

R E A L + W O R L D

Print Production

with Adobe® Creative Cloud®

INDUSTRIAL-STRENGTH PRODUCTION TECHNIQUES



Tools for
designers and
production artists

Tips for offset
digital printing

Tricks for maximum
efficiency

CLAUDIA McCUE

R E A L + W O R L D

Print Production

with Adobe® Creative Cloud®

INDUSTRIAL-STRENGTH PRODUCTION TECHNIQUES

CLAUDIA McCUE

ADOBE
PRESS



REAL WORLD PRINT PRODUCTION WITH ADOBE CREATIVE CLOUD

Claudia McCue

Copyright © 2014 by Claudia McCue

For the latest on Adobe Press books, go to www.adobepress.com

This Adobe Press book is published by Peachpit

To report errors, please send a note to errata@peachpit.com

Peachpit is a division of Pearson Education

Project Editor: Susan Rimerman

Production Editor: Maureen Forys, Happenstance Type-O-Rama

Copy Editor: Kelly Kordes Anton

Technical Editor: Chad Chelius

Proofreader: Suki Gear

Compositor: Craig Woods, Happenstance Type-O-Rama

Indexer: James Minkin

Cover Design: Charlene Charles Will

Cover Illustration: Alicia Buelow

Notice of Rights

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission for reprints and excerpts, contact permissions@peachpit.com.

Notice of Liability

The information in this book is distributed on an "As Is" basis without warranty. While every precaution has been taken in the preparation of the book, neither the author nor Peachpit shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

Trademarks

Adobe InDesign, Adobe Photoshop, Adobe Illustrator, and Adobe Acrobat are registered trademarks of Adobe Systems, Incorporated in the United States and/or other countries. All other trademarks are the property of their respective owners. Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

ISBN-10 0-321-97032-2

ISBN-13 978-032197032-9

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

Table of Contents

| | |
|--|------------|
| Introduction | vi |
| Chapter One: Life Cycle of a Print Job | 1 |
| The Olden Days..... | 2 |
| Designer..... | 3 |
| Typesetter..... | 3 |
| Photographer..... | 3 |
| Trade Shop..... | 3 |
| Printer..... | 3 |
| Job Submission..... | 6 |
| Scenic Tour of a Typical Printing Plant..... | 6 |
| Glossary of Printing Terms..... | 21 |
| Chapter Two: Ink on Paper | 39 |
| Fundamentals of Black-and-White Printing..... | 39 |
| Fundamentals of Color Printing..... | 42 |
| Press Issues..... | 51 |
| Digital Printing..... | 59 |
| Your Monitor Is Not Made of Paper..... | 63 |
| Chapter Three: Trimming, Binding, and Finishing | 69 |
| One Size Does Not Fit All..... | 69 |
| Folding: High-Speed Origami..... | 74 |
| Imposition..... | 76 |
| Binding Methods..... | 85 |
| Moving Beyond Two Dimensions..... | 90 |
| Chapter Four: Preparing Raster Images | 99 |
| Ancient Times: B.P. (Before Pixels)..... | 100 |
| All About Pixels..... | 100 |
| Imaging Software..... | 102 |
| Resolution and Image Fidelity..... | 103 |
| Scanning Artwork..... | 106 |
| Cropping and Transforming Images..... | 106 |
| Appropriate Image Formats for Print..... | 109 |
| Inappropriate Image Formats for Print..... | 119 |
| Chapter Five: Vector Graphics | 121 |
| Vector File Formats..... | 122 |
| Handling Text..... | 125 |
| Incorporating Images into Vector Files..... | 127 |
| Avoiding Unnecessary Complexity..... | 128 |

| | |
|---|------------|
| Chapter Six: Fonts | 131 |
| Font Flavors | 131 |
| Fonts Installed by Creative Cloud | 138 |
| Activating Fonts in the Operating System | 139 |
| Font-Management Programs | 140 |
| Typekit Desktop Fonts | 141 |
| Font Licensing Issues | 143 |
| Chapter Seven: Cross-Platform Issues | 147 |
| Crossing the Great Divide | 148 |
| Naming Files | 148 |
| Fonts | 152 |
| Sending Files from Mac to Windows | 153 |
| Sending Files from Windows to Mac | 154 |
| Graphics Formats | 155 |
| Compressing Files | 155 |
| Chapter Eight: Job Submission | 157 |
| Preparations During the Design Process | 158 |
| Talking with the Printer | 158 |
| Planning for Print | 160 |
| Sending Job Files | 166 |
| Preparing for Proofing Cycles | 170 |
| Attending a Press Check | 174 |
| Chapter Nine: Creative Cloud | 177 |
| Understanding Creative Cloud | 177 |
| Version Determination | 180 |
| Creating Work for Users of Older Versions | 180 |
| Chapter Ten: Photoshop Production Tips | 183 |
| Off to a Good Start | 183 |
| Know the Fate of the Image | 184 |
| Image Resolution | 185 |
| Color Space | 186 |
| Working in Layers | 188 |
| Transparency | 195 |
| Silhouettes and Masking | 197 |
| Silhouetting Soft-Edged Subjects | 201 |
| Beyond CMYK | 205 |
| Adding Spot Color to a CMYK Image | 207 |
| Creating a Spot Varnish Plate | 208 |
| Vector Content | 209 |
| Saving for Other Applications | 211 |

| | |
|---|------------|
| Chapter Eleven: Illustrator Production Tips | 213 |
| Document Profile and Color Mode | 213 |
| Artboards | 215 |
| Using Symbols | 219 |
| Simplifying Complex Artwork | 222 |
| Live Effects | 224 |
| Using the Appearance Panel | 227 |
| Creating 3D Artwork | 231 |
| Transparency | 233 |
| Flattening Transparency | 235 |
| Linked and Embedded Images | 237 |
| Blended Objects | 239 |
| Spot Colors | 240 |
| Type and Fonts | 245 |
| Why Versions Matter | 251 |
| Saving for Other Applications | 255 |
| Creating PDF Files | 259 |
| Opening PDF Files in Illustrator | 260 |
| Chapter Twelve: InDesign Production Tips | 261 |
| Graphics | 261 |
| Using Native Files | 273 |
| Swatches | 280 |
| Alternate Layouts | 285 |
| Miscellaneous Document Tips | 289 |
| Transparency | 296 |
| Finding and Fixing Problems | 307 |
| PDF Creation Methods | 314 |
| PDF Creation Settings | 315 |
| Chapter Thirteen: Acrobat Production Tips | 317 |
| Acrobat Product Line | 318 |
| Where Do PDFs Come From? | 319 |
| Creating PDF Files | 319 |
| Editing PDF Files | 327 |
| Comment and Review | 330 |
| Print Production Tools | 339 |
| Using External PDF Editors | 354 |
| Index | 355 |
| <i>Bonus chapters mentioned in this eBook are available after the index</i> | |
| Chapter Fourteen: Print Production Resources | A-1 |

Introduction

Much has changed in the realm of printing since the original edition of this book. Film has been almost totally abandoned in favor of direct-to-plate imaging, and the quality of digital printing processes rivals that of traditional offset. Updating the book has been a bit like time travel, as I deleted sections devoted to processes that have fallen by the wayside and expanded portions that described new-at-the-time techniques that are now commonplace.

I'm not a designer—I'm a printing geek. I spent half my life in prepress, troubleshooting, fixing jobs, and meeting impossible deadlines. I still love printing. I love the heavy rhythm of presses, the smell of the chemicals, the beehive bustle of a pressroom. I love to see paper roll in one end of the press and printed sheets fly out the other end. I hope I can pass some of this printing love on to you.

Who Should Read This Book

If you are a designer or a production artist who would like a better understanding of the pitfalls you encounter when using Adobe Creative Cloud software, you'll find lots of pointers in this book to help you avoid problems. Almost all software provides options that are tempting to choose but are dangerous under some circumstances. It's good to know which buttons *not* to push—and why.

Photoshop, Illustrator, and InDesign form a powerful ecosystem. Consequently, choices you make in Photoshop can limit your options when you place an image in InDesign. Options you choose in InDesign can affect the quality of the PDF you create. And so on. You need an aerial view of the programs' capabilities so you can anticipate the outcome. It would help if you were psychic, too, but that's another book entirely.

I believe that the more designers understand about the physical requirements of the printing process, the more easily they can avoid problems. This book can explain why your printer sometimes asks you to modify your designs for print. Better yet, you can beat them to it, and they will compliment you on how well-prepared your jobs always are.

If you are an in-house designer or marketing department member, you may have been thrown into the deep end, suddenly given the responsibility of preparing work for print. This book may help you understand the mysterious new world of print.

If you are a prepress production operator, you'll find many reminders of subtle problems that can lurk in graphics or page layouts. If you're new to printing, you'll find beneficial insights into what's happening on the other side of the pressroom door. And if you're looking for a gentle way to educate clients who keep submitting nightmare jobs, well, a book always makes a nice gift, doesn't it?

For purchasing this book, you are also entitled to bonus Chapter 14, "Print Production Resources." To download, register your book at peachpit.com/register. Create an account if you don't have one (it's free!). Then add this isbn: 0321970322. Look for the content on the "My Registered Products" page and click "Access Bonus Content." If you purchased an ebook, bonus Chapter 14 is already included at the end.

What This Book Is Not

If you're in the market for a hot-tips-and-tricks book, this isn't it. It's not a guide for stunning special effects (unless you consider it a special effect to get your job to print as expected). And, although this book demonstrates how to do some useful things in the Adobe Creative Cloud programs, it isn't strictly a how-to book either. In fact, there's quite a bit of how-*not*-to.

Are there any prerequisites for using this book? Only two, really. First, you should have basic proficiency with your computer and operating system, as well as the basics of InDesign, Illustrator, and Photoshop. The other requirement is arguably more important: You should have a healthy curiosity about the printing process and a desire to build problem-free files.

About the Author

I was a chemistry major. Really. But I had a knack for illustration, and I took some college art classes for extra credit. One of my instructors (Michael Parkes, who has since become a well-known fine artist in Europe) suggested that I change my career path from chemistry to commercial art. I thought, "Well, I'll try it for a while," and took a job at a printing plant that summer. A funny thing happened: I fell in love with printing and never went back to the lab. (Thanks, Michael.) Printing turned out to be the perfect environment for someone who held the dual titles of Class Clown and Science Student of the Year.



NOTE You know you've been in printing a long time if:

- Your grocery list has hanging indents.
- Your driver's license lists your eye color as PANTONE 5757.
- Your shoe size is 6½ plus ⅛-inch bleed.
- You refer to painting your house as a two-color job.
- You decide to write a book called *Real World Print Production with Adobe Creative Cloud*.

As a prepress production person, I always enjoyed troubleshooting, discovering new techniques, and sharing those discoveries with coworkers. I started in conventional paste-up and then moved into film stripping. (It's not what you think. See the glossary in Chapter 1, "Life Cycle of a Print Job.") And I was extremely fortunate (or cursed) to be one of the very early operators of color electronic prepress systems in the United States, so I've been pushing pixels around for a *long* time. Then, because it could perform the same magic as a Scitex or Crosfield system (minus the million-dollar price tag), Adobe Photoshop lured me to desktop computers.

I always believed in educating customers so they wouldn't be intimidated by the mysteries of printing. Not surprisingly, that led to my second career as a trainer, consultant, writer, and presenter at industry conferences.

Acknowledgments

I'm passing on to you some of the Basic Printing Truths imparted to me by a number of fine old printing curmudgeons. Count yourself truly lucky if you're befriended by a craftsman like Rick Duncan, who came up through the ranks, learned how to do everything the old-fashioned way, and was always patient with a kid asking too many questions.

I'm part of an informal fraternity of graphic arts aficionados. While we each have our specialties, our common bond is the love of learning and sharing new tricks. David Blatner, Scott Citron, Sandee "Vector Babe" Cohen, Anne-Marie Concepción, Bob Levine, and Mike Rankin are my InDesign brethren (and sistren), going back to the days when we were considered page-layout rebels. Mordy Golding's passion for Illustrator is contagious, and he shares my devotion to enlightening designers in the mysteries of print.

