TRY THIS

1. Collect printed pieces in which color is a crucial element of the design. You can collect ads or stories from magazines and newspapers. Collect rack brochures, direct mail pieces, take-out menus, candy wrappers, shopping bags, fast-food wrappers—anything printed.

   Write a short paragraph about each describing why the designer chose that color for that piece. Is the color about history? Emotion? Culture? Does the color wheel play a role in selection of the main or supporting colors?

2. Choose a brand and compare the reproduction of color in its visual branding across devices: smartphone, tablet, desktop/laptop, color printout from the Web, commercially printed piece. Describe differences you see.

3. Find three pictures demonstrating different cultural meanings for the same color. For example, find three pictures each using the color red to communicate a different symbolic message.

4. Imagine you must brand a new restaurant. Name the restaurant. Then go outside to find a color palette inspired by nature. Take some photos of your color inspiration. Use your design software's color functions to match your nature-inspired palette.

5. You've been hired as the art director for a new musical play set in the 1990s. Suggest a historical color palette for the production's overall design, and justify your recommendation with some graphic evidence.

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CHAPTER NINE

ADDING VISUAL APPEAL

WORKING WITH PHOTOS & ILLUSTRATIONS

While it's certainly possible to create readable print and online materials without the use of images, most of us prefer pictures to accompany our reading material. In fact, when it comes to communication, visuals are just as important as type.

Images—photos, illustrations, infographics—set tone, add interest, provide additional information and visually break up intimidating blocks of type. The right image can add color, texture, line and movement to your layouts. The use of images adds eye entry points and communicates visual hierarchy. Images help create rhythm to assist flow, thus providing your readers with much-needed direction, i.e., where do I start, where do I go next and where is the end?

When choosing the right images for your particular project, you'll need to consider a range of factors from image content to image quality.

Tonal range. Choose photos that display a range of dark and light colors. Photos that lack tonal range may appear flat and lifeless.

IMAGE CONTENT

Of course you should choose your photos and illustrations to fit the overall tone of the piece you're producing. Tone, obviously, is determined by what you or the boss want to project and, more importantly, what will resonate with your audience. You just don't put pictures of circus clowns on the front of an investment-banking brochure.

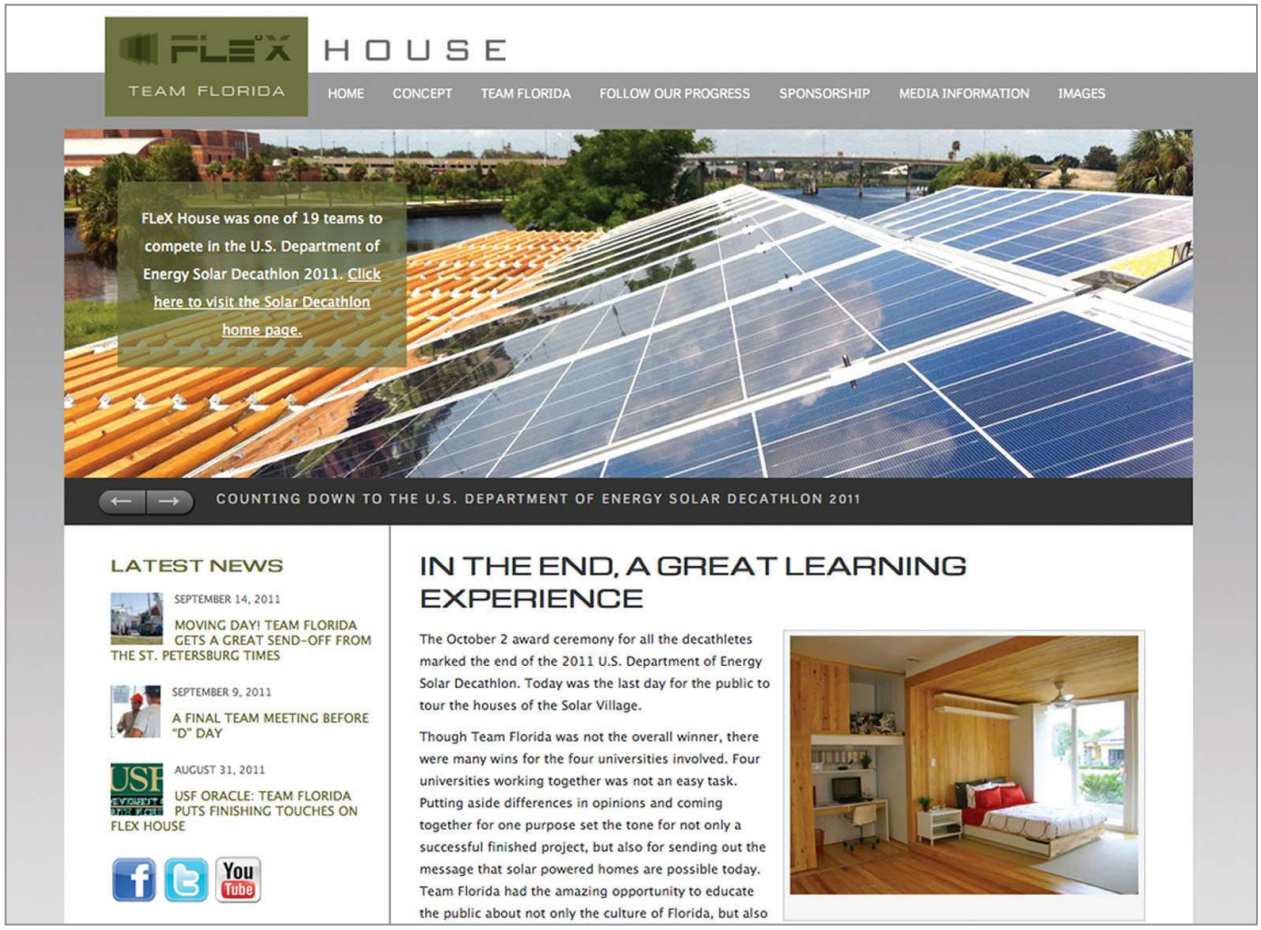
Say, for example, you really are choosing images for an investment-banking brochure. You might have a selection of appropriately serious-looking photos of people in suits shaking hands or conversing with other people in suits. How do you pick the best suits from the bunch?

Image quality.

One of the first and easiest things you can do to whittle your photo selections is to throw out the technically defective images. This is the photo equivalent of weeding out résumés by tossing out those with typos. Scrap any photos that are out of focus, that lack good tonal range (value and grayscale) and that lack proper resolution (more about this shortly). Despite the availability of photo-correcting software, it's still best to start with a good-quality photo that needs little to no correction. Some things can be fixed. Others, like lack of focus and resolution, cannot.

Clear subject.

Read any book on what makes a good photo, and you'll learn that simple subjects are best. In a simple photo, its subject is clear. Don't leave your reader wondering.



Choose wisely. Always choose the best available art. Poor quality art brings down the quality of the whole project.

If you're shooting new photos, remove distracting objects from the composition's background. If moving items is not possible (or is inappropriate, as in news-gathering), reframe the shot so the distracting items aren't visible. Avoid photos in which background objects such as trees or lampposts appear to grow out of people's heads. In order to eliminate distraction, consider shallow depth of field, in which the subject remains in focus while the background goes out of focus.

Photos of people doing things are more interesting than photos of people standing around. The "grip-and-grin" shot—a picture of one person giving an award of some sort to another—is about as dull as it gets. A much better approach would be to show the award winner engaged in the activity for which she won that award. Equally dull is the "police line-up" image, which consists of a group of people (board members, committee members, team members) all lined up against the wall. Again, it's much more powerful and interesting to show these people in action and in context. If you must photograph the group, at the very least vary the heights of your subjects. Some people seated plus some people standing makes better composition.

Rule of thirds. If we divide this image into a nine-square grid, our subject's face falls at the intersection of two of the gridlines. This makes for a photo with more interesting composition.

Bottom line? People *always* make good subjects for photos. Particularly engaging are photos of people looking right at the camera. While such photos may or may not be appropriate for journalistic applications, they are powerful in advertising, marketing and public relations materials. Don't forget to consider the diversity of people you represent in your photos as well as the diversity of people in your audience. Ethically speaking, gone are the days when white men symbolically stood for everyone. Tactically speaking, you want your audience to identify with your photos.

A well-composed photo.

Technical qualities aren't the only considerations for judging a "good" photo. A boring subject in perfect focus saved as a 300 dpi TIF image is still a lousy image. To qualify as a good photo—one that will be a compelling addition to your project—the photo also needs to be well composed.

Professional photographers know that the most interesting photos share some characteristics:

Asymmetrical balance and the rule of thirds. Centered photos are boring. Asymmetrical balance makes interesting shots, and using the rule of thirds is the quickest way to compose for asymmetry. Imagine the shot as a 3 × 3 grid, then position the focal point on one of the resulting four gridline intersections.

Tight cropping. Images that fill the frame communicate in no uncertain terms what the subject matter is about, and they also crowd out background distraction. Extreme tight crops and close-ups are particularly interesting, as they force us to look at the subject in a new way.

Natural lines to create movement. As in all visual communication, you want to control the eye's movement and flow through a photograph.

Interesting light. We've already touched on good tonal range. Playing with interesting highlights and shadows also results in compelling atmospheric images.

RESOLUTION, FILE FORMAT & SIZE

Even the most well-composed, compelling image is useless if it lacks the size, resolution and format appropriate to your chosen output. Images that are too small or lack resolution will appear pixellated and fuzzy in the final product.

COMMON **FILE FORMATS** AND THEIR USES

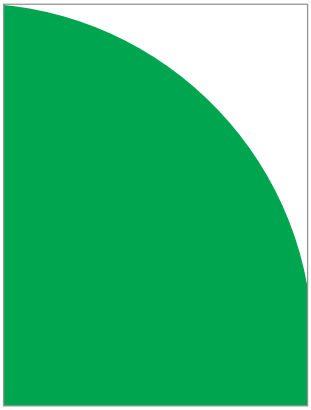
	FORMATS FOR PRINT	FORMATS FOR SCREEN
Encapsulated Postscript (EPS)	File format of most vector graphic files rendered through mathematical calculation, not pixel by pixel. Can be resized without loss of resolution. Best for logos, word art. Required for "duotone" images where *only* two spot colors can be used	
Graphic Interchange Format (GIF)		Best format for Web icons and animations. Supports transparency
Joint Photographic Experts Group (JPG)	Can be used for print pieces, but not recommended. Lossy format means poorer print resolution	Excellent for publishing photos on the Web. Use a photo-editing program to optimize and save at 72 ppi. Should not be used for video
Tagged Image File Format (TIF)	Best format for saving photos for commercial print purposes	Good format for still images intended for video. Supports layers
Portable Network Graphics (PNG)		Best for Web logos and illustrations. Also a good format for video stills and animations. Renders gradients well and supports a higher degree of transparency (drop shadows). Note, only PNG-24 offers full transparency support
Scalable Vector Graphic (SVG)		Vector graphics format for Web. Excellent for basic shapes, charts and graphs. Works well in responsive websites

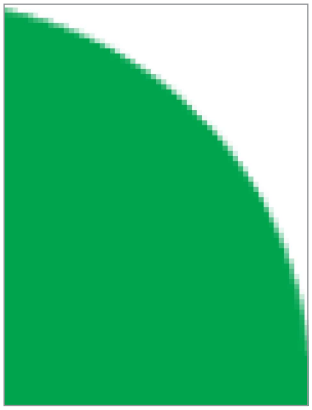
File formats.

