence can be extremely persuasive to juries and factfinders.

Communication Devices

A communication device, such as Wi-Fi, allows computers to exchange information. Such a device is technically both an input and an output device, as it can receive data from other computers (input) and also send data to other computers (output).

Wireless Modem Many mobile phones and tablet computers use **wireless modems** to connect to the Internet. A wireless modem typically is either built into the device or slides into an open slot on a laptop or tablet computer; in either case, it allows the user to access email, the Internet, and other mobile devices without hard-wired connections.

Videoconferencing **Videoconferencing** is a private broadcast between two or more remote locations, with live image transmission, display, and sound. This technology uses data communications to conduct long-distance, face-to-face meetings. Videoconferencing is very useful in a legal organization for meeting with clients, interviewing job candidates, meeting with co-counsel, taking depositions, and other applications.

Voice over Internet Protocol **Voice over Internet Protocol (VoIP)** allows users to make telephone calls using a broadband Internet connection instead of a regular (analog) phone line. Most VoIP service providers allow the user to call anyone who has a telephone number, including local, long-distance, mobile, and international numbers. VoIP allows a user to make a call directly from a computer, a special VoIP phone, or a traditional telephone using an adapter. Cost savings over long-distance telephone charges can be substantial, because most VoIP providers charge a flat fee for unlimited call time. Some systems can support multiparty conference calls, and can integrate voice mail and faxes with email.

A major disadvantage is VoIP's dependence on electrical power: if the power goes out, so do the phones, unless there is a backup system. VoIP is also dependent on proper operation of both the broadband connection and the network; if they go down, so do the phones.

Tablets and Smartphones Look around your classroom. Chances are that many students are not using laptop computers; instead they are using tablet computers (or just "tablets"). A tablet is a light, slim, portable computer that uses a touchscreen as its primary input device, such as the Apple iPad and Microsoft Surface. When your class takes a break, how many students reach for a smartphone, such as the Apple iPhone? These small mobile devices are simple to use, yet they can have extraordinary computing capability. Internet access is available via the device's cellular capability and Wi-Fi.

Virtual Private Networks (VPN)

You have probably logged onto numerous private networks without even thinking about it. For example, when you are online in your classroom, you are probably connected to your school's network. These private networks used by universities and corporations usually take advantage of sophisticated security systems to protect the data sent on the network. On the other hand, when you use the Internet provided by a hotel or a coffee shop, that is a public network and does not offer the same level of security as a private network. That creates the potential for all kinds of trouble as confidential client information is essentially streaming through the air available to anyone with the means and desire to intercept it.

A Virtual Private Network, or VPN, is a technology that lets people access their office's computer network over the Internet while at home or traveling. One way to think of a VPN is to think of it as a tunnel. Inside this "tunnel" information may travel safely. While in this "tunnel," information is encrypted. The end result is that the tunnel protects the information and even if it is intercepted, since it is encrypted, it is not of any use to the hacker. Accessing a network via a VPN is sometimes referred to as remote access.

speech recognition

The ability of a computer to understand spoken words.

wireless modems

Component of mobile phone or tablet computer that allows the user to access email, the Internet, and other mobile devices without hardwired connections.

Videoconferencing

A private broadcast between two or more remote locations, with live image transmission, display, and sound. Uses data communications to conduct long-distance, face-to-face meetings.

Voice over Internet Protocol (VoIP)

Functionality that allows users to make telephone calls using a broadband Internet connection instead of a regular phone line.

So why would you want to use VPN for remote access? Let's say you want to be able to work from home. Or maybe you need to retrieve a file while traveling. Without a VPN, in order to make resources on the office network available to users, the network administrator would have to weaken the security of your network by opening holes in your firewall—which isn't usually a good idea.

With VPN, the integrity of your office network remains intact, but you can allow remote users to act as part of the office network. After connecting over VPN, remote users can access files, print documents, and generally do anything with their computers that they would be able to do in the office.

Still, using VPN is not the same as being in the office. Most office networks are pretty fast. Most Internet connections are not. Even the fastest cable connections are around one-tenth the speed of your average office network.

In years past, most networks were hardwired. Today, an alternative to hardwired networks that require cables is **wireless networking**. Wireless networks are extremely popular in law offices, because they nearly eliminate the necessity to install long cable runs throughout an office.

wireless networking

System that allows computers on the network to communicate with each other using wireless antennas coordinated through a wired access point.

intranet

An internal network designed to provide and disseminate information to internal staff; most mimic the look and feel of the World Wide Web.

extranet

A secure web-based site that allows clients to access information about their cases and collaborate with the legal professionals who are providing legal services to them.

Web-Based Networks: Internet, Intranet, and Extranet

Many legal organizations have expanded their networks to include intranets and extranets. An **intranet** is an internal network designed to provide and disseminate information to internal staff; most such systems use a web browser and mimic the look and feel of the World Wide Web. In much the same way as the Internet provides information to the public, an intranet provides information to internal users. An intranet can be walled off from the Internet to provide security from Internet users. An intranet is part of a legal organization's networked computer system and in some cases the organization has a server dedicated to supporting the intranet. Information that a legal organization typically places on an intranet includes office policies and procedures, links to law-related websites, training materials, contact lists, and access to the firm's extranet. The use of intranets is growing substantially in legal organizations.