It's priceless to have friends on the inside at Adobe Systems: Dov Isaacs and Lonn Lorenz have been generous with their dry humor and no-nonsense advice on PostScript and PDF for years. And Noha Edell has long provided inspirational support and encouragement. PDF Sage Leonard Rosenthal has frequently enlightened me on arcane Acrobat mysteries.

I'm pleased to have the opportunity to update this book for Creative Cloud; it's sort of like reincarnation. It's truly gratifying that the first two editions have been used as textbooks in some schools. Thanks to Kelly Kordes Anton for policing my commas and technical editor Chad Chelius for ensuring that I wasn't spreading any myths. Thanks to Suki Gear, Craig Woods, and Maureen Forsys for their proofreading, composition, and production work, and James Minkin for crafting the index.

Now go out there and make me proud!

This page intentionally left blank

Preparing Raster Images

4

Whether you acquire an image from a scanner, a digital camera, a royalty-free CD with 1,000,000 images, or a stock photography vendor, it's made out of pixels. *Pixel* is shorthand for *picture element*, the smallest unit of information in a digitized image. Even though pictures on your monitor look like smooth transitions of color, zoom in sufficiently and you'll see all the little square pixels that actually make up the image (**Figure 4.1**). While pixels make it possible to do much of what we do in the graphic arts, they're also the cause of some important limitations.

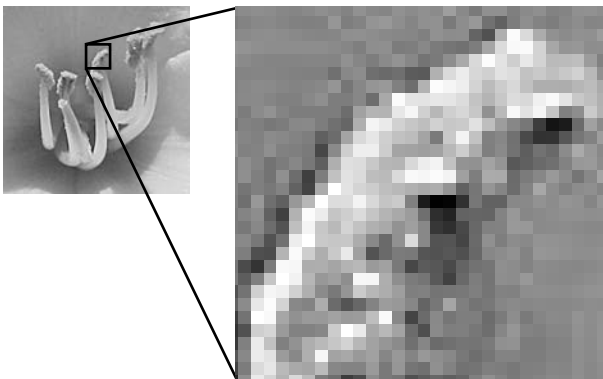


Figure 4.1 Images are made of pixels. Think of them as tiny mosaic tiles.

Ancient Times: B.P. (Before Pixels)

In the olden days of graphic arts, enormous cameras were used to photograph artwork such as drawings, reflective photographic prints, transparencies, and painted illustrations. Highly skilled specialists commandeered these monstrosities, some of which occupied entire rooms (the cameras, not the specialists). The use of colored filters, masking, and exposure methods to produce *color separations* (a separate piece of film for each printing ink) was rather arcane and required years of apprenticeship and study to perfect. And since every step required the use of specialized film, there were a lot of trips to a darkroom to develop the results in chemical baths. It all seemed very high-tech at the time (well, compared to cave paintings), but the process was quite time-consuming.

All About Pixels

Film has given way to pixels, and we have gone from dog-eared color photographic prints and moldy 35mm slides to storing our family photos on piles of CDs, and now into the nebulous world of cloud storage. What was once the province of the darkroom became a daylight venture, and the tools of the craftsmen became available to anyone brave enough to wade in.

Scanners

While early scanners still required highly skilled graphic arts professionals to operate them, they greatly sped up the process of capturing artwork for color separations. Early analog models used photomultiplier tubes and a daunting array of knobs and buttons to perform the same job that had been done by the huge cameras. The first scanners were petite only by comparison to their gigantic camera ancestors: Many could easily dwarf a Volkswagen. It was necessary to mount artwork on a heavy, clear plastic drum and then painstakingly ensure that there was no dust or a trapped air bubble to mar the scan. Scanner operators came from the ranks of color-separation cameramen, and their years of finely honed instincts for camera separations translated well to the newer methods. Thus began the move to digital capture and storage of image information, resulting in our devotion to the pixel and the advent of digital retouching.

In the mid-1990s, improvements in the capabilities and simplicity of flatbed scanners, coupled with the widespread usage of Adobe Photoshop, led to a major change in the way color separations were performed. It was no longer necessary to mount artwork on cylindrical drums, and the numerous knobs were replaced with onscreen buttons and dialog boxes. The digital imaging revolution was underway. Suddenly, people who weren't sure what color separation meant were making color separations.

As flatbed scanners have become more automated and less expensive, it's relatively easy even for novices to make a decent scan. But the more you know about what constitutes a good image, the better the chance you can create a great image from the pixels generated by your scanner.

Digital Cameras

Today's scanners capture transparencies, negative film, paintings, and illustrations and express them as pixels. High-end digital cameras now rival—or exceed—the ability of film-based cameras to capture photographic detail. The image captured by the camera is a digital original, so there's no need to scan a print. Of course, the better the camera and the photographer, the better the image. The rapid evolution of digital image capture is such that today's cellphones take pictures with more inherent information than the earliest digital cameras.

While conventional camera film—such as 35mm transparencies—must be scanned to be used on your computer, digital camera images can be downloaded directly to the computer and used immediately. Digital photography also cuts out the middleman. Unlike film images, digital images don't have any grain, although an image photographed in low lighting conditions may tax the resolving capabilities of a digital camera's sensor, resulting in unwanted digital noise.

Consumer point-and-shoot cameras deliver captured images as JPEG, a compressed format. There are degrees of compression, from gentle to aggressive, and you may never notice any visible artifacts betraying the compression. But higher level “prosumer” cameras and professional digital cameras can deliver images in the Camera Raw format, which is subjected to minimal processing by the camera. While you cannot place a Raw file directly into Illustrator or InDesign, Raw images can be opened directly in Photoshop and saved in another format, such as Photoshop PSD.



TIP While you can't place a Camera Raw file directly into Illustrator or InDesign, there is a work-around. In the Camera Raw module within Photoshop, hold down Shift as you click Open (the Open Image button changes to an Open Object button): this will open the image as a Smart Object in Photoshop. Save the image as a PSD, and you can then place it in Illustrator or InDesign while retaining the secret Camera Raw editing ability. Back in Photoshop, just double-click the Smart Object to edit in Camera Raw.

Raw files can be color corrected in the Photoshop Camera Raw environment without losing additional information. For example, an image shot under daylight conditions but with the camera's white balance set to fluorescent lighting can be corrected with one click in the Camera Raw environment without the loss of information that would be incurred by using a Levels or Curves correction in Photoshop.

If you are a point-and-shoot photographer who just wants to capture moments from a quick vacation, you may consider Raw files to be overkill. But for professional photographers, Camera Raw is a powerful and flexible format, often enabling the recovery or enhancement of details and tones that would be lost in a JPEG file.

Imaging Software

Once you have captured pixels, it's likely that you'll feel compelled to modify them. The industry standard imaging application is Adobe Photoshop, and for good reason. Photoshop provides controls for color correction that enable a knowledgeable user to achieve results equal to those of a knob-twisting scanner operator. Its tools surpass the capabilities of the original, million-dollar dedicated systems. If you're just beginning to learn Photoshop, you won't lack for educational resources. You could probably build an addition to your house from the books devoted to exploring Photoshop. You can add Chapter 10, "Photoshop Production Tips," to the pile.

Photoshop is arguably the most versatile and widely accepted application for image manipulation, but there are other applications that perform useful imaging functions as well.

Adobe Photoshop Elements® (Mac/PC) might be regarded as "Photoshop Lite," but it still packs a hefty arsenal of retouching and color-correction tools. The product is geared toward enthusiasts and lacks support for CMYK images.

Adobe Lightroom™ (Mac/PC) is engineered for use by photographers and provides sophisticated tools for organizing and color correcting images.

Apple iPhoto® (Mac only) is geared toward hobbyists, with organizational tools and limited color-correction capabilities. However, it offers no support for CMYK images.

Aperture (Mac only) is targeted to photographers and includes support for Camera Raw files. It provides organizational tools as well as color-correction controls but provides no support for CMYK images.

These are not the only solutions that exist for manipulating images. There are painting programs, such as Painter™ and Paint Shop Pro® (both from Corel®), which let you easily make images resemble watercolors or oil paintings. Imaging tools for consumer and hobbyist photographers increase on a daily basis. However, most of these programs don't offer support for CMYK images, so they're not the best tools if you're preparing images for print.

Let's face it—if you're designing for print, you can't live without Photoshop. When the name of a product becomes a verb—“Please Photoshop that out”—it's a sure sign that the product has become the industry standard.

Resolution and Image Fidelity

The resolution of an image is generally measured in pixels per inch (ppi) unless you speak metric, in which case it's expressed in pixels per millimeter. Determining the proper resolution for Web images is simple: 72 ppi at final size. But there are strongly held (and hotly debated) beliefs regarding the appropriate image resolution for printing. Some hold that 150 percent of the final screen ruling value is sufficient, and some believe twice the final ruling is preferable, largely because it's easier to calculate the resolution. For example, an image that will be printed at 150 line screen should have a resolution of 300 ppi. In the past, when typical hard drives held 80 MB, networks were glacially slow, and RIPs choked on 15 MB PostScript files, it was important to trim off every little bit of fat, so we agonized over resolution. But now, with hard drives measured in hundreds of gigabytes, and RIPs with much more robust digestive tracts, we can afford the luxury of a few extra pixels. That said, there's rarely an advantage to exceeding 300 ppi, except in some cases for higher line screens such as 175 lpi printing. So put away the calculator. For most circumstances, 300 ppi at final size is adequate and provides a bit of elbow room if you have to slightly reduce or enlarge an image.

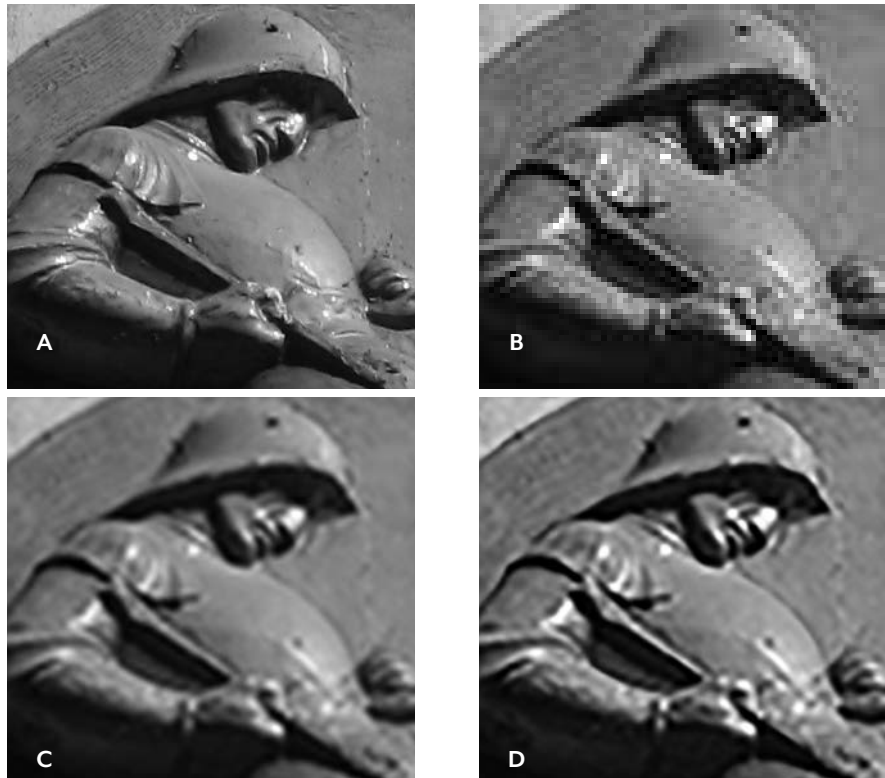
But you do have some leeway, depending on the nature of the image and how it will be used. For example, a gauzy, soft-focus shot of a sunset that will be used as a ghosted background accent in a magazine can be used at 200 ppi with no problem. A highly detailed close-up image of an important

piece of antique jewelry in a 175 lpi art book should be at 300–350 ppi. At the other end of the spectrum, an image for use in an 85 lpi newspaper can be 130–170 ppi, because much of the information in a 300 ppi image would be lost when printed in the coarse newspaper screen ruling. Consider the determination of appropriate resolution to be an equation based on image content and the final printing line screen rather than an absolute number.