Images can be saved in a number of different formats so there are a few standards you need to know. Each file type has different properties making it suitable for different purposes.

For Web, you'll want to save images as JPG (Joint Photographic Experts Group), GIF (Graphic Interchange Format) or PNG (Portable Network Graphic). JPGs are best for photos, GIFs work for small icons and simple animations, and PNG files are the choice for illustrations and logos.

It's important to note that GIFs and PNG files will both support transparency. JPGs do not. Transparency by definition means "see-through." In the case of Web graphics, transparency is essentially the





Vector vs. bitmap. The circles above both have been magnified by 1000 percent. The image on the top is a vector graphic, while the image on the bottom is a bitmap, or raster graphic. Because vector images are built through mathematical calculation, they can be scaled up or down infinitely without loss of quality. Bitmaps, however, get fuzzy on the edges when you try to scale up, as seen in the image at bottom.

GIF image

JPG image

GIF image with drop shadow

PNG-24 image with drop shadow

The right format for the right job. All logos above have been optimized for the Web. However, the GIF format (at top left) is the best choice for a graphic with broad flat areas of color. The GIF text is much crisper, and since the GIF format supports transparency, the graphic does not have a white bounding box like the JPG image on the top right.

While GIFs support transparency, they fail when the transparency needs a gradient, as in the case of drop shadows (lower left). For this, you need a PNG-24 file (lower right). Perfect.

ability to make certain color groups "invisible." If you've ever tried to put a logo in JPG format on top of a colored background and discovered that your logo has a white box around it, you've encountered lack of transparency. By creating your Web graphic in the correct software application and saving as a GIF or PNG image, you can eliminate the white box.

JPGs are great for the Web, but you should avoid them for print. The JPG is a "lossy" format, which means that each time you open or manipulate a JPG, it loses data. For print purposes, your best choice will be TIF (Tagged Image Format). TIF images are larger in file size and do not lose data. So choose TIF for print purposes.

Yet another file type for printing, EPS (Encapsulated Postscript) is used for some specific kinds of images. Vector graphics, usually illustrations, are

saved in EPS format, as are some photographs that have certain styling applied. EPS format is typically used for logos and, like GIF and PNG, supports transparency.

Size & resolution.

One of the most confusing things to grasp when working with digital images is the relationship between image resolution—usually expressed in dots per inch (dpi) or more accurately pixels per inch (ppi)—file size and physical image size. Take, for example, two images:

One image is 300 dpi at 1 × 1 inch with a file size of 263K.

The other is 72 dpi at 4.16 × 4.16 inches with a file size of 263K.

If your print project specs call for a 300 dpi image, which of these files is appropriate for use?

If you guessed that the 300 dpi image is the only print-appropriate image, you would be incorrect. Even though the resolution and dimensions are different, the file size (263K) is the same. It is the file size that is crucial to determining image usability.

Image 2: 300 dpi, 1 x 1 inch, 263K

Which is high resolution? Despite the fact one image is 72 dpi and the other 300 dpi, the file sizes are the same, and both could be used as high-res images.

Making Image 1 high-resolution (300 dpi) without losing file size would result in an image with a physical size of 1 × 1 inch, the same as Image 2.

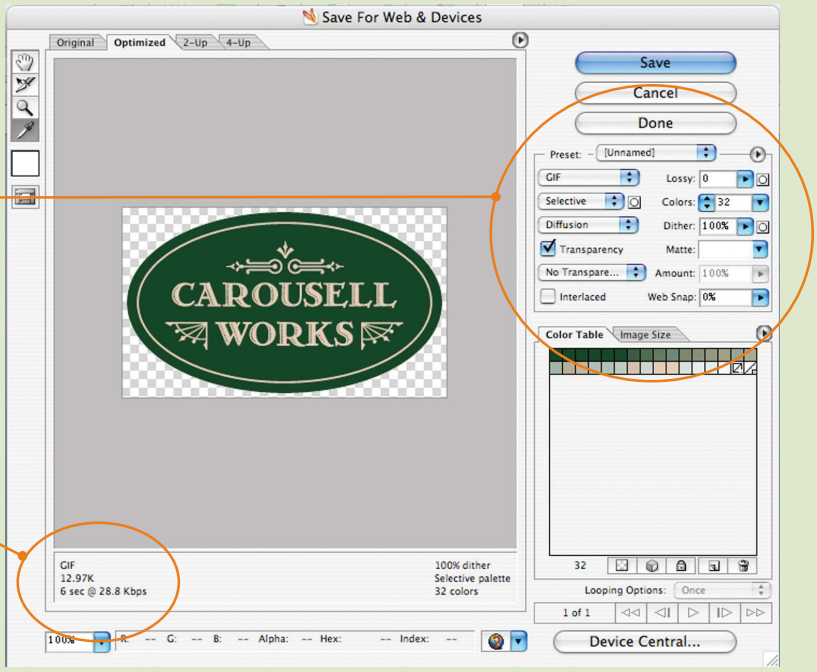
Using photo-editing software, you can take any image and change its size and resolution, including our "low-res" example listed here. But what you need to look at is what happens to the file size when you make the change. As a rule, you want the file size to stay the same or get smaller. If you make your changes and your file size gets bigger (sampling-up), your photo quality will drop (the image gets pixellated and fuzzy).

The optimizing process lets you find the sweet spot between image quality and lowest file size for Web images.

Select your settings.
Select settings based on the type of image. In this case, we chose GIF because of the image's broad flat areas of color.

Watch file size.
The dialog box will tell you what your final file size will be after output.

Adobe Photoshop® CC product screen shot(s) reprinted with permission from Adobe Systems Incorporated.



OPTIMIZING WEB GRAPHICS

Even if you never have to touch a website, at some point someone is likely to ask you to provide graphics for an existing site.

Working with a designer or developer. When you're working with professional designers and developers, your goal is to provide them with the best quality images at the highest resolutions available. When providing photos, send the highest resolution JPGs available. When providing logos, offer vector graphics. Your designer or developer will be able to resize and reformat your images as needed.

Preparing graphics on your own. Preparing graphics for the Web requires a few steps. First, the graphic must be resized to the appropriate dimensions. Next, if the image is a bitmap (raster) image, its resolution must be changed to 72 ppi.

Generally speaking, 72 ppi images are not large in terms of file size. Even so, it is possible to reduce the file size of a low-res image even further. Because large file sizes make for slow-loading pages, you want to make your file sizes as small as possible while retaining as much visual quality as possible. This process is called optimization.

Professional-grade photo-editing programs make it easy to optimize both vector and bitmap (raster) graphics. For bitmap images, optimizing involves choosing a level of quality for the final image from minimum to maximum. For vector images, the optimizing process requires you to choose from sets of colors ranging from a low of two colors to a full range of 256 colors. A preview screen shows you how the finished image will appear at each level. When you find the sweet spot between small file size and acceptable image quality, you save the image in the appropriate format. The most common vector formats are GIF and PNG.

The final optimized image is ready for uploading.

When you sample up, you are asking your software to add more pixels to the image, increasing both physical and file size. Software does a crummy job of this, and the result is a fuzzy image. Software does a better job of "down-sampling" (when your file size goes down). In this case, the software is choosing existing pixels to throw out, rather than having to create new ones.

In short, when evaluating an image, look at its dimensions, file size and original resolution. If both resolution and dimensions can be changed to what you need without an increase in the file size, you're golden.

Resolution for print & screen.

As you've likely figured out, one resolution does not fit all. While your end product dictates file format, it also dictates optimal image resolution. For high-end printing such as magazines, brochures and annual reports, optimal image resolution usually comes close to 300 dpi, so most designers simply use 300 dpi for all images destined for print. Graphics for the newspaper are the exception. Newspapers require a 200 dpi because of the presses involved and the nature of newsprint. Additional dots per inch on an absorbent paper like newsprint produce muddy images.

For screen graphics, lower resolution is required. Traditionally, images for the Web have been saved at a low resolution of 72 ppi. On standard flat screens, low-resolution images look great. Plus the smaller ppi images load more quickly, holding the attention of impatient readers and making search engines happy.

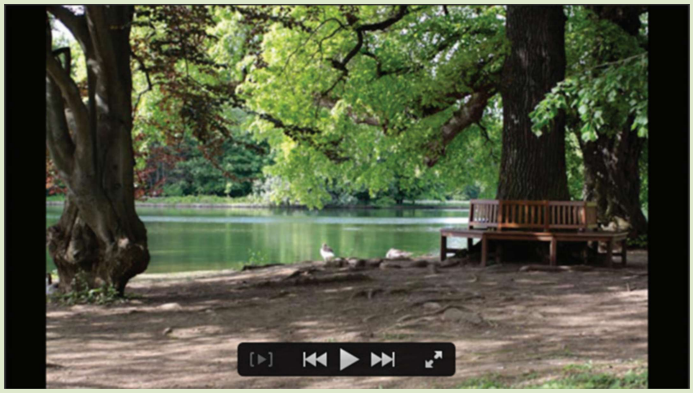
High pixel density monitors used in the latest mobile devices are changing the Web graphics game. High pixel density monitors squeeze in more pixels per inch than regular monitors, making images look much sharper. Images need twice the traditional resolution to look their best. For example, an image 150 × 200 pixels at 72 ppi would need to be 300 × 400 pixels at 72 ppi to look good on a high pixel density monitor. One way designers and developers address this issue is to create two versions of the same graphic, one twice the size of the other. The site is coded to detect the monitor type and call the appropriate version of the graphic to load.

With additional graphics at larger file sizes, it's essential to use a graphics

HD monitors. High pixel density monitors make images look much sharper by squeezing in more pixels per inch than regular monitors. Images need twice the traditional resolution to look their best on HD monitors.

STILL GRAPHICS FOR VIDEO

When putting together videos, you expect to work with video clips (crazy, we know). That said, there's plenty of room for still images in video production. Broadcast news employs still images and infographics in newscasts. Still graphics show up in title slides, lower thirds and program promos. And what documentary would be complete without panning and zooming in on vintage photos?



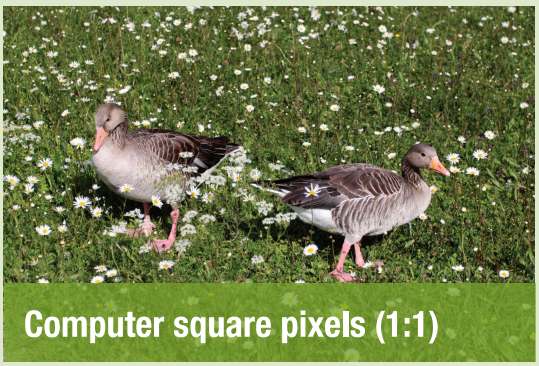
Between bars. Match the aspect ratio of your still images to your video format to avoid photos "between bars."