An **extranet** is a network designed to provide, disseminate, and share confidential information with clients. A client with a web browser can tap into the legal organization's extranet, after going through security and identification/password protections, to access his or her case plans, documents, case strategies, billing information, and other information. This is also extremely helpful when a law office must communicate with multiple clients or co-counsel on one case. Exhibit 1–2 notes the similarities and differences between intranets and extranets.

INTRODUCTION TO COMPUTER SOFTWARE

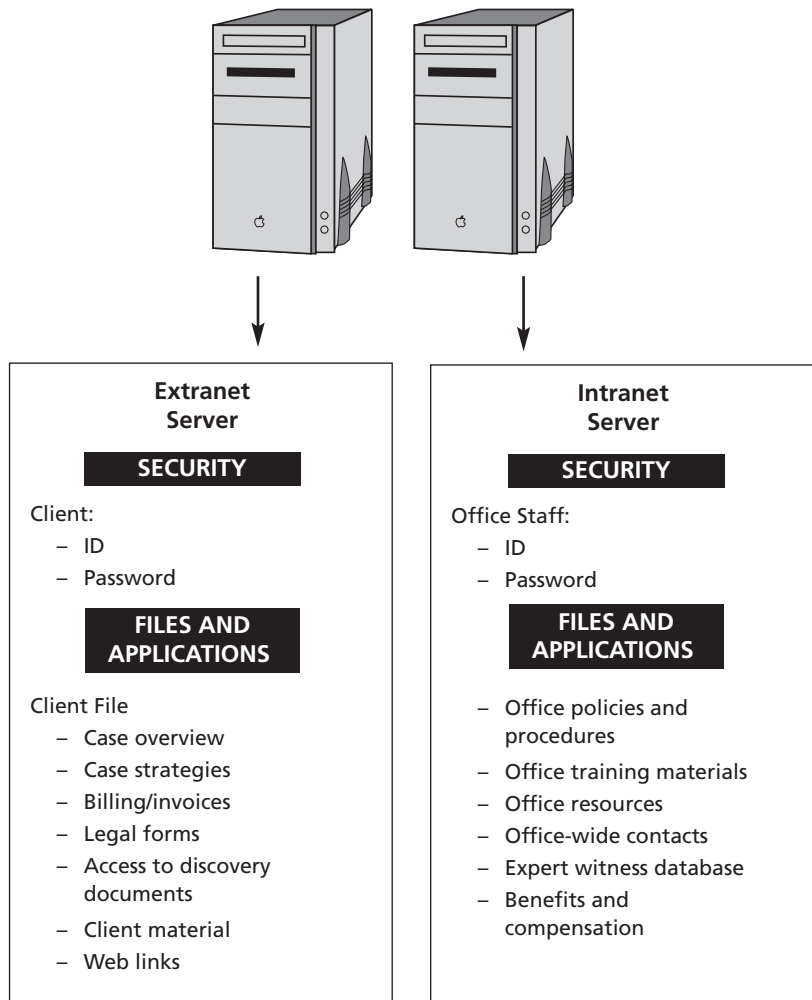
Computer hardware is useless without computer software to make it operate. Computer software (i.e., a computer program) is a set of step-by-step instructions that direct a computer how to function and perform tasks. Three basic types of software are available: operating system software, utility software, and application software.

The **operating system software (program)** instructs the computer hardware how to operate its internal circuitry and how to communicate with input, output, and auxiliary storage devices; this program also allows the user to manage the computer. Operating system software ties the computer hardware and software together. Using operating system software, users can delete old or unwanted files, obtain a directory of the files on a disk, and manage the resources of a computer. Some type of operating system software comes free with nearly all computers.

operating system software (program)

A set of instructions that tell the computer how to operate its own circuitry and manage its components; also controls how the computer communicates with input, output, and auxiliary storage devices. Allows the user to manage the computer.

Exhibit 1-2
Extranet and intranet



© Cengage

Utility software helps users with the housekeeping and maintenance tasks that a computer requires. Thousands of utility programs are available. Utility programs can back up a hard disk, recover data that have been accidentally deleted, protect computers from viruses, and carry out many other tasks.

Application software instructs the computer to perform a specific function or task, such as word processing. Practically speaking, when people use the word *software*, they are usually referring to application software. A word-processing program, a spreadsheet program, and a database program are all examples of application software, because they each tell the computer how to perform a specific task or set of tasks.

Relax, You’ve Done This Before: Specific Law Office Uses of Computer Software

Take comfort in the fact that most paralegal students are already competent in and comfortable with performing basic computer functions. You may have used a software program to “clean” your computer by removing unwanted files. That is an example of a utility program. It is likely that you have prepared documents (e.g., a term paper) using a word-processing program. That is an example of application software. It follows, then, that you probably already have many of the essential skills required to use a computer in a modern law office.

Utility software
Instructions that help users with the housekeeping and maintenance tasks a computer requires; helps manage either the hardware or software aspects of a computer.

Application software
Instructions (programs) that tell the computer to perform a specific function or task, such as word processing.