Scaling Up

When enlarging or reducing an image, don't be afraid to *slightly* reduce or enlarge an image. But be aware that when an image is scanned or captured by a digital camera, it contains a fixed number of pixels. When you enlarge an image, you're attempting to generate missing information in a process called interpolation; the result is never as good as a proper-sized original scan. And the more drastic the transformation, the less satisfying the outcome (**Figure 4.2**).

Figure 4.2 You can't truly make something from nothing. Notice the loss of detail in the scaled-up version (D) versus the original (A).



Because of the limitations imposed by resolution, it's helpful if you can anticipate how the image will be used and control photography or scanning accordingly. For typical image content, you can probably scale up to 120–125 percent. If the image is background content without much detail, such as a soft-focus landscape, you have more leeway and can probably get away with scaling up to 150–200 percent. Conversely, if you need to maintain very small details, you may be limited to a maximum of 120 percent.

Photoshop CC introduced a new method that does a better job of scaling up images and upsampling them to higher resolutions—Preserve Details. While the results won't be equal to a higher resolution original image, it's a definite improvement over earlier methods (**Figure 4.3**).

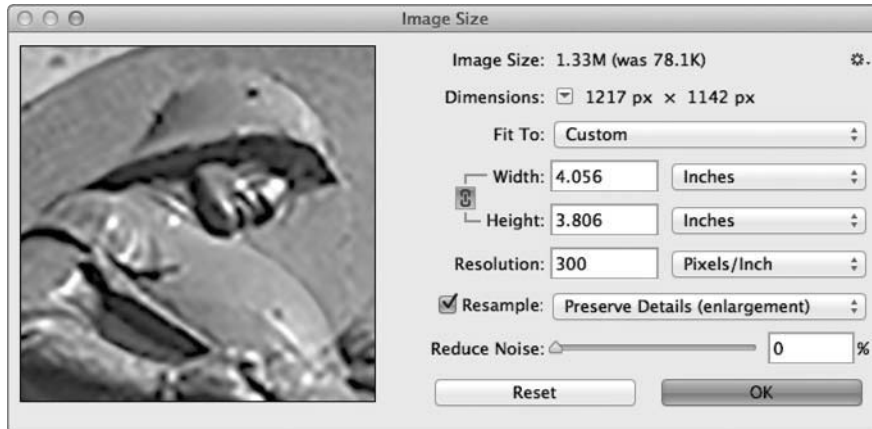


Figure 4.3 *If you have to scale up an image, or artificially increase its resolution, be sure to choose the Preserve Details option in the Photoshop CC Image Size dialog box. Tip: If you select “Automatic,” Photoshop CC chooses the best method for resampling.*

Scaling Down

Scaling down an image also involves interpolation. While the loss of data may not be quite so obvious when you reduce the size of an image, there can be some softening of detail. For best results, choose the Automatic option in the Image Size dialog box in Photoshop CC; it applies some sharpening to camouflage the reduction in detail. While it's acceptable to scale images in InDesign, if you find it necessary to scale an image below 75 percent of its original size in your page layout, consider scaling it down in Photoshop CC instead, because InDesign can't sharpen image content.

Scanning Artwork

If you are incorporating flat artwork such as pen-and-ink drawings or paintings in your design, you have several choices for digitizing the artwork. If you have a good flatbed scanner, you may be able to capture the artwork without any special handling. To provide some flexibility in later usages of the scanned image, consider performing two scans at 100 percent: one at 300 ppi, and one at 600 ppi if your scanner supports it. Then, you have two robust images that can be resized for a wider range of uses.

If your flatbed scanner isn't up to the task, ask if your print service provider performs scanning. Many printers have high-end scanners capable of capturing and enlarging artwork. If you have transparencies or negative film that must be scanned, the printer's professional scanners can capture detail and perform enlargements with higher-quality results than are possible with consumer-level scanners.

Some materials, such as textured paper, dimensional paint (such as heavy acrylic or oil paint), metal, or transparent substrates, don't scan well. The scanner's illumination bounces off metallic components and often appears black in the scanned image. Because of the even, frontal lighting of the scanner, texture is subdued or lost. And you can't very well pin a statue under the lid of your scanner. If you have to capture a challenging art piece, the best solution might be to hire a photographer who specializes in capturing fine art pieces and has experience lighting and photographing such projects.

Cropping and Transforming Images

It would be great if you could anticipate the exact size, crop, and angle at which you'll want to use an image in your page layout. But it may be difficult to see that far down the line at the moment you're pressing the button on your camera, or slipping a print under the lid of your flatbed scanner. Oh, and watch out for that little gust of wind that comes along just as you're putting the scanner lid down...

Cropping

Should you crop your images? Maybe. If you're certain about future image use, feel free to crop. Leave a reasonable rind around the image area you intend to use to provide some elbow room when you place the image in the final page, so you have room to reposition the image, or to provide bleed for the page. However, if you think there's even a remote chance that you'll want to use more of the image in the near future—maybe you're not sure if you might want to show a row of four buildings instead of just the one in the middle—then it's worth keeping the whole shebang. While you may be reluctant to store an entire image just to keep the part with the 2-inch golf ball that you're sure you will silhouette, give yourself a safety net and at least keep an uncropped backup copy of the image. Hard drive space is plentiful and you can always crop it later. It's hard to recover that extra person you lopped off last week who turns out to be the CEO of the company.

Rotating Images

Almost any transformation, whether resizing or rotating, causes interpolation of pixel information. The only safe rotations are 90-degree increments—anything else will result in softening of detail (see **Figure 4.4**). Think of those rows and columns of pixels, much like the grid of a needlepoint pattern. Imagine what a challenge it would be to redraw that pattern at a 42-degree angle. It should give you a little sympathy for the math Photoshop has to do.



Figure 4.4 Repeated rotations of an image can result in cumulative erosion of detail (original image on the left, rotated image on the right). The exaggerated sharpening in the image on the right is a result of Photoshop's attempt to compensate for softening of detail.

All these cautions about transformations such as scaling and rotating are not intended to strike terror in your heart. Don't be afraid to enlarge, reduce, or rotate if you need to. Just be prepared for the slight but unavoidable loss of detail and the degradation of the image's appearance. Try to resize in even increments, and beware of oddball rotations such as 1.25 degrees in the interest of maintaining as much information as possible.

Successive transformations—scaling and then rotating, for example—are particularly destructive. Let your conscience be your guide. How important is the detail in the image? If it's a key product shot, it's worth rescanning (if possible). If it's a less important image, such as a ghosted background or a decorative bit, you needn't feel quite so guilty about the transformation.

Where to Transform: Image Editor vs. Page-Layout Application

If you are going to transform images, does it matter where the transformation takes place? If you use Photoshop to scale an image, is the result superior to the outcome of scaling within your page-layout application?

The answer is an unqualified, "It depends."

If you perform your scaling and rotation in Photoshop or another image-editing application, and then place the resulting image in a page layout at 100 percent with no rotation, you do have a pretty good idea of how the image will look when it's printed.

If, however, you induce the scaling or rotation in a page layout, you've only *requested* those transformations—you haven't actually *performed* the transformations. They don't really take place until the job is processed by a RIP. This puts you at the mercy of that RIP's implementation of scaling and rotation algorithms. If you generate and submit PDFs, the rotations or distortions within that PDF are still pending, and they are implemented only when the PDF is processed by a RIP. In other words, the original image information is contained in the PDF, unchanged, but earmarked for its ultimate transformation in the RIP.

Be comforted by the fact that late-model RIPs can chew a lot more information in a shorter time than they used to. Rotating a few images here and there won't prevent the processing of your job. However, despite the improvements in RIP technology, it is still possible (although rare) to build a job that can't be processed by a RIP. (Please don't take that remark as a personal challenge.)

Keep in mind, too, that if you've rotated an image in Photoshop and then subsequently applied additional scaling or rotation in a page layout, you've transformed it twice. It's not the end of the world, but you may see some slight softening of detail in the finished piece.

Appropriate Image Formats for Print

How you should save your raster images is governed largely by how you intend to use them. Often, you will be placing images into InDesign or Illustrator, so you're limited to the formats supported by those applications. The application may be willing to let you place a wide variety of file formats, but that doesn't necessarily serve as an endorsement of file format wonderfulness. In the olden days, the most commonly used image formats were TIFF and EPS. However, native Photoshop files (PSD) and Photoshop PDF files are much more flexible, and both formats are supported by InDesign and Illustrator. So, there's not much reason to use other formats unless you're handing off your images to users of other applications, such as Microsoft PowerPoint or Word.



NOTE When you receive a JPEG image, it's a good idea to immediately resave it as a PSD or TIFF to avoid further erosion to image content. Repeatedly opening, modifying, and resaving a JPEG can result in compromised quality if aggressive compression is used.

TIFF

If you need to blindly send an image out into the world, TIFF (tagged image file format) is one of the most widely supported image file formats. It's happy being imported into Illustrator, InDesign, Microsoft Word, and even some text editors—almost any application that accepts images. The TIFF image format supports multiple layers as well as RGB and CMYK color spaces, and even allows an image to contain spot-color channels (although some applications, such as Word, do not support such nontraditional contents in a TIFF).

Photoshop EPS

Some equate the acronym EPS (Encapsulated PostScript) with vector artwork, but the *encapsulated* part of the format's name gives a hint about the flexibility of the format. It's a *container* for artwork, and it can transport vector art, raster images, or a combination of raster and vector content. EPS is, as the name implies, PostScript in a bag (see the sidebar, "EPS: Raster or Vector?"). The historic reasons for saving an image as a Photoshop EPS were to preserve

the special function of a PostScript-based vector clipping path used to silhouette an image or to preserve an image set up to image as a duotone. If you're using InDesign and Illustrator, that's no longer necessary.


EPS: Raster or Vector?

It may be a bit confusing that there are raster-based EPSs (saved from an image-editing program such as Photoshop) and vector-based EPSs (saved from a vector drawing program such as Adobe Illustrator or Adobe [formerly Macromedia] FreeHand). The uninitiated sometimes think that saving an image as an EPS magically vectorizes it. Not so. Think of the EPS format as a type of container. The pixels within an EPS are no different from those in their TIFF brethren. They're just contained and presented in a different way.

As applications and RIPs have progressed, you're no longer required to save such images as Photoshop EPS. Pixel for pixel, a Photoshop native PSD is a smaller file than an equivalent EPS and offers support for clipping paths as well as duotone definitions.

This doesn't mean you need to hunt down your legacy Photoshop EPS files and resave them as PSD (unless you're terribly bored). Just know that unless you need to accommodate someone else's requirements, there's no advantage to saving as Photoshop EPS now.

Photoshop Native (PSD)

 **TRANSPARENCY TIP:** Although Illustrator and InDesign accept and correctly handle *opacity* settings in a placed native Photoshop file, they do not correctly handle *blending modes* in a Photoshop file. There are some workarounds for InDesign, detailed in Chapter 12, “InDesign Production Tips.”

In ancient times, the native PSD (Photoshop document) format was used solely for working files in Photoshop. Copies of those working files were flattened and saved in TIFF or EPS formats for placement in a page-layout program. While PageMaker allowed placement of native Photoshop files (yes, really—although it did not honor transparency), QuarkXPress required TIFF or EPS instead. Old habits die hard, and TIFF and EPS have long been the standard of the industry. Not that there's anything truly wrong with that.

However, Illustrator and InDesign can take advantage of the layers and transparency in Photoshop native files, eliminating the need to go back through two generations of an image to make corrections to an original file. Today,

there's no need to maintain two separate images: the working image and the finished file are now the same file.

Photoshop PDF

A Photoshop PDF (Portable Document Format) contains the same pixels as a garden-variety PSD, but those pixels are encased in a PDF wrapper—it's like the chocolate-covered cherry of file formats. A Photoshop PDF comes in handy on special occasions, because it can contain vector and type elements without rasterizing the vector content, and it allows nondestructive round-trip editing in Photoshop.

A Photoshop EPS can contain vectors and text, but the vector content will be converted to pixels if the file is reopened in Photoshop, losing the crisp vector edge—so you lose the ability to edit text or vector content. A native Photoshop PSD can contain vector components, but page-layout programs rasterize the content. However, Photoshop PDFs preserve vector content when placed in other applications (see **Table 4.1** for a feature comparison of common image formats).