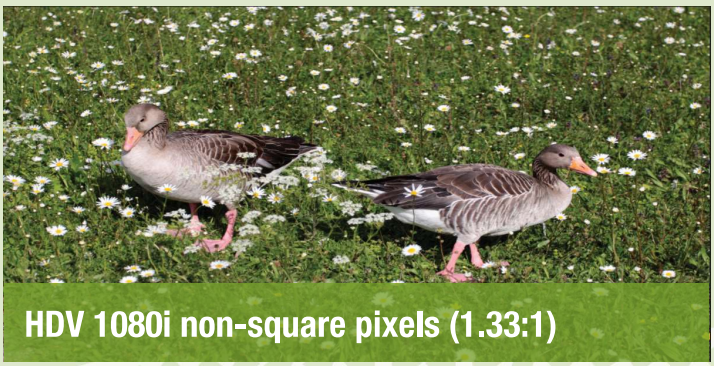
However, if you prepare images for video the same way you do for print or Web, you'll be in for some surprises and disappointments. Computer monitors are significantly sharper and show more color than television screens. Plus, different video formats use different aspect ratios. The dimensions for a clip on a video-sharing site differ from those of an HDTV promo trailer, and none of those match the dimensions of a photo right out of the camera. If you've ever tried to drop a still photo into a video and gotten funky black boxes on the top or sides of your image, you understand the implications.

Output determines format. To prevent still images in video from becoming a distorted mess, first consider the end product, in this case, the final video. You need to determine the dimensions of the final video and make your graphic fill or fit within that space. Things would be much easier if there were a standard size for all video. But you know what they say about things being easy. To find the size you need, ask the professional producing the final video. We recommend such a consultation for most larger scale video projects. For smaller do-it-yourself videos destined for sharing sites, search online for the correct dimensions. Video parameters for common video-sharing sites are not difficult to find.

Proper set-up solves issues. Video pros who work with still images recommend that you create your new document first, then import or "place" your chosen assets (images, logos, etc.) into the document. This allows you to set appropriate film and video document parameters at the outset, such as file sizes and formats, pixel aspect ratios and color spaces. A big benefit of "create document first, place image second" is that professional-grade photo programs automatically adjust the visual appearance of imported photos to compensate for the difference between camera and video pixel aspect ratios.

Resolution is irrelevant in creating graphics for video. Your only concern is whether you have the proper pixel-by-pixel measurement.





Go pro. Use professional-grade photo editing programs to automatically adjust the visual appearance of imported photos. They automatically compensate for the difference between camera, computer and video pixel aspect ratios. Because no one likes stretched duck.

Another benefit is that grids and guides for live area and title safe area might be automatically generated. (For a review of grids and live area, revisit Chapter 6.) Such a feature saves you some math—and time.

What resolution? Surprisingly, the answer here is, "Who cares?" Resolution—the concept of pixels—or points-per-inch—is irrelevant in creating graphics for video. Your only concern is whether you have the proper pixel-by-pixel measurement. For example, if you'd like to create a full-screen still image for your video, and the video dimensions are 1280 pixels × 720 pixels, then your image needs to be at least 1280 pixels × 720 pixels. Getting your image to fit likely requires scaling (down-sizing only, please) and/or cropping.

Keep in mind that if you want to use panning or zooming effects on your image (a.k.a. the "Ken Burns Effect"), you'll need an image larger than the screen size. Don't forget about aspect ratio, and make sure your larger image stays in proportion to the screen size.

What color space? Recall Chapter 8's discussion on color space? While it's not a perfect match for video color, set your document to use RGB color space. RGB gives you the greatest range of color (referred to as gamut) for your completed image. Some colors on the far edges of the RGB color space don't work well in video, particularly on television screens. If your software provides the option to set a color space based on final video format, take advantage of it. You'll get better color results in your end product.

What image format? Once you finalize your image or graphic, save it in a format compatible with importing into a video-editing program. The best formats for saving images for video aren't what you might expect. While JPG is great for Web, its lossy format makes it a poor choice for video. PNG files, on the other hand, are acceptable for importing into video.

Although other formats work, a TIF image remains the best option. TIF images do not lose data, and they support layers if created in a graphics program that uses layers. Elements created on separate layers may be edited independently of each other. If you created a color block on one layer and a slide title on another layer, you have the option of animating them separately—making each fade in one at a time, for example—once imported into the video-editing program.

Establishing and detail shots. When your layout calls for more than one image, consider pairing an establishing shot like the temple view at top with a detail shot like the image of the flower market. The contrast of subject makes for a more interesting layout.

program to optimize images. Optimizing is the process of reducing file size by selectively removing data from an image while preserving visual quality. When optimizing, aim for a balance between best visual quality and smallest file size.

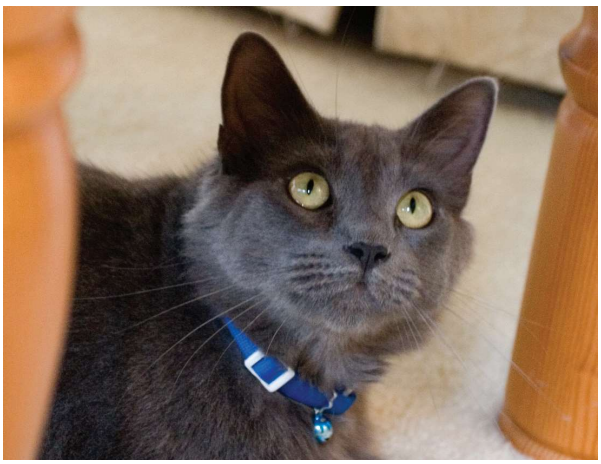
CHOOSING MORE THAN ONE PHOTO

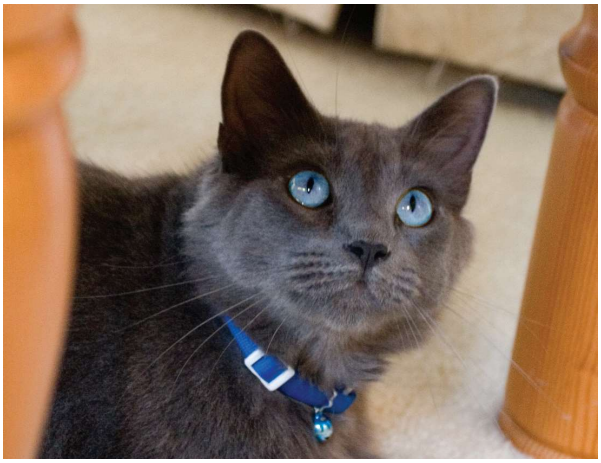
In many instances, such as websites, brochures, feature news and magazine stories, you may find that you need more than one image. When choosing multiple images for your project, you should start your selection process using the same criteria discussed earlier in this chapter. Once you've eliminated any poor quality images from consideration, your next step is to look at your potential images with an eye towards contrast. (Remember the element of contrast from mini art school?) While there are many types of contrast, in this case, the contrast you should look for is contrast in image content.

In terms of content, think about using establishing shots, which are wider in scope and content, or detail shots, which are typically closer to the subject and more tightly cropped. For example, an image showing the width of the Grand Canyon is an establishing shot. A close-up image of a rabbit on the canyon rim is a detail shot.

Pairing an establishing shot with a detail shot increases your storytelling power. The establishing shot sets the stage: time, location and action. The detail shot provides additional information, and by nature of close cropping puts your reader "inside" the story.

If your project requires more than two images, the same process applies. You should weed out poor quality images first, then make your remaining selections based on content contrast.





ETHICS OF SHOOTING & EDITING

To be clear from the start, shooting images for documentary and news purposes is very different than shooting images for commercial or political purposes. Documentary or news photography, however artful or evocative, strictly adheres to the principles of truth, accuracy, fairness and balance. Such principles are necessary to maintain viewer trust that such images are factual and reality-based. Photos staged for advertising, publicity and marketing purposes, not so much. Differences between photojournalism and commercial photography persist after the images have been shot, too.

If you've played with photo-editing software, then you know there are all kinds of things you can do to alter photos—from turning them into watercolor paintings to removing an inch or two from your subject's buns and thighs. It is certainly true that most, if not all, images of professional models are digitally retouched. We are greeted daily by photographic images that have added effects for visual interest. However, let codes of professional conduct, if not your personal integrity, guide your decisions about the ethics of altering photographs. Fear of unemployment and lawsuits can be persuasive forms of conscience, too.

A little cosmetic photo retouching is common. But retouching that results in false or misleading communication will get you in serious trouble.

If the photo represents news, regardless of format or context, restrict photo-editing to only those techniques you could accomplish in a traditional darkroom. This limits your editing to cropping, overall value adjustments and dodging and burning (lightening or darkening specific areas in an image). For news photos, edits other than darkroom-based techniques run the risk of altering or negating the truth of the image. That rule applies to media relations folks on the public relations side of the news business, too.

Diversity. We live in a wonderfully diverse world. Successful design reflects and respects this asset.

Formal rules are looser in non-news contexts when the photo merely sets tone or delivers a message in advertising, public relations and marketing materials. However, be aware that truth reigns here, as well, according to the Federal Trade Commission and the Supreme Court. Professional ethics say you should avoid puffery, photos that seem to exaggerate commercial claims. But the law prohibits false, misleading and deceptive commercial claims, including those implied by photos. Proceed with caution in taking artistic license when altering photography.

DIVERSITY AS CRAFT EXCELLENCE

While we're talking about professional conduct and ethics, this is an appropriate time to remind you of your responsibility to rise above the lowest common denominator when it comes to doing the right thing. Journalism, advertising and public relations all define diversity as part of craft excellence. Just look at those professional codes of conduct again. First, you have an ethical responsibility to deploy images free of stereotypes, whether based on gender, race, ethnicity, sexuality, religion, nationality, age, disability, class or any other kind of physical, social or cultural difference. "Everyone else does it" is no excuse. You're better than that. But accidental harm is no excuse, either. Symbolic annihilation refers to images that injure via symbolic messages about individuals or groups of people. Second, sometimes the problem has less to do with what actually appears in your image and instead has

more to do with what does not appear in your image. Ask yourself who or what is missing from the images in your design work. Learn to look critically at images with an eye toward mitigating prejudice and ignorance. Plus, working against the grain by avoiding visual stereotypes can offer the added benefit of capturing people's attention, as well as surprising and delighting them, with something unexpected. Sad but true.