Table 4.1 *Image format features*

| Supported Feature | TIFF | EPS | PSD | JPEG | PDF |
|---------------------------|------|--------------|--------------|------|-----|
| RGB color space | X | X | X | X | X |
| CMYK color space | X | X | X | X | X |
| Grayscale | X | X | X | X | X |
| ICC profiles | X | X | X | X | X |
| Clipping paths | X | X | X | X | X |
| Layers | X | — | X | — | X |
| Alpha channels | X | — | X | — | X |
| Spot color channels | X | ¹ | X | — | X |
| Duotones | — | X | X | — | X |
| Bitmap (bi-level content) | X | X | X | — | X |
| Vector data | — | ² | ³ | — | X |
| Transparency | X | — | X | — | X |

¹ If saved as DCS 2.0 (a variant of the EPS format)

² EPSs cannot be reopened in Photoshop with vector content intact

³ Page-layout applications rasterize vector content in PSDs

Moving to Native PSD and PDF

Is there any compelling reason to continue using old-fashioned TIFFs and EPSs? It may seem adventurous to use such new-fangled files, but workflow is changing. The demarcation between photo-compositing and page layout is blurring, and designers demand more power and flexibility from software. RIPs are more robust than ever, networks are faster, and hard drives are huge. It's still important to know the imaging challenges posed by using native files (such as transparency), and it's wise to communicate with your printer before you embark on the all-native path. You're still at the mercy of the equipment and processes used by the printer, and if they're lagging a bit behind the latest software and hardware developments, you may be limited by their capabilities.

Bitmap Images

Also called “line art images,” bitmap images contain only black and white pixels, with no intermediate shades of gray. If you need to scan a signature to add to an editorial page or scan a pen and ink sketch, a bitmap scan can provide a sharp, clean image. Because of the compact nature of bitmap scans, they can be very high resolution (usually 600–1200 ppi) but still produce small file sizes (Figure 4.5).

Figure 4.5 *This 1200 ppi bitmap scan prints nearly as sharply as vector art. It weighs in at less than 1 MB; a grayscale image of this size and resolution would be nearly 10 MB. Magnified to 300 percent, it may look a bit rough, but at 100 percent it's crisp and clean.*



Special Case: Screen Captures

If you're creating software documentation for print, or you want to show an image of a Web page in your project, you may need to include screen captures of software interface components such as menus or panels in your page layouts. Screen captures are easy to make using a system utility or dedicated screen-capture software, but they require some special handling to print clearly. When they're part of software documentation or instructional materials, it's important that the details are as sharply rendered as possible.

You should understand this about screen captures: Whether you take them by using your system's built-in screen-capture functionality or a third-party screen-capture application, you are merely intercepting *information* that eventually becomes pixels on your monitor. Regardless of your current monitor resolution, there is a one-to-one relationship between the fixed number of pixels that an application (and your system) uses to render panels and menus and the number of pixels you see on your screen, even if you use a zoom utility. Of course, the size of the overall image you see is a function of your current monitor resolution, but the *pixel dimensions* of panels, menus, and tools will be identical, regardless of resolution. (Figure 4.6)

An application panel that measures 244 pixels by 117 pixels appears larger when your screen resolution is set to 800 by 600, and it's almost unreadably small when your monitor is set to 1920 by 1200. However, the panel is made of exactly the same number of pixels in both instances. So it doesn't matter what resolution your monitor is using, or how large the panels may appear onscreen, or whether you use a utility to zoom in. The captured image of a panel or menu will be the same in terms of pixel dimensions, regardless of the monitor resolution setting, and the resulting image will be 72 ppi.

TIP Do an experiment: In the software of your choice, open a panel and position it in the middle of the screen. Take screen shots at two different resolutions. Make a loose selection of the panel in one image, copy it, and place it into the other image. You'll see that they're identical in pixel count. The overall images will be different sizes because of the different monitor resolutions, but the number of pixels used by interface components such as panels, menus, and tools will be identical.

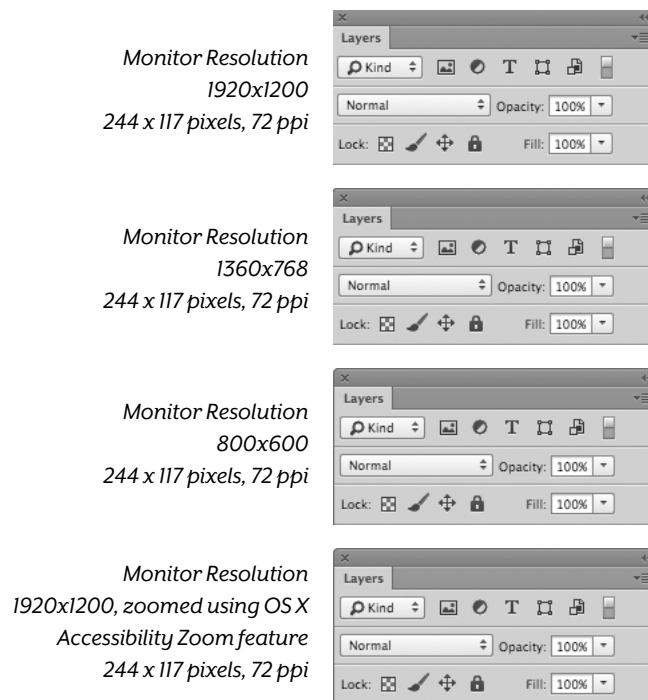


Figure 4.6 The resolution setting of your monitor has no effect on the number of pixels used by panels and menus. Although this panel was captured at three different monitor resolutions, the three captures are identical, each consisting of exactly the same number of pixels.

Since it's been drilled into you that 300 ppi is the Holy Grail of image resolution, it's tempting to try to improve screen captures by increasing the resolution. Unfortunately, this usually makes them look worse by softening small details during interpolation.

If you plan to use a screen capture at 100 percent enlargement, just leave it at 72 ppi (go ahead and freak out). Yes, the print service provider's prepress department will raise a flag, but the examples below show why screen captures are not improved by increasing their resolution.

As you can see in **Figure 4.7**, the original 72 ppi screen capture seems a bit coarse, but it's readable. Increasing the resolution to 300 ppi in Photoshop may sound like a good idea, but the interpolation will soften detail in the image.

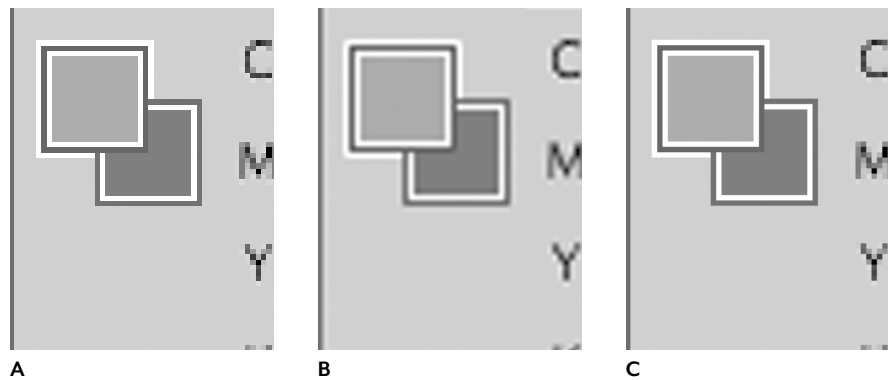
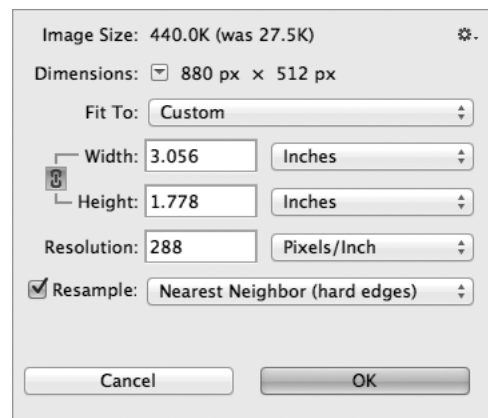


Figure 4.7 Image A is the original 72 ppi screen shot. Image B is the result of increasing the resolution to 300 ppi, using the default Bicubic method: Note blurry text and softened edges. Image C is the result of increasing the resolution to 288 ppi, using Nearest Neighbor.



If you do feel compelled to increase the resolution of a screen capture, choose *Image > Image Size* in Photoshop, and then set the resolution to an even multiple of the original resolution; for example, resample a 72 ppi screen shot to 288 ppi. In that same dialog box, set the Resample Image option to Nearest Neighbor. This avoids interpolation by simply repeating pixels rather than attempting to create pixels. It's not an appropriate approach when scaling images of a photographic nature, but it's a helpful solution for screen captures, because of their special nature.

Converting Screen Captures to CMYK

Because screen captures are generated as RGB images, they must usually be converted to CMYK for print. When performing that conversion, a special approach is recommended to maintain the best rendering of black type. The default conversion of RGB to CMYK in Photoshop will render black as a four-color mix (**Figure 4.8**), with the possibility that slight misregistration on press will turn tiny details to mush.

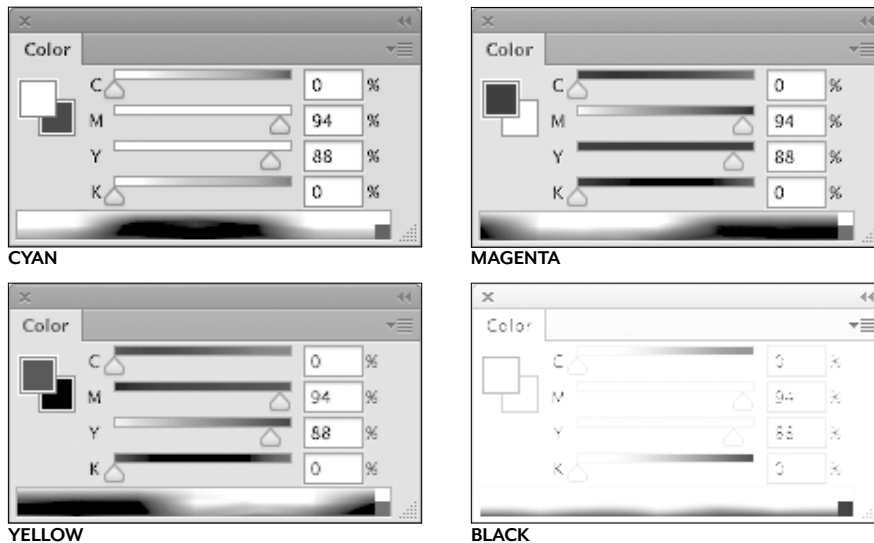
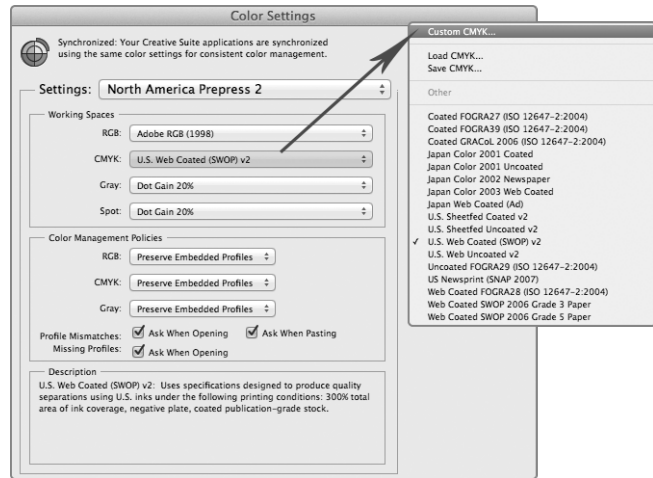


Figure 4.8 A conventional conversion from RGB to CMYK produces four-color equivalents of the gray and black parts of a screen capture. Press misregistration will turn text and other black or gray elements to an out-of-focus rainbow. Festive, but hard to read.

To simplify printing of screen captures, use a color-separation recipe that ensures that all neutral black or gray areas of the image will print only in black ink during the RGB-to-CMYK conversion. Neutral areas in an RGB image are those areas in which the RGB values are equal; for example, R128-G128-B128 would constitute a midtone gray.

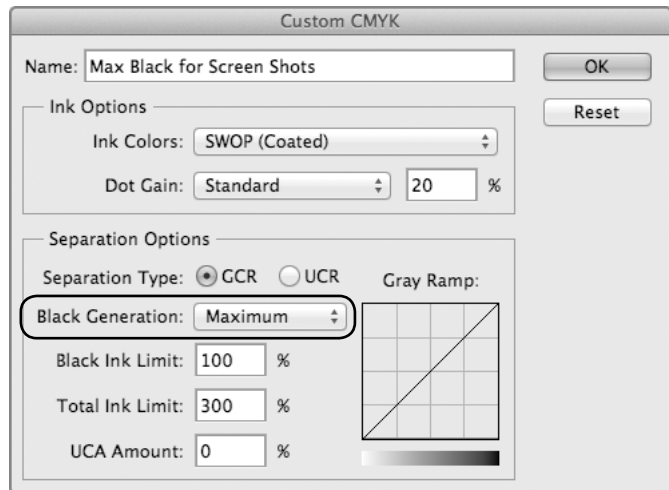
To create this custom screen-capture conversion recipe in Photoshop, choose *Edit > Color Settings* to access the color-separation controls. Under Working Spaces, choose *Custom* for the CMYK setting (Figure 4.9).

Figure 4.9 In the *Color Settings* dialog box, select *Custom* CMYK from the CMYK menu.



In the Custom CMYK dialog box, select *Maximum Black Generation* (Figure 4.10). The curve you see may seem odd, but it merely indicates that all equivalent RGB values are being replaced with black. The appearance of color elements won't be compromised.

Figure 4.10 In the *Custom CMYK* dialog box, select the *Maximum Black Generation* setting. This consolidates all gray-equivalent values to the black channel, minimizing issues with registration.



Color elements will be composed of four colors in the final CMYK image. But black and gray elements will be rendered only in black (**Figure 4.11**). While this may look odd, it results in cleaner printing of the screen capture, because there aren't four colors piling up in most of the image.

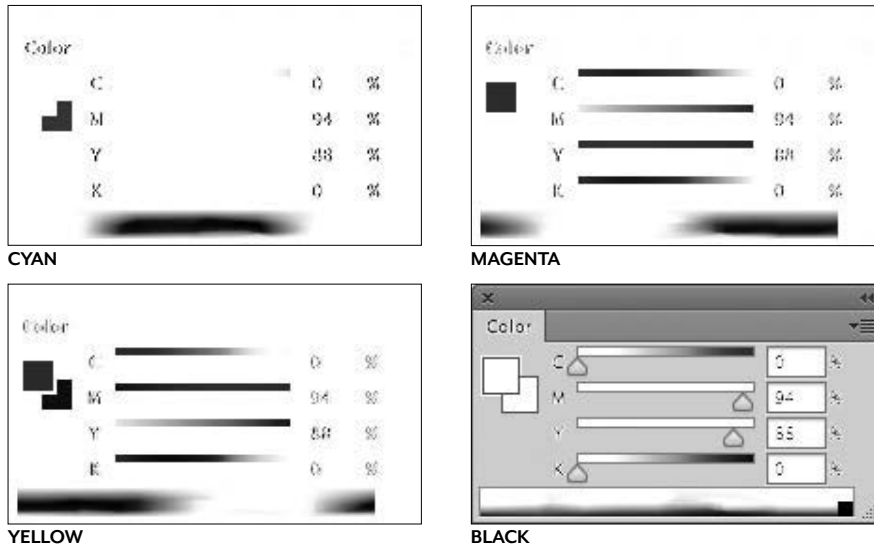


Figure 4.11 All the color components appear on the cyan, magenta, and yellow plates. Black and gray areas appear only on the black plate. This special treatment ensures that screen shots print cleanly.

RGB vs. CMYK

Since the dawn of desktop publishing, it's been unquestioned that Thou Shalt Convert to CMYK. Those who submitted RGB files were considered uninformed, even uncivilized.

The rules are changing, though, because of the increased use of digital printing. Although these devices may use inks or toners named *cyan*, *magenta*, *yellow*, and *black*, those inks and toners have a different pigment makeup than the namesake inks used on offset presses, and they have a wider color gamut than offset inks. Inkjet devices such as large-format printers utilize additional inks such as light cyan, pink, light yellow, orange, and green, further extending the range of colors that they can print.

This seems like a good time to open a can of multicolored worms. After you've been told by printers for years that you should convert your images to CMYK before submitting, I'm now going to tell you that you might not have to do so. That's because many digital devices happily digest RGB and can provide more vibrant output by rendering RGB content.

When you convert to CMYK, ranges of colors outside the CMYK gamut are remapped to fall within the CMYK printable gamut, and some of your most vibrant colors are lost forever.

If you happen to have some very colorful RGB images (tropical birds would do the trick), try this little experiment:

1. Open the RGB image in Photoshop, and maybe make it even more vibrant by using Hue/Saturation or Vibrance. Get carried away; this is for science, after all, not for art.
2. Choose *Edit > Color Settings*. At the top of the dialog box, choose *North America Prepress 2* from the menu and click OK.
3. Choose *View > Proof Colors*. The difference in appearance may not be huge, but try toggling Proof Colors on and off quickly by using the keyboard shortcut (PC: Ctrl-Y; Mac: Cmd-Y) and watch for differences in bright blues and greens. Neon greens provide a particularly noticeable difference.
4. Choose *View > Gamut Warning*. The gray areas are areas whose current RGB color will be remapped (and probably become duller) when converted to CMYK, because of the smaller color gamut of CMYK.

This gives you an idea of the color range that you'll lose when you convert to CMYK—and much of that color range can be imaged on many digital devices. Of course, ask the print service provider before you submit your work to ensure that you're sending what they want. Just don't be surprised if they say "RGB is OK."

RGB as a Working Format

Because the RGB gamut is larger than that of CMYK, it's often preferable to perform color corrections and compositing with RGB files, converting to CMYK (if necessary) as late in the process as possible. If you are participating in a fully color-managed workflow, you will keep your images as RGB with ICC profiles. The International Color Consortium (ICC) was formed by a group of graphic arts industry vendors, with the goal of promoting the use and standardization of color management tools. ICC profiles are methods of describing the characteristics of devices such as scanners, presses, and printers for optimal results. Conversion will not take place until the job is imaged. Much of today's software offers sophisticated support of color

management. For example, when exporting a PDF or printing, InDesign will perform the same conversion of RGB to CMYK that Photoshop would (assuming you've synchronized your color settings across all your Creative Cloud applications).

What if the Printer Demands CMYK Images?

Some print service providers and their customers have fully adopted color-managed workflows as part of their regular operation. But many print service providers (especially in North America) expect CMYK when you submit your job, believing that it's what Nature intended, especially when the job will be printed on an offset press (as opposed to a digital printer). Consult with your printer to see what they prefer. If you're using digital photography or scanning your own artwork, they should be able to provide you with their preferred settings, so you can make appropriate conversions to CMYK.

Inappropriate Image Formats for Print

Some image formats are intended primarily for onscreen and Web use. **Portable Network Graphics** (PNG) images can contain RGB and indexed color as well as transparency. While PNG can be high resolution, it has no support for the CMYK color space.

The Windows format **BMP** (an abbreviation for bitmap) supports color depths from one-bit (black and white, with no shades of gray) to 32-bit (millions of colors) but lacks support for CMYK. BMP is not appropriate in projects intended for print.

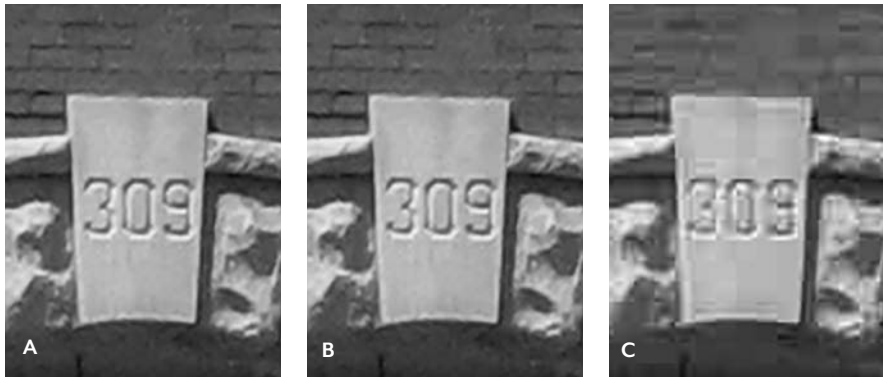
Graphics Interchange Format (GIF) is appropriate only for Web use because of its inherently low resolution and an indexed color palette limited to a maximum of 256 colors. Don't use GIF for print.

JPEG (Joint Photographic Experts Group), named after the committee that created it, has an unsavory reputation in graphic arts. Just whisper "jay-peg" and watch prepress operators cringe. It is a lossy compression scheme, meaning that it discards information to make a smaller digital file. But some of the fear of JPEGs is out of proportion to the amount of damage that takes place

when a JPEG is created. Assuming an image has adequate resolution, a very slight amount of initial JPEG compression doesn't noticeably impair image quality, but aggressive compression introduces ugly rectangular artifacts, especially in detailed areas (**Figure 4.12**).

Figure 4.12 *There's good JPEG, and there's bad JPEG:*

- A. Original PSD
- B. JPEG saved with Maximum Quality setting
- C. JPEG saved with lowest quality setting



Each time you open an image, make a change, then resave the image as a JPEG, you recompress it. Prepress paranoids will shriek that you're ruining your image, and there's a little bit of truth to that. While it's true that repeatedly resaving an image with low-quality compression settings would eventually visibly erode detail, the mere fact that an image has been saved as a JPEG does not render it unusable, especially if you use a minimal level of compression. Despite the reputation, JPEGs aren't inherently evil. They can be decent graphic citizens, even capable of containing high-resolution CMYK image data.

That said, when you acquire a JPEG image from your digital camera or a stock photo service, it's still advisable to immediately resave the image as a TIFF or PSD file to prevent further compression. However, JPEGs intended for Web use are low-resolution RGB files, inappropriate for print. If your client provides a low-resolution or aggressively compressed JPEG, there's not much you can do to improve it. Even with the refined Intelligent Upsampling in Photoshop CC, you can only go so far. They'll find that hard to believe, though, because they know there's a tool in Photoshop called the Magic Wand. Good luck explaining it to them.

Index

1C (one-color) jobs, 21
2/1 (two-over-one) jobs, 21
2C (two-color) jobs, 21
3D effects in Illustrator, 231–233
4/1 (four-over-one) jobs, 21
4C (four-color) jobs, 21

A

AAs (artist alterations), 15, 21
Acrobat, 317–354
 collaborating with, 334–336
 collecting comments in, 336–337
 comment and markup features, 331–334
 Compare Documents function, 173
 Distiller feature, 315, 318, 323
 editing PDF files in, 327–330, 354
 enabling Reader features from, 334
 font embedding in, 327
 forensic tools, 340–346
 handling image content in, 324–326
 Overprint Preview option, 304
 PDF compatibility with, 323
 preflighting files in, 343–346
 previewing output in, 341–342
 Print Production tools, 339–354
 product line for, 318–319
 Professional version, 10, 318
 repair tools, 346–354
 Simulate Overprint option, 306
 summarizing comments in, 337–338
 unclumping text in, 255
activating fonts, 132, 139, 140–141
Add Printer Marks tool, Acrobat, 348–349
adjustment layers, 191–192, 238
Adjustments panel, Photoshop, 191
Adobe Acrobat. *See* Acrobat
Adobe Bridge, 188, 281
Adobe FreeHand, 123
Adobe Illustrator. *See* Illustrator
Adobe InDesign. *See* InDesign
Adobe Lightroom, 102
Adobe PDF Print Engine, 13
Adobe Photoshop. *See* Photoshop

Adobe Photoshop Elements, 102
Adobe PostScript. *See* PostScript
Adobe Reader, 318, 333–334
AI files, 255–256, 278
Aldus PageMaker, 4
alpha channels, 204, 211
alternate layouts, 285–289
Aperture program, 103
Appearance panel, Illustrator, 227–231
Apple desktop computers, 4
 See also Macintosh computers
Apple iPhoto, 102
Apple LaserWriter, 4
application files
 submitting to printers, 167–170
 version and platform issues with, 169–170
aqueous coatings, 21, 56, 58
area type, 246
Arrow tool, Acrobat, 333
Artboard Options dialog box, 216
Artboard tool, 216, 217
artboards (Illustrator), 215–219
 bleed settings, 219
 creating, 216–217
 deleting, 217, 218
 hiding, 217
 modifying, 218
 page layout and, 219
 saving files with multiple, 256–258
 trim size and, 70, 73
artist alterations (AAs), 15, 21
artwork
 InDesign files as, 278–279
 PDF files as, 279–280
 scanning, 11, 106
Automatic (JPEG) compression, 326
Automatic Recovery, InDesign, 290