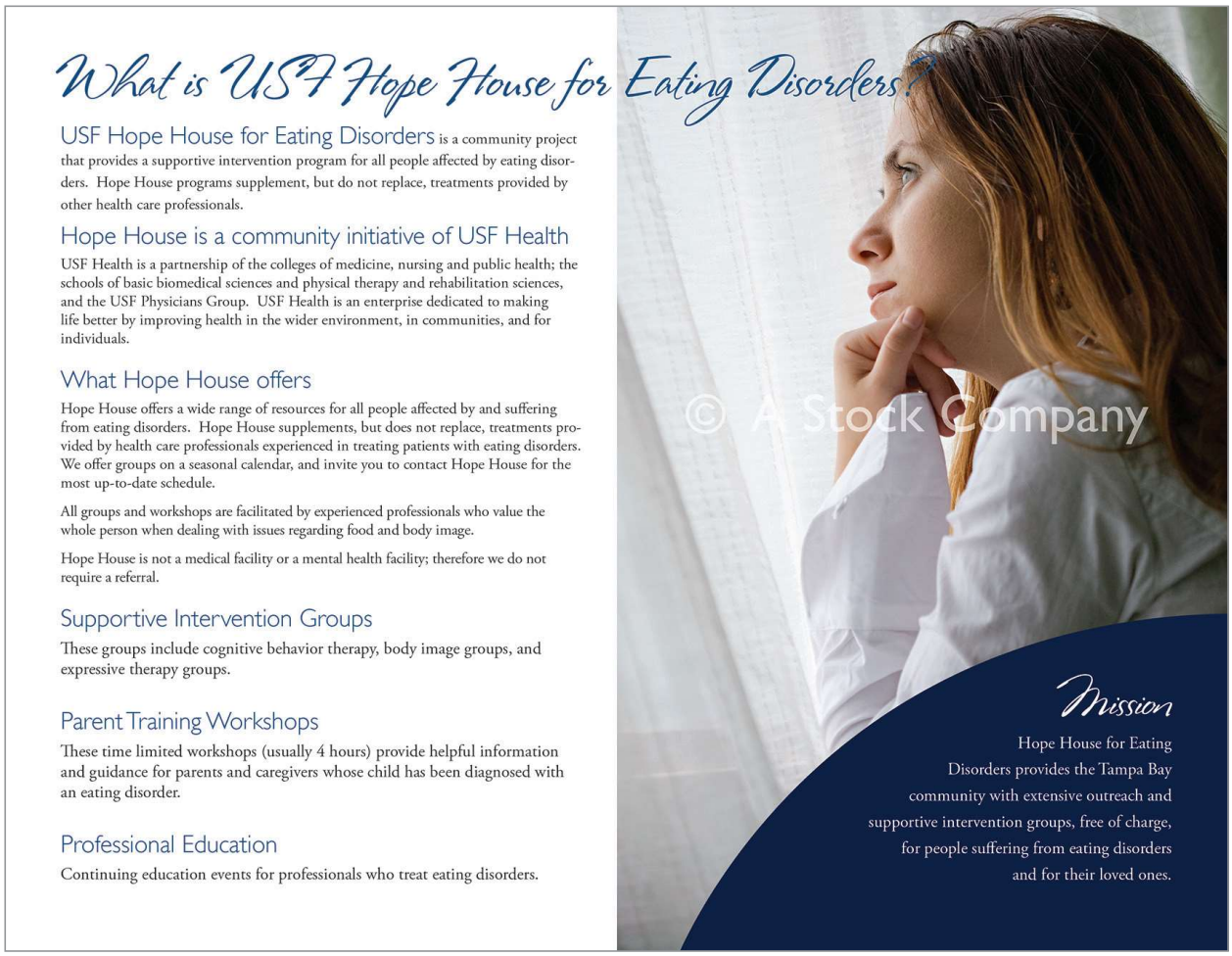
WHERE TO GET PHOTOS

To lay photographers tempted to shoot their own photos, we say—as diplomatically as possible—don't. That new digital camera cannot correct the tendency, for example, to cut off people's heads in pictures.

On the other hand, many graphic designers take up photography in the interest of being able to shoot exactly what is needed at a moment's notice. Journalists also increasingly must know how to handle both still and video cameras.

Comp images. The brochure below includes a comp image from a digital stock company. Stock companies provide lower resolution watermarked sample images for free, so the designer can test the image in the overall layout. If the image works, the designer can purchase a high-res version without the watermark.

Embedded photo © Philip Date - Fotolia.com



What is USF Hope House for Eating Disorders?

USF Hope House for Eating Disorders is a community project that provides a supportive intervention program for all people affected by eating disorders. Hope House programs supplement, but do not replace, treatments provided by other health care professionals.

Hope House is a community initiative of USF Health

USF Health is a partnership of the colleges of medicine, nursing and public health; the schools of basic biomedical sciences and physical therapy and rehabilitation sciences, and the USF Physicians Group. USF Health is an enterprise dedicated to making life better by improving health in the wider environment, in communities, and for individuals.

What Hope House offers

Hope House offers a wide range of resources for all people affected by and suffering from eating disorders. Hope House supplements, but does not replace, treatments provided by health care professionals experienced in treating patients with eating disorders. We offer groups on a seasonal calendar, and invite you to contact Hope House for the most up-to-date schedule.

All groups and workshops are facilitated by experienced professionals who value the whole person when dealing with issues regarding food and body image.

Hope House is not a medical facility or a mental health facility; therefore we do not require a referral.

Supportive Intervention Groups

These groups include cognitive behavior therapy, body image groups, and expressive therapy groups.

Parent Training Workshops

These time limited workshops (usually 4 hours) provide helpful information and guidance for parents and caregivers whose child has been diagnosed with an eating disorder.

Professional Education

Continuing education events for professionals who treat eating disorders.

Mission

Hope House for Eating Disorders provides the Tampa Bay community with extensive outreach and supportive intervention groups, free of charge, for people suffering from eating disorders and for their loved ones.

If you are still inclined to try your hand at photography, familiarize yourself with the appropriate file formats and resolutions needed for design work and learn how to set them on your camera. Also educate yourself on what makes a good photograph (re-reading this chapter is a good start).

Stock sites have restrictions on reselling images and may have limits on alterations, types of use and frequency of use. When purchasing and using stock images, do read the fine print.

Digital stock sites.

If photography is not your thing, consider buying images from digital stock sites. There are scores out there, and their inventory is immense. Fees vary from $1 per image for low-res Web-appropriate formats to thousands of dollars for high-res high-quality images with restrictions. You can purchase single images or subscriptions that allow multiple downloads over a given timeframe. In addition to photos, many stock sites also offer vector illustrations, video clips and stock animation.

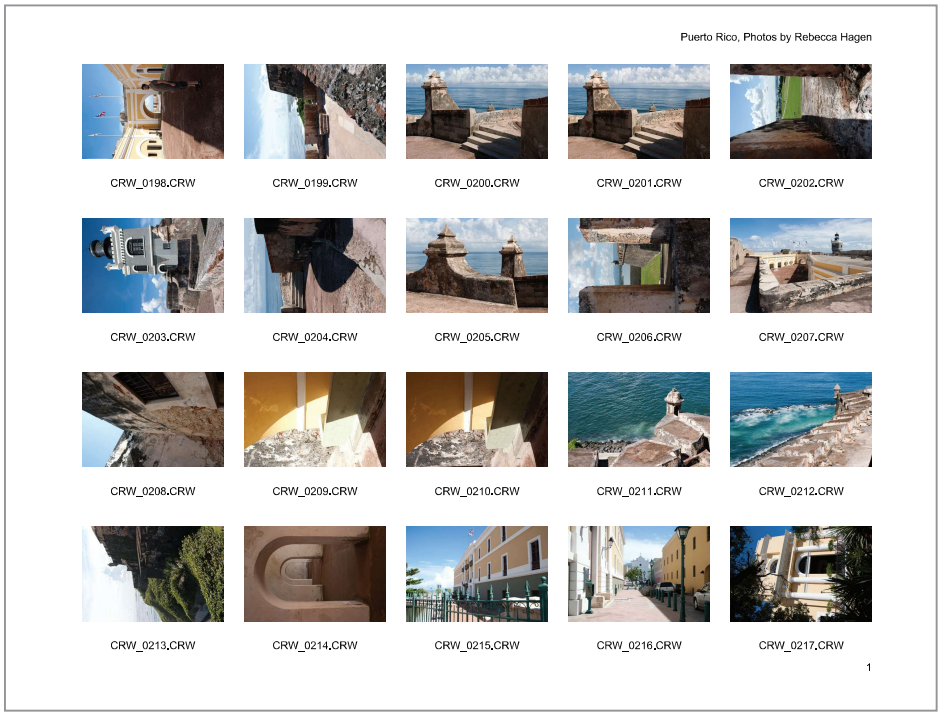
One of the best features of digital stock sites is the availability of comp images, meaning complimentary images. Comp images are lower-resolution versions of stock images available for free. They give you the chance to test-drive one or more images in a design so you can decide what you like before you buy. Often, comp images are watermarked with the name of the stock site to prevent people from using the images without paying.

At the point you do have to cough up some cash, you usually have the option of purchasing images royalty-free or rights-managed. Royalty-free images are typically cheaper, but the drawback is that you don't get exclusive use of the image. You could choose a splendid image for your project only to discover another organization in town is using the same image for its project. We've seen it happen.

Using rights-managed images solves this issue. However, rights-managed images are more expensive than their royalty-free counterparts. You may find yourself paying once to use the image for one project then paying again later if you want to use the same image for another project. While you don't want to pay for rights-managed images you'll never use, good planning suggests thinking about how, for example, a photo you use for an expensive brochure might also create some continuity if you use it for your next website update as well as in this year's annual report.

No matter where you get stock, or what type of stock you get, be prepared to agree to various restrictions. Stock sites have restrictions

on reselling images and may have limits on alterations, types of use and frequency of use. When purchasing and using stock images, do read the fine print.



Contact sheets. Photographers shoot hundreds of photos, yet few images actually make it to publication. To help you select the images you want, photographers typically provide a contact sheet. Originally printed on photographic paper, most contact sheets today come in the form of an online gallery.

Working with photographers.

If you have sufficient budget and time, hiring a professional photographer to take custom photos is the best possible scenario.

Depending on the project, you'll want to find a photographer who has experience in the type of photography you need. Portrait, landscape, product, catalog and food photography each require a different eye and, often, different equipment. Freelance photojournalists and documentary photographers, bound by stricter ethical constraints than commerical photographers, also vary widely in skill sets. So find someone with the expertise you need.

You could check a local directory, but finding your photographer by word-of-mouth is safer. Ask colleagues and friends in the business for recommendations.

When you do find a photographer, be prepared to discuss a number of things up front. Specifically, everyone will need to be clear on the timetable and the actual deliverables. You may want a high-res copy of every image, but the photographer may want to give you only a set of retouched images. From the beginning, make sure everyone is on the same page.

If a commercial photo shoot involves people, make sure all the models (professional or otherwise) sign photo release forms. Whether news or commercial photography, in the case of minors, parents or guardians do have to sign consent for underage photo subjects. Photographers often have their own release forms. You'll want to have a form of your own for your specific project.