B

backsaving
 Illustrator files, 179, 181, 254
 InDesign files, 179, 182, 291
 Photoshop files, 179, 182

- baseline, 21
- Bézier shapes, 128
- bindery, 21
- binding, 19, 85–90
 - case, 86
 - coil, 23, 89
 - comb, 24, 88–89
 - custom, 90
 - perfect, 19, 32, 86–87
 - post, 90
 - saddle stitched, 19, 35, 85–86
 - wire, 38, 89
- bitmap images, 112
- black
 - duotone, 205
 - rich, 55–56, 173
- black-and-white printing, 39–42
- blanket, 21
- bleed
 - checking on proofs, 172
 - die cutting and, 94–95
 - Illustrator settings for, 219, 258
 - importance of providing, 72–73, 161
 - imposition related to, 77, 78
 - InDesign settings for, 292–293
 - printer marks indicating, 348–349
 - vector artwork and, 164
- Blend tool, Illustrator, 239
- blended objects, 239
- blending modes, 110, 195, 196, 234
- blind embossing, 26, 96
- bluelines, 14, 15, 22, 173–174
- BMP file format, 119
- Bridge, Adobe, 188, 281
- bump plates, 22, 207

- C**
- CIs paper, 22
- C2s paper, 22
- calibrating monitors, 65
- Callout tool, Acrobat, 332
- Camera Raw, 101–102
- cameramen, 22
- camera-ready art, 22
- case binding, 22, 86
- cast shadow effect, 274

- CDs
 - distributing PDF files on, 320
 - submitting jobs on, 170
- CEPS (color electronic prepress system), 3, 22
- channel masks, 203–204
- channels, Photoshop, 203–204
- characters, 135
- chase, 22
- choking, 53
- CID (Character ID) font encoding, 315
- Clean Up dialog box, Illustrator, 222
- clipping masks, 194–195
- clipping paths, 198–199, 200
- closed path type, 248
- Cloud tool, Acrobat, 333
- CMYK color
 - adding spot color to, 207–208
 - color printing and, 42–48
 - explanation of acronym for, 48
 - Illustrator options for, 214, 240–241
 - limitations of, 47–48, 118
 - RGB conversions to, 119, 187–188
 - screen captures converted to, 115–117
 - specifying screen values for, 46
 - spot color conversions to, 50–51, 240–241
- coated paper, 50
- coatings, 17, 58–59, 159
- coil binding, 23, 89
- cold foil, 97
- collaborating over PDF files, 334–336
 - email-based reviews, 334
 - shared reviews, 335–336
- color
 - checking, 171
 - CMYK, 42–48
 - naming, 163
 - spot, 48–51
 - stroke, 228–229
 - viewing, 66–67
- color break, 23
- color cast, 23
- color corrections
 - layers for making, 190–192
 - performing in RGB color space, 185
- color electronic prepress system (CEPS), 3, 22
- Color Formula Guides, 48
- Color Key proofs, 2
- color management, 23, 63–64

- color modes, 214–215
 - Color panel, InDesign, 280
 - color printing, 42–51
 - CMYK inks for, 42–48
 - spot colors for, 48–51
 - color proofs, 14
 - color separations, 23, 100
 - color settings files, 187–188
 - color space, 162, 186–187
 - color temperature, 14, 23–24
 - colorimeters, 65
 - colorizing images, 285
 - comb binding, 24, 88–89
 - commenting tools, 331–333
 - comments
 - adding to PDFs, 334
 - collecting and summarizing, 336–338
 - deleting from PDFs, 333
 - Committee for Graphics Arts Technologies Standards (CGATS), 322
 - Compare Documents function, 173
 - compatibility, PDF file, 323
 - Component Information dialog box, 309–310
 - compressed files, 155, 167, 169–170
 - compression settings, 325–326
 - comps, 24
 - computer-to-plate (CTP), 10, 16, 25
 - Content Grabber, 273
 - continuous tone, 24
 - contract proofs, 14–15, 17, 24, 68
 - conversions
 - Illustrator text, 252
 - Postscript to PDF, 315
 - RGB to CMYK color, 119, 187–188
 - screen capture to CMYK, 115–117
 - spot color to CMYK, 50–51, 240–241
 - text to outline, 126–127, 145
 - Convert Colors tool, Acrobat, 348
 - converter, 25
 - corrections, 15, 173
 - Creative Cloud, 177–182
 - Adobe Bridge for, 281
 - backsaving files from, 179, 181–182
 - fonts installed by, 138–139
 - hosting information for, 179
 - persistent myths about, 178–179
 - Typekit desktop fonts, 141–142
 - version determination, 180
 - creep, 25
 - Cromalin proofs, 2, 25
 - cropping images, 107
 - crossover art, 173, 174
 - cross-platform issues, 147–155
 - file compression, 155
 - file naming, 148–151
 - fonts, 152–153
 - graphics formats, 155
 - Mac-to-Windows, 153–154
 - progress made in, 147–148
 - Windows-to-Mac, 154
 - CTP (computer-to-plate), 10, 16, 25
 - curing process, 25
 - Curve Precision setting, 222–223
 - custom binding, 90
 - customer alterations, 15
 - customer service representative (CSR), 8, 159
 - custom-mixed inks, 25, 57, 159
 - cutting die, 25, 93–95
- D**
- DCS files, 207
 - debossing, 26, 96
 - deleting
 - artboards, 217, 218
 - channels, 211
 - comments, 333
 - layers, 191, 211
 - paths, 211
 - desktop printers, 65
 - desktop publishing, 4–5
 - dfonts, 136
 - die, 25, 91
 - die cutting, 19, 25, 93–95
 - die lines, 91, 92, 94
 - digital cameras, 26, 101–102
 - Digital Distribution of Advertising for Publications (DDAP), 322
 - digital photography, 11
 - digital press, 26
 - digital printing, 17, 59–63
 - advantages of, 59–60
 - limitations of, 60–63
 - dingbats, 133
 - Direct Selection tool
 - Illustrator, 248
 - InDesign, 272, 273

disclosure triangle, 268
 Distiller, Acrobat, 315, 318, 323
 document profiles, 213–214, 227
 Document Raster Effects settings, 225–226
 dot etchers, 26
 dot gain, 26, 41
 double spaces, 165
 downsampling, 325
 dpi (dots per inch), 42
 drag-and-drop into InDesign, 263–265
 drop shadows
 InDesign handling of, 274–275, 276, 278, 301, 306–307
 Photoshop creation of, 196
 Droplet, Preflight, 346
 drying agents, 56
 duotones, 26, 205–206, 285
 DVDs
 distributing PDF files on, 320
 submitting jobs on, 170

E

edge detection, 201–202
 Edit Original button, InDesign, 270
 Edit Text & Images tool (Acrobat), 328–330
 editing graphics using, 329–330
 editing text using, 328–329
 editing
 graphics in Acrobat, 329–330
 graphics in InDesign, 270
 PDF files in Acrobat, 327–330, 354
 text in Acrobat, 328–329
 text in Illustrator, 253–254
 effects
 Illustrator, 221, 224–226
 Photoshop, 224
 emailing PDF files, 320, 334
 embedded fonts, 125–126, 144–145, 167, 249–250, 327
 embedding
 graphics in InDesign, 265–266
 images in Illustrator, 127, 237–238
 embossing, 26, 95–96
 embossing die, 25, 95, 96
 EMF file format, 124–125
 Encapsulated PostScript. *See* EPS
 Enfocus PitStop, 10, 317, 339

environment controls, 64–65
 EPS (Encapsulated PostScript), 109–110
 drop shadows and, 278
 raster vs. vector, 110
 saving in Illustrator, 256, 258
 vector graphics and, 122–123
 Eraser tool, Acrobat, 333
 estimators, 9, 27
 EULAs (End User License Agreements), 143–144
 exporting
 comments from PDF files, 336–337
 InDesign files to PDF, 314
 PDF files from applications, 323–324
 preflight profiles, 313

F

fake duotones, 27, 285
 feathering effects, 301
 file extensions, 148, 151
 File Handling & Clipboard preferences, Illustrator, 264–265
 File Transfer Protocol (FTP), 169
 files
 backsaving, 179, 181–182, 254, 291
 compressing, 167, 169–170
 flattening, 195
 naming, 148–151, 163, 212
 reducing size of, 291
 fills, 229–230
 film strippers, 27
 finishing processes, 18–20, 27
 binding, 85–90
 building files for, 69–74, 90–93
 custom, 160
 die cutting, 93–95
 embossing, 95–96
 foil stamping, 97
 folding, 74–76
 imposition, 76–85
 print specifications for, 74
 trimming, 69–74
 Fix Hairlines tool, Acrobat, 352
 flatbed scanners, 101, 106
 flatness settings, 199–200
 flats, 15, 27
 Flatten Preview option, InDesign, 308–309

flattening
 layers, 195
 transparency, 235–237, 296–307

flexography, 16, 27

FlightCheck software, 10, 165, 166, 168

fluorescent inks, 57

FM screening, 45–46

foil stamping, 27–28, 56–57, 97

folding, 18
 configuring jobs for, 74–76
 templates for, 76

folding dummy, 28, 82

folio, 28

Font Book utility, 135, 139

Font Explorer X Pro, 140

FontAgent Pro, 132, 140

FontDoctor, 141

FontLab, 143

fonts, 131–146
 activating, 132, 139, 140–141
 conflicts between, 141
 converting to outline, 126–127, 145
 cross-platform issues, 152–153
 embedding, 125–126, 144–145, 167, 249–250, 327
 identifiers for, 137
 Illustrator handling of, 249–250
 installed by Creative Cloud, 138–139
 licensing issues for, 143–146
 Macintosh OS X system, 136
 management programs for, 140–141
 multilingual, 134
 Multiple Master, 137
 OpenType, 133–135
 PostScript, 131–132
 screen, 131–132
 sending to service providers, 145–146
 substituting, 138
 TrueType, 132–133
 Typekit desktop, 141–142
 vector artwork and, 163
 Windows system, 137
See also text

Fonts control panel, 135

forensic tools, Acrobat, 340–346

FPO images, 28

frames, scaling, 272

Free Transform tool, InDesign, 272

Freehand program, 123

FTP (File Transfer Protocol), 169

fulfillment, 20

G

ganged content, 18, 28, 78

GIF file format, 119

glazed embossing, 96

global swatches, 242–245

glossary of printing terms, 21–38

glue flap, 93

gluing, 20

glyphs, 133, 134, 135

GRACoL color settings files, 187–188

grain of paper, 28

graphic arts tasks
 desktop publishing's redistribution of, 4–5
 historical division of, 2–3

graphics
 Acrobat editing of, 329–330
 dragging and dropping, 263–265
 embedding/unembedding, 265–266
 extracting from PDF files, 330
 finding missing, 269
 InDesign editing of, 270
 placing in InDesign, 261–263
 replacing existing, 270
 scaling, 273
 updating modified, 269
See also images; vector graphics

graphics formats. *See image formats*

gravure printing, 16, 28

gripper edge, 28

H

hairline fix, 352

halftone dots, 40, 43

halftones, 28
 black-and-white, 40–42
 color, 43–46

hiding artboards, 217

High Quality Print option, 316

Highlight Text tool, Acrobat, 332

hinting, 126, 163, 250

hot type, 28–29

I

- ICC profiles, 118
- IDLK files, 290
- IDML files, 182, 291
- Illustrator, 213–260
 - 3D artwork in, 231–233
 - AI files in InDesign, 255, 278
 - Appearance panel, 227–231
 - artboards in, 215–219
 - backsaving from, 122, 179, 181, 254
 - bleed options in, 219, 258
 - blended objects in, 239
 - capabilities of, 129–130
 - CMYK conversions in, 240–241
 - color modes in, 214–215
 - document profiles, 213–214, 227
 - drag-and-drop into InDesign from, 264–265
 - editing PDF files in, 354
 - embedding fonts in, 249–250
 - EPS files in, 123, 256, 258
 - linked and embedded images in, 237–238
 - live effects in, 221, 224–226
 - native AI format, 122
 - opening PDF files in, 260
 - OpenType font support, 135
 - Overprint Preview option, 232–233, 234, 235, 241
 - Package function, 167–168, 258
 - PDF file creation, 259–260
 - PSD files used in, 110
 - saving files from, 255–258, 259–260
 - Scoop plug-in, 125, 258
 - Separations Preview panel, 242
 - simplifying complex artwork in, 222–223
 - spot color options, 240–245
 - symbols used in, 219–221
 - templates, 227
 - text conversion in, 252
 - transparency effects in, 233–237
 - trim size in, 70, 73
 - type features in, 245–251
 - version issues, 251–255, 257–258
- image formats
 - appropriate for print, 109–112, 122–124
 - cross-platform compatibility of, 155
 - features comparison chart, 111
 - inappropriate for print, 119–120, 124–125
- image proofs, 170–171
- image work, 12
 - images
 - bitmap, 112
 - colorizing, 285
 - cropping, 107
 - downsampling, 325
 - editing, 270
 - embedding, 237–238
 - finding missing, 269
 - linking, 237
 - retouching, 162
 - rotating, 107–108, 162
 - scaling, 104–105, 162, 273
 - unembedding, 238
 - See also* graphics; raster images
 - imagesetters, 29, 63
 - imaging software, 102–103
 - importing
 - comments from PDF files, 337
 - Illustrator symbols, 221
 - preflight profiles, 313
 - imposition, 14, 29, 76–85
 - multipage, 80–85
 - nested, 78–79
 - simple, 77–78
 - InDesign, 261–316
 - alternate layouts in, 285–289
 - Automatic Recovery, 290
 - backsaving from, 179, 182, 291
 - bleed settings in, 292–293
 - Color panel, 280
 - colorizing images in, 285
 - Component Information dialog box, 309–310
 - drag-and-drop into, 263–265
 - editing graphics used in, 270
 - embedding/unembedding graphics in, 265–266
 - files as artwork in, 278–279
 - finding and fixing problems in, 307–314
 - Flattener Preview option, 308–309
 - IDLK files, 290
 - Illustrator files in, 255, 264–265, 278
 - Ink Manager, 283–284
 - libraries used in, 293
 - Links panel, 266–270
 - Liquid Layout tools, 286–287
 - locating missing graphics in, 269
 - managing linked stories in, 288–289
 - Object Layer Options dialog box, 275–277
 - OpenType font support, 135

- Overprint Preview option, 308
- Package function, 167–168, 314
- page size setup, 70
- paths used in, 200–201
- PDF creation in, 314–316
- PDF files as artwork in, 279–280
- Photoshop files in, 263–264
- placing graphics in, 261–263
- Preflight feature, 165
- Preview mode, 307–308
- PSD files used in, 110, 273–277
- reducing file size in, 291
- scaling graphics in, 273
- Separations Preview panel, 282–283
- Smart Guides, 294–296
- Smart Text Reflow, 296
- Snippets, 265
- Swatches panel, 280–281
- tips for using, 289–296
- transforming frames in, 272
- transparency effects in, 296–307
- Units & Increments setting, 75
- updating graphics in, 269–270
- InDesign Markup (IDML) format, 182, 291
- Ink Aliasing, 283
- Ink Manager
 - Acrobat, 347–348
 - InDesign, 283–284
- inks
 - custom-mixed, 57, 159
 - fluorescent, 57
 - large color areas for, 54
 - metallic, 56–57
 - problem, 56
 - process color, 42, 47, 50–51
 - rich black, 55–56
 - spot color, 48–50
- interpolation, 104, 105
- iPhoto program, 102

J

- JDF job ticketing, 13
- job flow diagram, 7
- job jacket, 8, 29
- job submission, 6, 157–176
 - application files for, 167–170
 - page-layout file check, 164–166

- PDF files for, 166–167
 - planning process, 160–166
 - preflighting your job, 165
 - preparing designs for, 158
 - press check following, 174–176
 - proofing cycles following, 170–174
 - providing printouts in, 165
 - raster image check, 161–163
 - sending job files, 166–170
 - talking with printers about, 158–160
 - vector artwork check, 163–164
- job ticket, 8–9, 29
- JPEG compression, 326
- JPEG file format, 101, 109, 119–120

K

- Kelvin temperature scale, 24
- kiss plates, 207
- knock out, 29, 304

L

- Lab color, 186
- laminates, 29
- layer masks, 189–190
- layers, 188–195
 - adjustment, 191–192
 - clipping masks and, 194–195
 - color corrections with, 190–192
 - deleting, 191, 211
 - flattening, 195
 - InDesign handling of, 275–277
 - job submission with, 168
 - layer masks and, 189–190
 - merging, 195
 - Smart Objects and, 192–194
- LCD monitors, 65
- leading, 28, 29
- letterpress printing, 16–17, 29–30
- libraries, InDesign, 293
- licensing issues for fonts, 143–146
- lighting considerations, 64, 66–67
- lighting indicator patches, 67
- Lightroom program, 102
- line shots, 30
- Line tool, Acrobat, 333
- linen tester, 30

linked stories, 288–289
 linking images, 237
 Links panel, InDesign, 266–270
 Liquid Layout tools, InDesign, 286–287
 lithography, 30
 live effects, 221, 224–226
 loaded-graphics cursor, 262
 loupe, 30
 lowercase, 30
 lpi (lines per inch), 35–36, 40, 42

M

Macintosh computers
 cross-platform issues, 147–155
 file associations fix, 271
 filenaming conventions, 148–151
 font activation, 135, 139
 OS X system fonts, 136
 Save As PDF option, 315
 Magic Wand tool, Photoshop, 197, 198
 makeready, 17, 30
 markup tools, 331–333
 masks
 channel, 203–204
 clipping, 194–195
 layer, 189–190
 Matchprint proofs, 2, 30
 mechanical, 2, 30
 mechanical color, 31
 merging layers, 195
 metallic inks, 56–57
 metamerism, 66
 Microsoft Powerpoint, 125
 Mini Bridge, 263
 missing graphics, 269
 mockups, 24
 modified graphics, 269
 moiré pattern, 31, 41, 43–44, 171, 173
 monitor considerations, 63–68
 calibration, 65
 color management, 63–64
 environment controls, 64–65
 viewing environment, 66–67
 white point setting, 68
 multilingual fonts, 134
 multipage imposition, 80–85
 Multiple Master fonts, 137

N

naming files, 148–151, 163, 212
 native file formats
 Illustrator, 122
 Photoshop, 110–111
 nested impositions, 78–79
 New Document Profiles folder, 227

O

Object Inspector, Acrobat, 342–343
 Object Layer Options dialog box, InDesign, 275–277
 objects
 blended, 239
 silhouetted, 197–204
 Smart Objects, 192–194
 offset printing, 16, 17, 31
 on-press imaging, 16
 opacity, 110, 195
 open path type, 246–247
 OpenType fonts, 133–135, 152, 153
 OPI (Open Prepress Interface), 31
 optimizing PDFs, 353–354
 OttLite lamps, 67
 Outline view, Illustrator, 221
 outlining text, 126–127, 145, 250
 Output Preview tool, Acrobat, 340, 341–342
 Oval tool, Acrobat, 333
 overprint, 31, 172, 303–304
 Overprint Preview option
 Acrobat, 304
 Illustrator, 232–233, 234, 235, 241
 InDesign, 308

P

Package function
 Illustrator, 127, 167–168, 238, 251, 258
 InDesign, 167–168, 314
 Typekit desktop fonts and, 251
 page creep, 84
 page proofs, 2, 31
 page size, 70
 page-layout files
 checking for job submission, 164–166
 packaging elements of, 167–168
 page-layout programs, 4

- pagination, 32, 174
- PANTONE Color Bridge, 49, 51
- PANTONE Color Formula Guides, 48, 49, 51
- PANTONE lighting indicators, 67
- PANTONE PLUS libraries, 49, 240
- paper
 - digital presses and, 62
 - press check and behavior of, 175
 - special orders for, 159
- path designation, 149
- paths
 - clipping, 198–199, 200
 - creating, 197–199
 - deleting, 211
 - flatness settings, 199–200
 - simplifying, 128–129
 - type on open/closed, 246–248
- PDF Enhancer, 353
- PDF files, 32
 - adding comments to, 334
 - artwork from, 279–280
 - collaboration using, 334–336
 - collecting comments on, 336–337
 - comment and markup features for, 331–334
 - compression settings, 325–326
 - creation of, 319–327
 - early conception of, 317
 - editing, 327–330, 354
 - emailing, 320, 334
 - embedding fonts in, 144–145, 327
 - exporting from applications, 323–324
 - external editors for, 354
 - extracting graphics from, 330
 - forensic tools, 340–346
 - Illustrator files saved as, 215, 259–260, 354
 - image content and, 324–326
 - InDesign files saved as, 314–316
 - opening in Illustrator, 260
 - origin of, 319
 - Photoshop PDF, 111, 210–211
 - Postscript conversion to, 315
 - preflight process, 10, 166
 - proofs sent as, 173
 - repair tools, 346–354
 - resolution settings, 323–324, 325
 - RIP conversion of, 12–13
 - security of, 123
 - settings for, 315–316, 321, 322–323
 - submitting to printers, 166–167, 320
 - summarizing comments on, 337–338
 - transformations made in, 108
 - types of, 320
 - vector art saved as, 123–124
- PDF Optimizer, Acrobat, 353–354
- PDF Print Engine, 13
- PDF Reference, 319
- PDF Shrink, 353
- PDF/X-1a format, 259, 316, 322, 323
- PDF/X-3 format, 316, 323
- PDF/X-4 format, 299, 316, 323
- Pen tool, Photoshop, 197, 198
- Pencil tool, Acrobat, 333
- perfect binding, 19, 32, 86–87
- personalization, 17, 32
- Photoshop, 4, 102, 183–212
 - adjustment layers, 191–192
 - backsaving from, 179, 182
 - channel masks, 203–204
 - color space issues, 186–187
 - drag-and-drop into InDesign from, 263–264
 - duotone creation, 205–206
 - effects in Illustrator, 224
 - EPS file format, 109–110
 - image use considerations, 184–185
 - layers used in, 188–195
 - native PSD format, 110–111, 112
 - OpenType font support, 135
 - PDF file format, 111, 210–211
 - PSD files in InDesign, 273–277
 - Refine Edge feature, 201–202
 - resampling options, 186
 - resolution issues, 185
 - RGB to CMYK conversions, 115, 187–188
 - saving files in, 210–212
 - screen capture conversions, 115–117
 - silhouetting objects in, 197–204
 - spot colors added in, 207–208
 - spot varnish plate creation, 208–209
 - transparency effects in, 195–196
 - vector elements in, 209–211
- Photoshop Elements, 102
- picas, 32, 75
- pixels, 99, 225
- PlaceMultipagePDF script, 280
- planners, 9, 32