You'll have a better chance of getting the best photos if you arm the photographer with all the necessary project knowledge. Are you

It's illegal. There are two really good reasons not to steal graphics from the Web: Optimized Web graphics likely will lack the resolution you need, and it's illegal.

producing images for print or Web? What is the overall feel you are shooting for? A good photographer will ask you many of the same questions you asked the boss at the start of the project. Be prepared to give concrete, detailed answers.

Show the photographer a rough or comp mock-up of the design. This visual will help the photographer plan and frame the shots, including, for example, such things as vertical versus horizontal formats or left- versus right-facing content.

Keep in mind that photographers are creatives, too. Give them as much information as you can then step back and let them work. But don't be shy about providing feedback when necessary.

WHERE NOT TO GET PHOTOS

Why go to a photographer or digital stock site when there are billions of images out there on countless Web galleries? Two reasons. One, as

we've already discussed, Web images may not have enough resolution for your particular needs. Two, and more importantly, it's illegal.

Copyright law in the United States protects ownership of creative works (art, the written word, music, photography) from the moment of creation, with or without notice of copyright. Because something is posted to the Internet doesn't mean it's free for the taking. To pull an image (or text, or anything) off someone's website and use it without permission is essentially stealing. Depending on the circumstances and severity, a person can be charged with a felony for engaging in this sort of practice. Transcendent of the fear of legal action, ripping off other people's creative work generates bad karma.

Unless the owner of an image explicitly states that the image is available to all for any use, do not assume you can use it without arranging for permission. If you find a must-have image on the Web, track down the owner and get written permission to use the image before you proceed.

ALTERNATIVES TO PHOTOS

Maybe you're on a tight timetable, maybe you have a really low budget or maybe it's the particular concept, but sometimes a photo just isn't the right thing.

As we've already noted, you still need something to break up lots of text. The good news is that illustrations, clip art and text-based elements such as pull quotes are solid alternatives to photos.

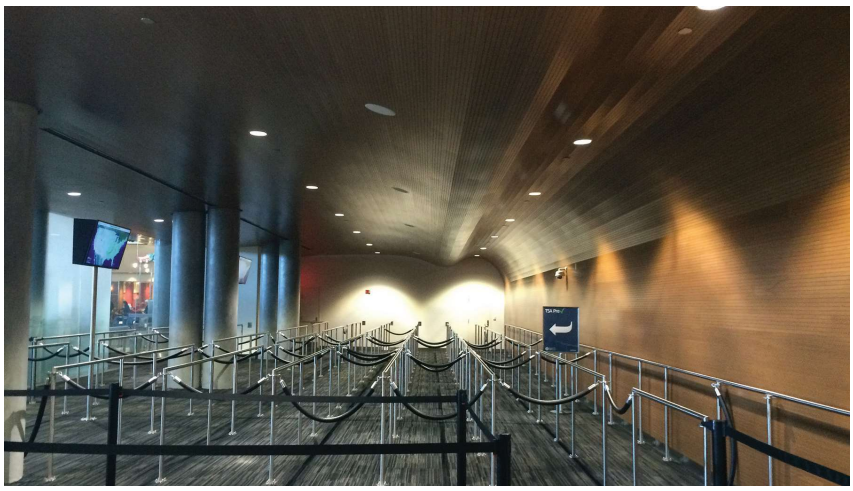
Illustrations.

Under no circumstances should you think of illustrations as second-rate substitutes for photos. On the contrary, illustrations are often the best choice, if not the only choice, for a design project.

Photo effects. Photo-editing software can turn ordinary photos into interesting images. The miniaturized look on this book cover was created using a filter that mimics the look of tilt-shift photography.

Illustration to show what is possible. This pair of photos was used to pitch an environmental advertising package. The photo at top shows the airport queue area as is. The photo below was edited to show potential placement of branded graphics and other audio and visual components.

Photo editing by Rebecca Hagen. Images courtesy of SecurityPoint Media.



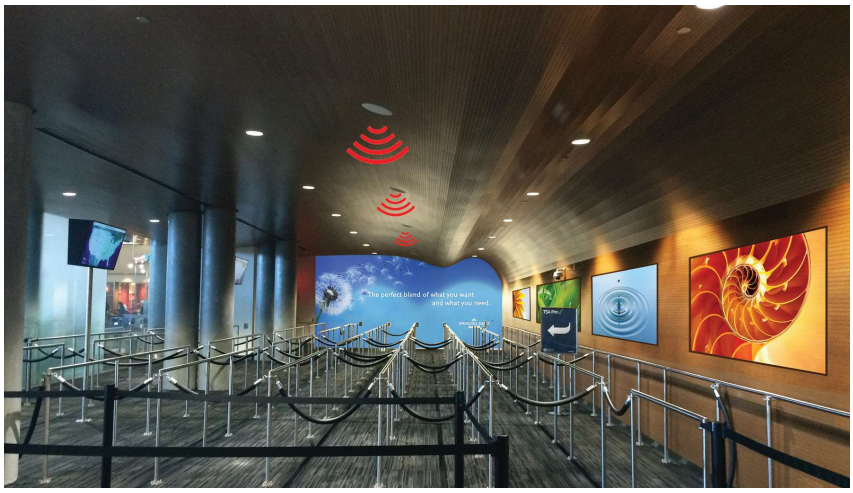


Illustration gives form to the imaginary. Say, for example, you are writing a story about fire-breathing dragons. Let's say you want to find a photo to accompany your story. Good luck with that. For hundreds of years, illustrators have been giving visual form to people, places and things found only in the imagination. Fiction (for both adults and children) is full of wonderful illustrations that bring everything from fairies to flying monkeys to life.

Illustration isn't just for the fantastic. Architects, landscape designers and interior designers sell concepts to clients through the use of renderings. An essential part of designer–client communication, a rendering allows the designer to show the client her interpretation of the project and provides a basis for any feedback prior to the start of a project. It's far easier to provide an illustration of what the fountain, walkways and shrubbery will look like than it is to explain it verbally.

Illustration for sensitive subject matter. Sometimes illustrations may be more appropriate than photos if the subject matter is too sensitive

for realism—death, assault or rape, for example. Caricatures can be used to illustrate stories about public figures such as celebrities or politicians, especially when the story is commentary, satire or feature news. Political cartoons are another example of this type of illustration.

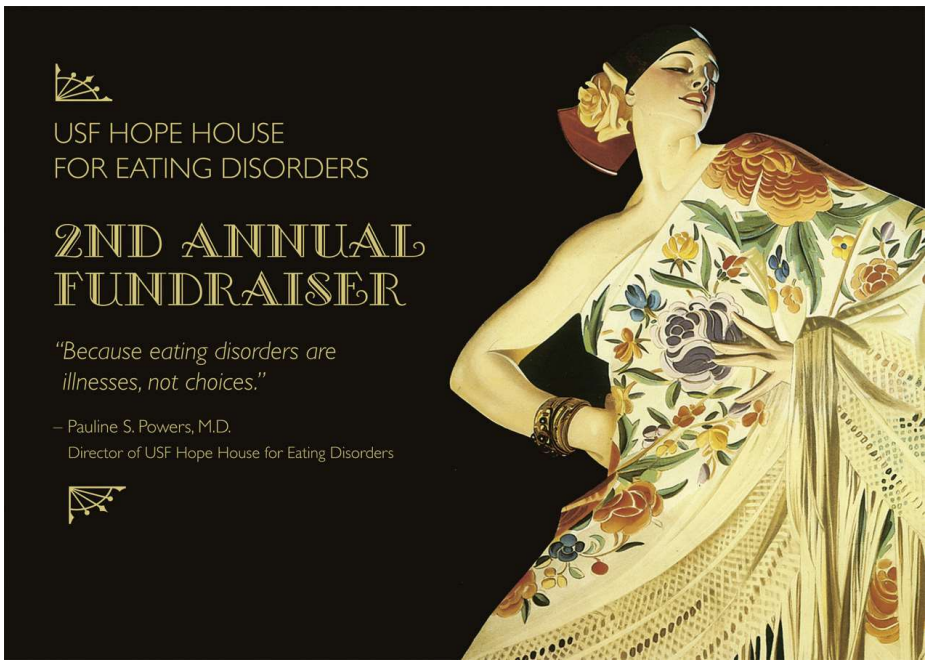


Illustration to show change over time. While photos capture a single moment in time, illustration has the power to show change over time. Attorneys use illustration for this purpose. Consider a court case involving a traffic accident. Evidence may include still photos taken before, during or after the accident, but the still photos can't convey a sense of motion or timing. For this, attorneys hire illustrators to create illustrations showing a simplified layout of the street and position of the vehicles involved. Arrows, time stamps and other devices are used to add the information still photos can't provide.

Illustration to evoke history. Before photography, illustration was the method of choice to record both day-to-day life and special events. Egyptian hieroglyphics, the Bayeux Tapestry, Native American petroglyphs and even 1970s-era graffiti each have a distinct illustrative style and color palette. By echoing historic illustration styles in contemporary design work, it is possible to evoke a specific sense of time and place.

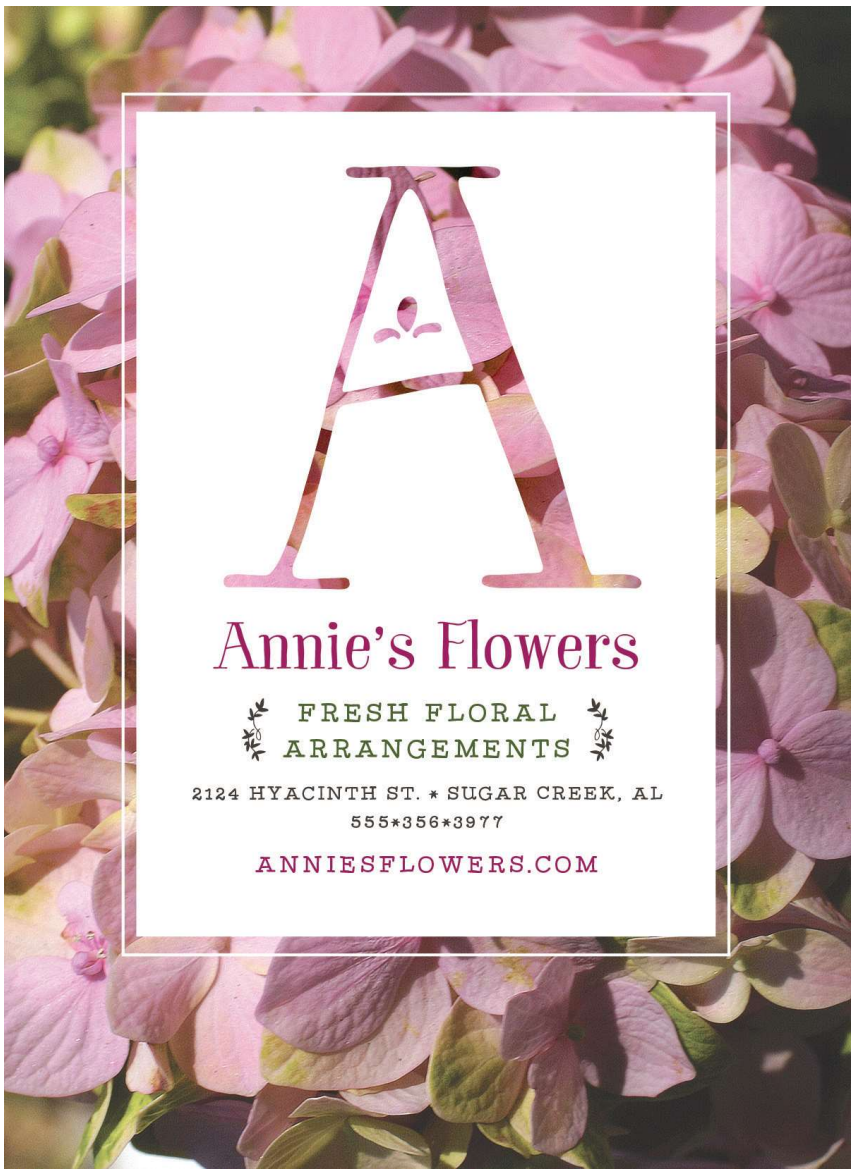
Using photo-editing tools, you can turn a simple photograph into an illustration. If your skill isn't up to the illustration task, hire a professional illustrator or search digital stock sites for art you can purchase.