- plates
 - bump, 22, 207
 - computer-to-plate method, 10, 16, 25
 - created by printers, 15–16
 - spot varnish, 208–209
- platesetters, 32, 62–63
- platform issues, 169
- PNG file format, 119, 125
- pocket folder, 90–93
- point type, 245
- points, 32
- post binding, 90
- PostScript, 32–33
 - conversion to PDF, 315
 - desktop publishing and, 4
 - encapsulated, 109–110, 122–123
 - RIP processing of, 12–13
 - See also* EPS
- PostScript Printer Definition (PPD) files, 315
- PostScript (Type 1) fonts, 131–132, 152
- potential pixels, 225
- Powerpoint program, 125
- PPD files, 315
- ppi (pixels per inch), 42
- preflight, 10, 33
 - Acrobat tool for, 343–346
 - creating custom profiles for, 311–313
 - importing/sharing profiles for, 313
 - InDesign feature for, 310–313
 - prior to job submission, 165, 166
- Preflight Droplet, 346
- Preflight panel, InDesign, 311
- Preflight tool, Acrobat, 340, 343–346
- prepress, 10–15, 33
- Preserve Details option, Photoshop, 105
- Preserve Spot Colors option, Illustrator, 232
- press check, 17, 33, 174–176
- press issues, 51–59
 - coatings, 58–59
 - ink coverage, 54–57
 - registration, 51–52
 - trapping, 52–54
- press proof, 33
- Press Quality option, 316
- pressroom, 16–17
- Preview mode, InDesign, 307–308
- previewing documents
 - in Acrobat, 341–342
 - in InDesign, 307–309
- Print Production tools (Acrobat), 339–354
 - Add Printer Marks tool, 348–349
 - Convert Colors tool, 348
 - Fix Hairlines tool, 352
 - forensic tools, 340–346
 - Ink Manager, 347–348
 - Object Inspector, 342–343
 - Output Preview tool, 340, 341–342
 - PDF Optimizer, 353–354
 - Preflight tool, 340, 343–346
 - repair tools, 346–354
 - Set Page Boxes dialog box, 350–352
 - Transparency Flattening options, 353
 - Trap Presets feature, 354
- print service providers
 - application file submission to, 167–170
 - discussing print jobs with, 158–160
 - fonts sent with jobs to, 145–146
 - PDF file submission to, 166–167, 320
 - press check with, 174–176
 - proofing cycles with, 170–174
 - sending job files to, 166–170
- Print to Adobe PDF option, 315
- printer alterations, 15, 33
- printer marks, 348–349
- printer profiles, 65
- printer's spreads, 33–34, 80, 81, 166
- printing, 16–17
 - black-and-white, 39–42
 - coatings used in, 58–59
 - color, 42–51
 - digital, 17, 59–63
 - glossary of terms for, 21–38
 - image formats for, 109–112, 122–124
 - ink coverage and, 54–57
 - press check during, 174–176
 - registration issues, 51–52
 - slang terms in, 70
 - trapping issues, 52–54
- Printing Industries of America, 67
- printing plants
 - job flow diagram for, 7
 - overview of departments in, 6–20
- printouts of job, 165
- problem inks, 56
- process colors, 34, 42
- production, 10–11
- profiles
 - document, 213–214, 227

- monitor, 65
 - preflight, 343–346
 - printer, 65
 - Project Camelot, 317
 - Proof Colors feature, 166
 - proofing process, 14–15, 170–174
 - correction check, 173
 - image proof check, 170–171
 - imposed blue line check, 173–174
 - page proof check, 172–173
 - signing off on proofs, 174
 - proofs, 34
 - contract, 14–15, 17, 24, 68
 - image, 170–171
 - page, 31, 172–173
 - press, 33
 - scatter, 35
 - PSD files, 110–111, 211, 238, 273–277
- Q**
- quadtones, 205
 - QuarkXPress, 110, 135
- R**
- random proofs, 14, 170
 - raster image processors (RIPs), 12–13, 34
 - halftone dots and, 41
 - PDF Print Engine in, 13
 - rasterization process by, 300–301
 - transformations performed by, 108
 - raster images, 99–120
 - cropping, 107
 - digital cameras and, 101–102
 - file formats for printing, 109–112
 - imaging software and, 102–103
 - inappropriate formats for printing, 119–120
 - placing into vector graphics, 127
 - pre-job submission check of, 161–163
 - programs for transforming, 108–109
 - raster effects and, 225–226
 - resolution of, 103–104, 162
 - retouching work on, 162
 - RGB vs. CMYK, 117–119
 - rotating, 107–108, 162
 - scaling, 104–105, 162
 - scanners and, 100–101, 106
 - screen captures as, 112–117
 - Smart Objects as, 192, 193
 - vector graphics vs., 121
 - Raw images, 101–102
 - Reader, Adobe, 318, 333–334
 - reader's spreads, 80, 81, 166
 - Ready, Set, Go! program, 4
 - Real World Color Management* (Fraser, Murphy, and Bunting), 64
 - Rectangle Frame tool, InDesign, 261
 - Rectangle tool
 - Acrobat, 333
 - InDesign, 261
 - Refine Edge feature, Photoshop, 201–202
 - Reflex Blue ink, 56
 - registered embossing, 96
 - registration, 34
 - digital printing and, 61
 - printing inks and, 51–52
 - Relink button
 - Illustrator, 237
 - InDesign, 269, 270
 - remapping spot colors, 283–284
 - repair tools, Acrobat, 346–354
 - resampling images, 105, 186
 - resizing. *See* sizing/resizing
 - resolution, 34
 - determining for images, 103–104, 162
 - digital presses and, 63
 - PDF settings for, 323–324, 325
 - Photoshop considerations, 185
 - scaled images and, 105
 - screen captures and, 113–115
 - retouching images, 162, 171
 - RGB color
 - color correction with, 185
 - converting to CMYK, 119, 187–188
 - digital output of, 11, 118–119
 - screen captures converted from, 115–117
 - working with, 118–119
 - RHEM lighting indicators, 67
 - rich black, 55–56, 173
 - RIPs. *See* raster image processors
 - ROOM (RIP once, output many), 34
 - rosette pattern, 44
 - rotation
 - checking layout files for, 165
 - of raster images, 107–108, 162, 184–185

S

- saddle stitching, 18, 19, 35, 85–86
- salesperson, 6, 8, 158–159
- Save As command, 291
- Save As PDF option, 315
- saving
 - back to older versions, 179, 181–182
 - files with multiple artboards, 256–258
 - Illustrator files, 255–258, 259–260
 - Photoshop files, 210–212
 - symbols in Illustrator, 221
 - vector art as PDFs, 123–124
- scaling
 - checking layout files for, 165
 - frames and graphics, 272–273
 - raster images, 104–105, 162
 - resampling and, 184
 - vector graphics, 121
- scanners, 35, 100–101, 106
- scanning artwork, 11, 106
- scatter proofs, 35, 170
- schedulers, 9, 35
- Scoop plug-in, 125, 258
- scoring, 35, 93
- screen angle, 35, 44
- screen captures, 112–117
 - converting to CMYK, 115–117
 - resolution of, 113–115
- screen fonts, 131–132
- screen printing, 17, 35
- screen ruling, 35–36, 40–41, 63
- screen values, 46
- Selection tool, InDesign, 272, 273
- sending job files, 166–170
 - application files, 167–170
 - PDF files, 166–167
 - See also* job submission
- Separations Preview panel
 - Illustrator, 242
 - InDesign, 282–283
- service bureau licenses, 144
- Set Page Boxes dialog box, Acrobat, 350–352
- shadow effects, 274–275, 276, 278
 - See also* drop shadows
- Shared Review wizard, Acrobat, 335
- sharing
 - PDF files, 335–336
 - preflight profiles, 313
- sheetfed presses, 36
- shingling, 84–85
- shipping, 20
- short print runs, 59
- signatures, 36, 80
- signing off on proofs, 174
- silhouettes, 36, 197–204
 - channel masks for, 203–204
 - checking on proofs, 171
 - edge detection for, 201–202
 - path creation for, 197–200
 - soft-edged subjects and, 201–204
- simple imposition, 77–78
- Simplify dialog box, Illustrator, 222–223
- Simulate Overprint option, 305, 306
- size considerations
 - for file size, 291
 - for print planning, 160–161
 - for trim size, 70–72
- sizing/resizing
 - artboards, 218
 - raster images, 104–105
- Smallest File Size option, 315–316
- Smart Guides (InDesign), 294–296
 - setting preferences for, 295–296
 - Smart Spacing indicators, 295
- Smart Objects, 101, 192–194
- Smart Text Reflow, 296
- Snippets, InDesign, 265
- soft proofs, 14
- special effects, 172
- specialty inks, 56–57
- spiral binding, 23, 89
- spot colors, 36, 48–51
 - 3D artwork and, 231–233
 - acronyms used for, 50
 - adding to CMYK images, 207–208
 - advantages of using, 49
 - checking on proofs, 173
 - choosing for duotones, 206
 - converting to CMYK, 50–51, 240–241
 - digital presses and, 61–62
 - guides for choosing, 48, 49
 - Illustrator options for, 231–232, 240–245
 - InDesign options for, 280–284
 - remapping with Ink Manager, 283–284
 - transparency and, 233, 303–304
- spot varnishes, 58, 59, 208–209

- spreading, 53
- Stamps tool, Acrobat, 332
- stat camera, 36
- Sticky Notes, 331–332
- stitching, 18
- stochastic screening, 36, 45–46
- stories, linked, 288–289
- strokes, 228–231
- subsetting fonts, 327
- substituting fonts, 138
- Suitcase Fusion, 132, 140
- summarizing comments on PDFs, 337–338
- SVG filters, Illustrator, 224
- Swatch Options dialog box, Illustrator, 243
- swatches
 - global, 242–245
 - Illustrator, 242–245
 - InDesign, 280–283
- Swatches panel
 - Illustrator, 245
 - InDesign, 280–281
- Symbol tools, Illustrator, 220
- symbols, Illustrator, 219–221
- system fonts
 - Macintosh OS X, 136
 - Windows OS, 137

T

- TAC (total area coverage), 36
- templates
 - folding project, 76
 - Illustrator, 227
- text
 - checking on proofs, 172
 - converting to outlines, 126–127, 145
 - editing in Acrobat, 328–329
 - Illustrator features for, 245–251
 - rasterization of, 300–301
 - transparency flattening and, 298
 - unclumping in Acrobat Pro, 255
 - vector graphics and, 125–127, 163–164
 - version issues related to, 252–255
 - See also* fonts
- Text Box tool, Acrobat, 332
- Text Edit tools, Acrobat, 332
- TIFF files, 109, 211, 238
- toner-based printing. *See* digital printing
- touch plates, 207

- TouchUp tool, Acrobat, 330
- Toyo Color Finder, 48
- trade shops, 37
- transforming frames, 272
- transparencies, 37
- Transparency Blend Space, 298–299
- transparency effects
 - Illustrator, 233–237
 - InDesign, 296–307
 - Photoshop, 195–196
- Transparency Flattener Presets, 300, 301–303
- transparency flattening
 - Acrobat and, 353
 - drop shadows and, 306–307
 - Illustrator and, 235–237
 - InDesign and, 296–307
 - layer stacking order and, 298
 - spot colors and, 303–304
- Trap Presets feature, Acrobat, 354
- trapping, 13, 37, 52–54, 172, 354
- trimming, 18, 69–74
 - bleed provided for, 72–73
 - margin added for, 73
 - printer marks for, 348–349
 - trim size and, 70–72
- tritones, 205
- TrueType fonts, 132–133, 152
- TRUMATCH Colorfinder, 51
- two-color jobs, 39–40
- type features (Illustrator), 245–251
 - embedded fonts, 249–250
 - open/closed paths, 246–248
 - outlined type, 250
 - point and area type, 245–246
 - Typekit desktop fonts and, 251
 - version issues and, 252–255
 - See also* fonts; text
- Type on a Path Tool, 246
- Type tool, Illustrator, 245
- Typekit desktop fonts, 141–142, 180, 251
- typesetters, 37

U

- uncoated paper, 50
- unembedding images, 238
- Unicode, 133
- UPC (universal product code), 37
- Update Link button, 269

updating graphics, 269–270
 uppercase, 37
 UV coatings, 37, 58

V

variable data printing (VDP), 13, 38, 60, 160
 varnishes, 17, 38, 58–59, 159, 208–209
 vector graphics, 121–130

- color naming for, 163
- file formats for printing, 122–124
- inappropriate formats for printing, 124–125
- incorporating images into, 127
- Photoshop images and, 209–211
- pre-job submission check of, 163–164
- programs for creating, 129
- raster images vs., 121
- rasterization of, 125, 300–301
- simplifying, 128–129
- Smart Objects as, 192, 193–194
- text handling in, 125–127, 163–164

 version issues, 180–181

- Illustrator files and, 251–255, 257–258
- job submission and, 168–169

 viewing booth, 38, 66

W

Warnock, John, 317
 web presses, 38
 Web-based PDF files, 320
 white point setting, 68
 Windows computers

- cross-platform issues, 147–155
- filenaming conventions, 148–151
- font activation, 140
- system fonts, 137

 wire binding, 38, 89
 WMF file format, 124
 work paths, 200

Y

Yucky Discolored Box Syndrome (YDBS), 304–306

Z

ZIP compression, 155, 326