Clip art. Clip art is one of many alternatives to photos. However, all clip art is not created equal. Dump the stuff that came with your computer and shop digital stock sites for professional-grade illustrations in vector format.

Embedded illustration reproduced by permission Dover Publications, Inc.

Clip art.

Clip art is another visual alternative to photos. But not all clip art is created equal. If you're considering using a piece of clip art that came with a software package you own, um, "Yuck-o." Clip art that comes with computer programs is notoriously bad. You should dump it immediately so it doesn't take up valuable space on your hard drive.



Type as image. Letterforms are so interesting they can take the place of images in layouts.

If you really want to use clip art, visit a digital stock site to purchase something appropriate. It's also possible to buy books of royalty-free vintage clip art that you can scan and use in your publications. If you're lucky, your book will include a CD so you won't even have to scan.

Video & multimedia components.

The popularity of video-sharing sites on the Web leaves no doubt that the democratization of design has hit video production as well. Websites are just as likely to include video clips and animation as they are photos and illustrations. Video and animation make excellent focal points because they include the eye-catching element of motion.

Some extra planning is required if you want motion elements to carry the same compositional punch as still images in your project. If your clip is a slideshow, each image in the sequence should coordinate with the overall layout in terms of color, shape or content.

Traditional video clips also must work with your layout. You should choose a title slide that provides a good tease for the video content and coordinates with your other layout elements. Quality, style and speed of video and animation transitions also impact your layout. Video that is choppy and animation transitions that are too fast or slow can be distracting. Like a poor quality photograph, poor quality video and animation bring down the quality of the whole project.

Type as image.

Maybe, for whatever reason, you have been reduced to choosing between a poor photo and a cheesy piece of clip art for your project.

Trust your judgment and skip both, then. Instead plan for creative type to do the job of adding visual interest to your long copy.

Letterforms are interesting. For most of us, the last time we really looked at individual letters was in kindergarten. When we learned to read, we were taught to recognize each letterform in upper- and lowercase and to associate each letterform with a particular sound. Once we trained our brains to equate the shape with the sound, and letter pairings with the sound and meaning of words, conscious thought regarding the shapes of letters fell off our radar screens.

Highlighting a QUIRKY QUOTE IS A GOOD WAY TO entice readers to READ ALL YOUR copy.

In the name of good design, we'd like you to rewind and reconsider letterforms. As design elements, letterforms are fantastic. Set alone, or as individual words, letterforms can have the same compositional impact as photos. Letterforms have curves. They have negative space. They have line. And of course, they can have color. Set large and in color, the right letterforms can turn a basic headline into the focal point for any layout. Individual decorative characters can be used as watermarks. Repeated decorative characters add background texture.

We discussed some of the more traditional uses of type in Chapter 7 on typesetting. But there are a couple of type treatments more closely related to image and illustration that we'll discuss here: pull quotes and rendered type.

Pull quotes. A pull quote (also called a lift-out or callout) does exactly what its name implies—it pulls a quote from the copy for the purpose of highlighting it. Choosing a particularly interesting, compelling or quirky quote is a good way to entice readers to read all your copy.

You often box a pull quote. Because a quote is relatively short, you significantly increase the font size so that it will pop off the page to read as a graphic element or visual. If you're feeling really wild and crazy, you might replace your standard quotation marks with decorative ones. If the source of the quotation is as eye-catching as the quotation, provide an attribution line.

Some design tips for creating pull quotes include:

- Don't forget to include margins outside and inside the box. Don't cheat your margins!
- When adding color to pull quotes, there are two options. The whole quote can be in color, or you might put your color in the

box's background (the fill) or the box's outline or border (stroke). If you choose a background color, make sure the text is set in a color that contrasts with the background color.

» Use a hanging indent to pull the first quotation mark outside the margin bounding the text box. Set your second and subsequent lines to align with the first letter after the first quotation mark.

Rendered type. Rendered type is a character, word or string of words that has been filled with an image, or otherwise transformed using photo-editing software. Rendered type is commonly seen in magazines, newspaper features, posters, websites, video, television and movie title sequences. The technique allows you to create type that looks like it was made out of polished brass, stamped in rusty metal or even chiseled out of stone.

To summarize what you've learned about adding visual appeal with photos and illustrations, be selective in terms of quality. Choose the appropriate resolution, file format and size, too. If photos aren't an option, don't discount using illustrations, clip art, video and decorative type for visual impact. Remember the lessons of mini art school when you compose and place any kind of visuals. If you hire outside help, treat photographers and illustrators with the professional respect they deserve. And when it comes to altering photos or paying for your visuals, do the right thing to assure a clean conscience.

Rendered type. For some really interesting effects, try filling your letterforms with an image. Or use image-editing software to make your type look like polished chrome.

Maybe, however, your design is begging for something more. Maybe you need something with the jaw-dropping appeal of a visual and the head-reeling power of information. For that kind of one-two punch, you're talking infographics, which we cover in the next chapter.

TRY THIS

1. Find an example of a printed piece with a photo that does not work (poor quality, inappropriate subject, whatever). Visit a digital stock site and find a suitable replacement image. Redesign the piece using your new image. Explain why the photo you chose is a better solution to the design problem.

2. Brainstorm photo options for the following situations. Create a set of thumbnail sketches for each scenario. Use two or more images in each sketch.

   a. A feature story on a famous artist for the leisure section of a broadsheet newspaper. The artist is opening a show at a local venue in the coming week.

   b. A trifold brochure for a small independent bookstore. This piece needs to have some "shelf-life." In other words, the brochure content cannot be time-sensitive.

   c. A website home page for the bookstore in letter b.

   d. A 24 × 36-inch poster for an upcoming Latin Jazz Festival.

Pulling out all the stops. By combining interesting images, illustration, decorative type and rendered type, you can create rich textural compositions.

3. Collect several advertisements relating to the following topics:

   a. Luxury goods (watches, perfume, jewelry, expensive cars)

   b. Baby products

   c. Clothing for teens and tweens

   d. Sporting goods/athletics

   Compare and contrast the photo treatments. Consider compositional techniques, color use and alterations applied using photo-editing software. Choose one of the topics and create two ads of your own: one in a style consistent with convention and one using an entirely different style. Use digital stock imagery and the photo-editing software of your choice for this assignment.

4. Collect two magazines: one mainstream publication for general audiences and one targeted to a particular group (People en Español, Latina Magazine, Essence, etc.). Compare and contrast the use of imagery throughout both magazines. What are the similarities, differences? Take the ad you designed in exercise 3, or an ad from another exercise, and redesign it to better reflect diverse audiences.

5. Design a two-page magazine-style spread for a story on a campus martial arts club. The completed spread will appear in the campus alumni magazine. Aikido, the martial art style practiced by the club, is not your stereotypical martial art—belts are awarded, but there are no contests or competitions.

   Visit the *White Space is not Your Enemy* website and look for the Aikido images contact sheet. How many images will you need? Which ones will you choose? Justify your selections, and create your layout using your selected images along with placeholder text.

CHAPTER TEN

INFOGRAPHICS

MAXIUMUM INFORMATION IN MINIMUM SPACE

Here in the 21st century, people want quick, handy chunks of visual communication via smartphones and tablets as well as traditional electronic screens and printed material. We scan for pictures and headlines that pique our interest. We may or may not read further. There may or may not be anything further to read. We may be moving so fast that we need to absorb it at a glance or miss it altogether.

More and more, everyone from news organizations to advertising agencies relies on infographics to deliver content to audiences. Infographics—as in information graphics—present information graphically. Partner the reporter's nose for sniffing out a good story with the designer's eye for visualizing it, and you've got infographics.

But today's infographics go way beyond performing a supporting role to a main news event. First, infographics are not just for journalism—or even business communications. Second, infographics can tell a deeper, broader and evolving story better than text or certainly raw data alone. In many instances an infographic is easier and faster to wrap the brain around than a paragraph of explanatory type, whether news, advertising, public relations or those "assembly required" diagrams we love to hate.

Before sharing best practices for designing such things as maps, bar charts, fever graphs and timelines, we'd like to talk a little about the evolution of infographics.

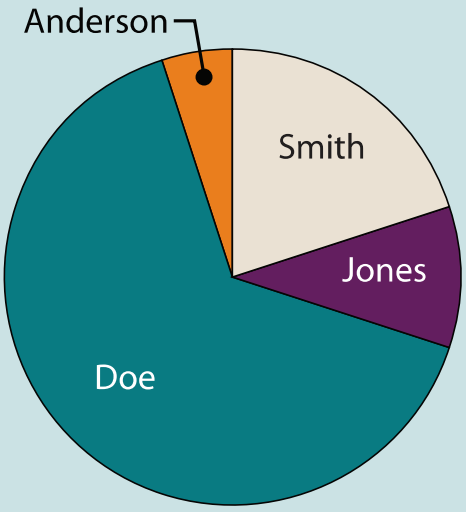
THE ART OF CUTTING TO THE CHASE

Sometimes an infographic tells the story faster and better than words. Consider this example:

A recent poll showed that 20 percent of the residents in Precinct A voted for candidate Smith, 10 percent voted for candidate Jones, 65 percent voted for candidate Doe, and 5 percent voted for write-in candidate Anderson.

Or we could go this route:

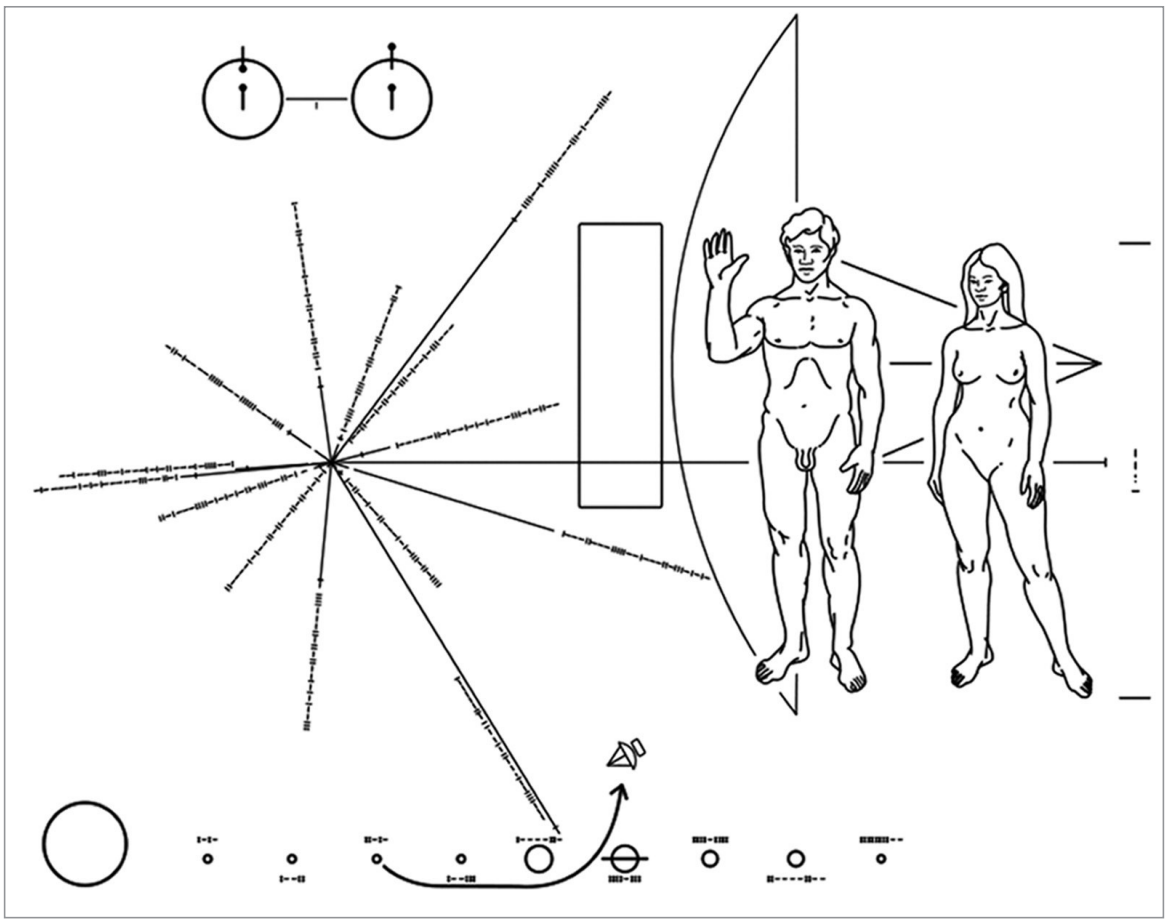
How they voted in precinct A



A TERSE HISTORY OF INFOGRAPHICS

USA Today usually gets credit for popularizing modern infographics. And colorful charts and graphs remain hallmarks of USA Today's design for busy readers. But people were using graphics to deliver information well before the 1982 origins of USA Today.

The earliest humans on the planet shared information in pictures carved and painted on rocks and caves, not to mention tattooed on bodies. All over the globe, ancient peoples documented themselves and the world around them in pictographs from Japanese Kanji derived from Chinese ideographs to Egyptian hieroglyphics.



Is anyone out there? Carl Sagan and a multidisciplinary team developed this plaque for NASA's Pioneer 10 and 11 space probes. The plaque was designed to communicate basic information about the human race, including what we look like and where we come from.

More recently, NASA's Pioneer 10 and 11 interstellar space probes, launched in 1972 and 1973, carry information-rich diagrams. Just in case we're not alone. No joke.

In modern history, infographics recruited the aid of sound and motion while working in the TV business. Infographics went 3D with the invention of video games. With the great Web migration, infographics reinvented themselves as interactive. Color graphics, sound effects, animation, 3D perspective and interactivity all working together increased the communications capability of infographics exponentially. Use of infographics increased exponentially as well.

YOU MIGHT NEED AN INFOGRAPHIC IF…

Infographics are an excellent tool for your designer's toolbox, but they aren't perfect for every situation. They are best used when:

» You need to communicate quickly.

» A verbal or written account is too complicated—or tedious—for comprehension.

» Your audience can't hear or read well—or at all.

TYPES OF **INFOGRAPHICS**

A self-consciously ironic, though not exhaustive, infographic about types of infographics. Purity is not required. Mix and match. Or invent a new form.

Text Boxes

Profiles

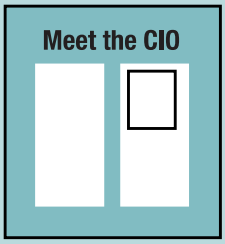
- Bio-Box
- At-a-Glance
- In-a-Nutshell
- Quick Tips
- Fact Box

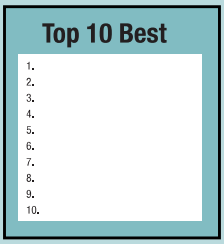
Horse Races

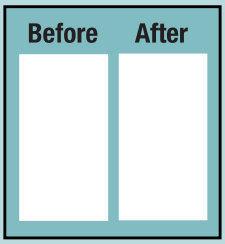
- Ordinal Lists
- Outlines
- Rankings
- Ratings
- Scores

Two-fers

- Before-After
- Pro-Con
- Problem-Solution
- Compare-Contrast

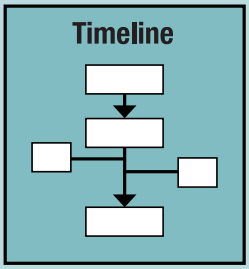






Sequences

- Demos
- How-To's
- Timelines

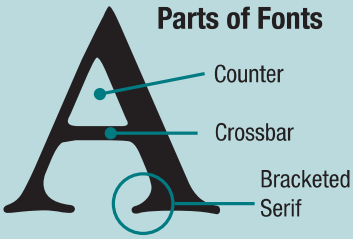


Maps

- Locator
- Geological
- Data/Statistical

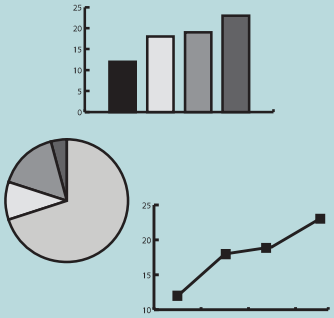
Diagrams

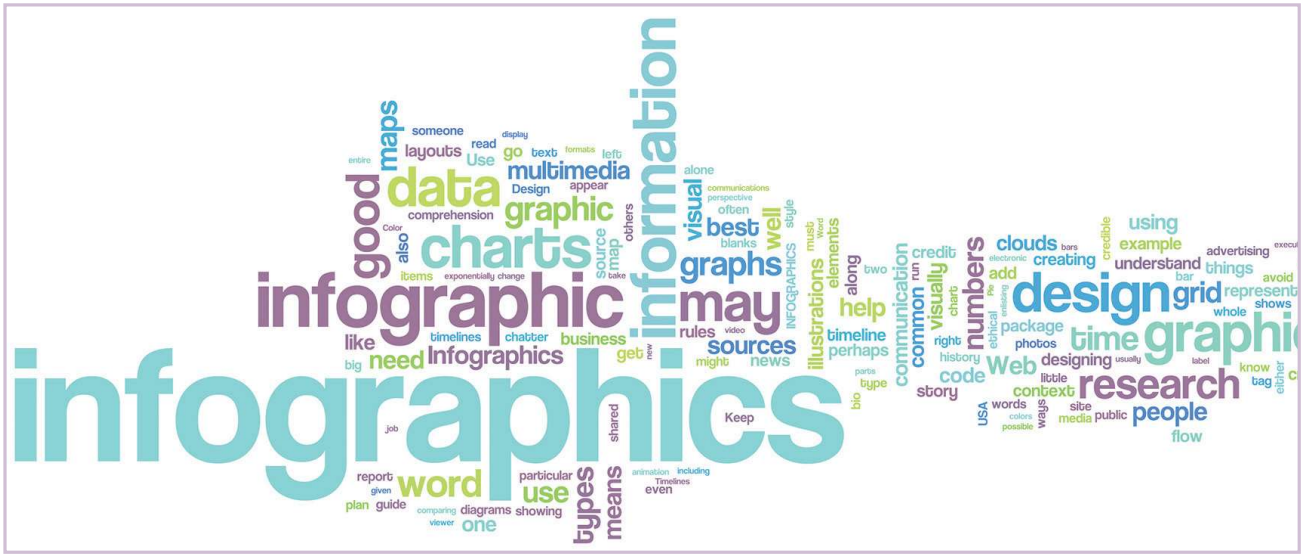
- Cutaways
- Schematics
- Diagrams
- Figures
- Illustrations



Charts & Graphs

- Pie
- Bar
- Fever
- Scatter
- Flowchart





Word or tag clouds. While word clouds are a little passé, they're still a good example of simple, dynamically generated infographics. This word cloud visually displays the most commonly used words in this chapter. Free word cloud generators are easily found on the Internet.

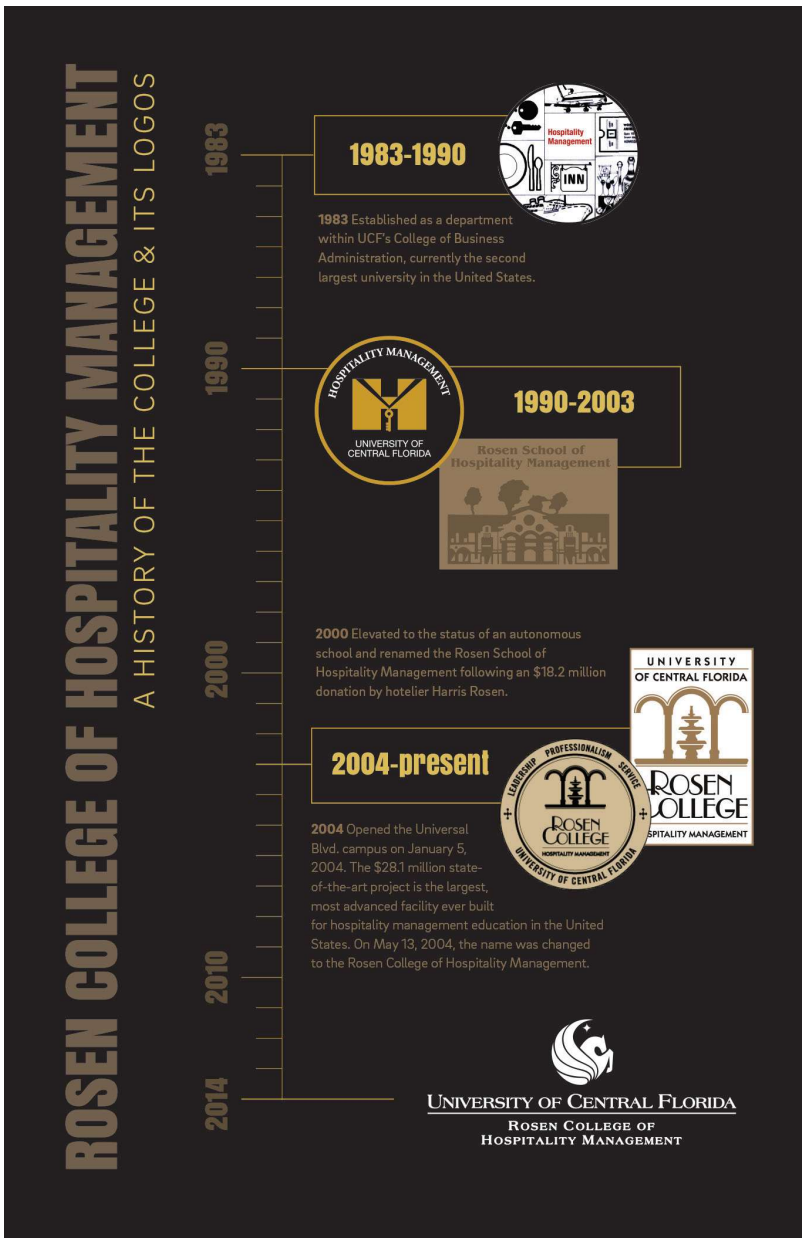
Choosing the right infographic for the job is equally important. Sometimes your topic offers clues to suggest a certain kind of infographic is suitable. For example, people as key actors—heroes, villains or victims—suggest bio boxes. Dates imply a timeline. References to geographic areas such as neighborhoods, floor plans or precincts hint at maps.

WHERE DO INFOGRAPHICS COME FROM?

Despite their complicated appearance, many types of charts and graphs are easily generated using common word processing, spreadsheet or presentation programs. For more advanced needs, or instances when you need more control over your colors or formats, programs designed specifically for creating charts and graphs are available. There are even online services for creating infographics. Some are free, and others are subscription-based.

Infographics also can be drawn from scratch using graphic design software. This might be your only option if you need a highly specialized infographic like a diagram.

If your layout is Web-based, then plug-ins, widgets and shared code snippets can populate your site with some types of charts and graphs. Embedding maps is perhaps the most common example of this practice. Widgets that generate word or tag clouds are also common. Word clouds and tag clouds visually represent the frequency with which particular words appear in a given context, such as a research



Quality control. You can find online generators for many infographic types, but the results might not be the best quality. For complex infographics like timelines and diagrams, the best approach may be a custom design.

Design by Rebecca Hagen, printed with permission of the Rosen College of Hospitality Management at the University of Central Florida.

report or an entire social media network. A "big" word means it shows up often; a little word means it is relatively rare.

Dynamically generated infographics.

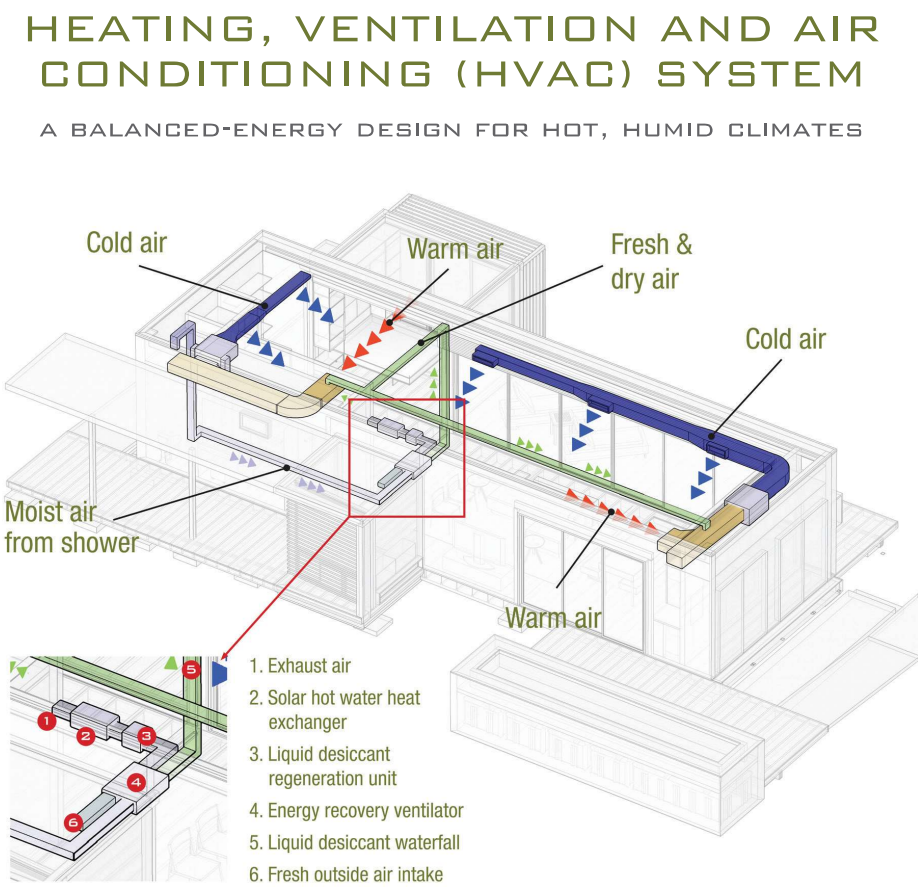
To take the concept of the embedded Web infographic further, some graphics automatically update themselves as new data are collected and added to the source. Your website can display the results of an informal poll even as the numbers are still being collected, for example. Other websites with content to share may offer code snippets, plug-ins or widgets. You might add code to your site to display the week's highest-grossing movies or perhaps updated weather information.

Some infographic needs can't be met with pre-existing shared code. In these cases, Web developers can be hired to code solutions for mining, assembling and displaying the desired data. A wealth of existing data on the Internet can be tapped to create all types of infographics. Or a developer can help you collect entirely new data. What if, for example, the local college Web team developed and posted an interactive campus map accessible via a website or mobile device? Imagine the instant ability to report, avoid and dispatch repairs to dangerous walkways, burned-out light bulbs and buildings in/accessible to wheelchairs.

MULTIMEDIA INFOGRAPHICS

The methods for generating infographics and the means for collecting data have changed. But so have infographics themselves. While charts and graphs were once largely static visuals printed in hardcopy, it is now possible to create rich multimedia infographics.

Consider a diagram showing the flow of air through a heating, ventilation and air conditioning (HVAC) system. In print, we would use arrows and ordinal numbers to signify directional and sequential flow. We would add a short block of explanatory type.



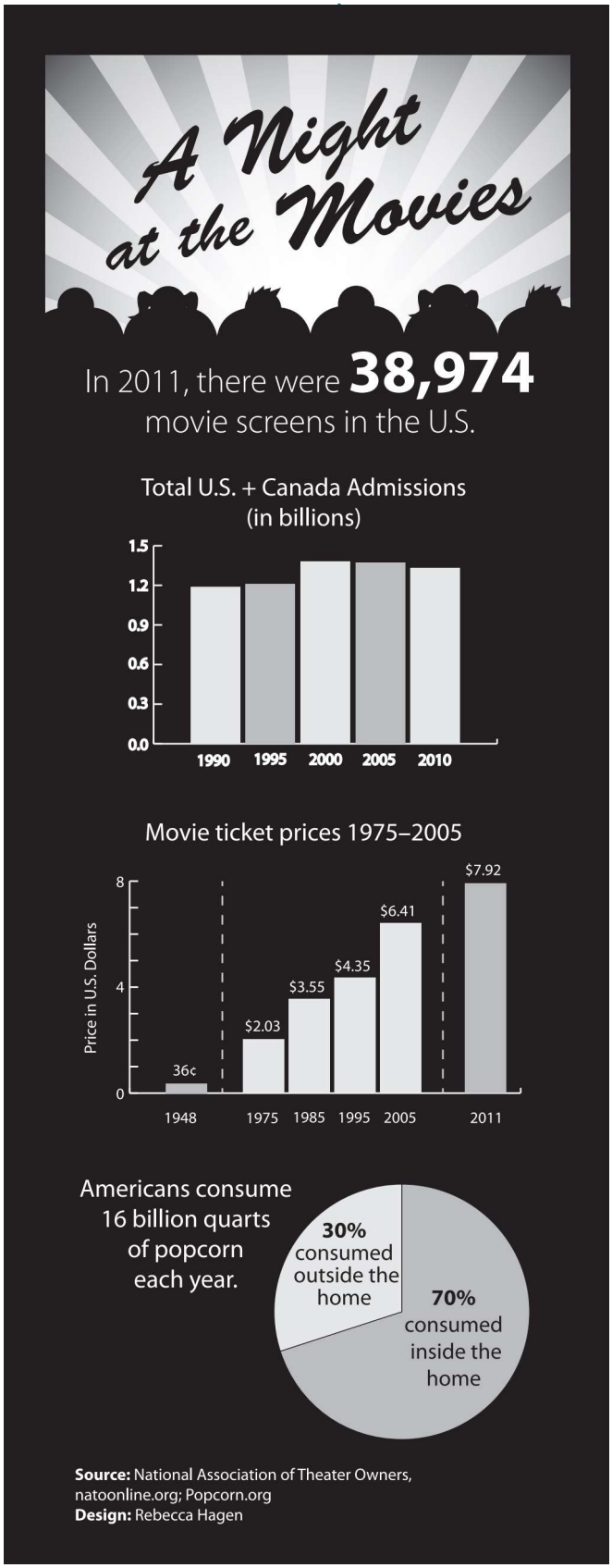
Next generation diagrams. Active diagrams like the HVAC diagram above are great for print. For the Web, we can take the diagram one step further by adding interactive animation and audio.

Illustration by Dimitar Dimitrov, Team Florida, U.S. Department of Energy Solar Decathlon 2011.

But in today's digital formats, infographic designers would animate the airflow. High-end animation would simulate 3D perspective and might even feel something like a theme-park ride to viewers scooting along the ductwork.

In addition to typographic explainers, audio could add the recorded sound of water flowing through the liquid desiccant waterfall, along with studio sound effects and perhaps some music. Voiceover narration could add yet more information and help accommodate the visually impaired.

So when you're brainstorming infographics, don't forget to concept for interactivity and multimedia. No need to go gonzo, but take advantage where available and appropriate to your project's objectives.



GRAPHICS PACKAGES

Gonzo multimedia infographics bring up a good point about combining and linking infographics. In the newsroom, a graphics package reports a story by using multiple types of graphics together. These often are anchored by a focal illustration or lead graphic and supported by related smaller graphs, charts, timelines, bio boxes, etc. The combination of well-crafted story, photos and infographics makes one-stop-shopping of visual appeal, in-depth information and at-a-glance comprehension.

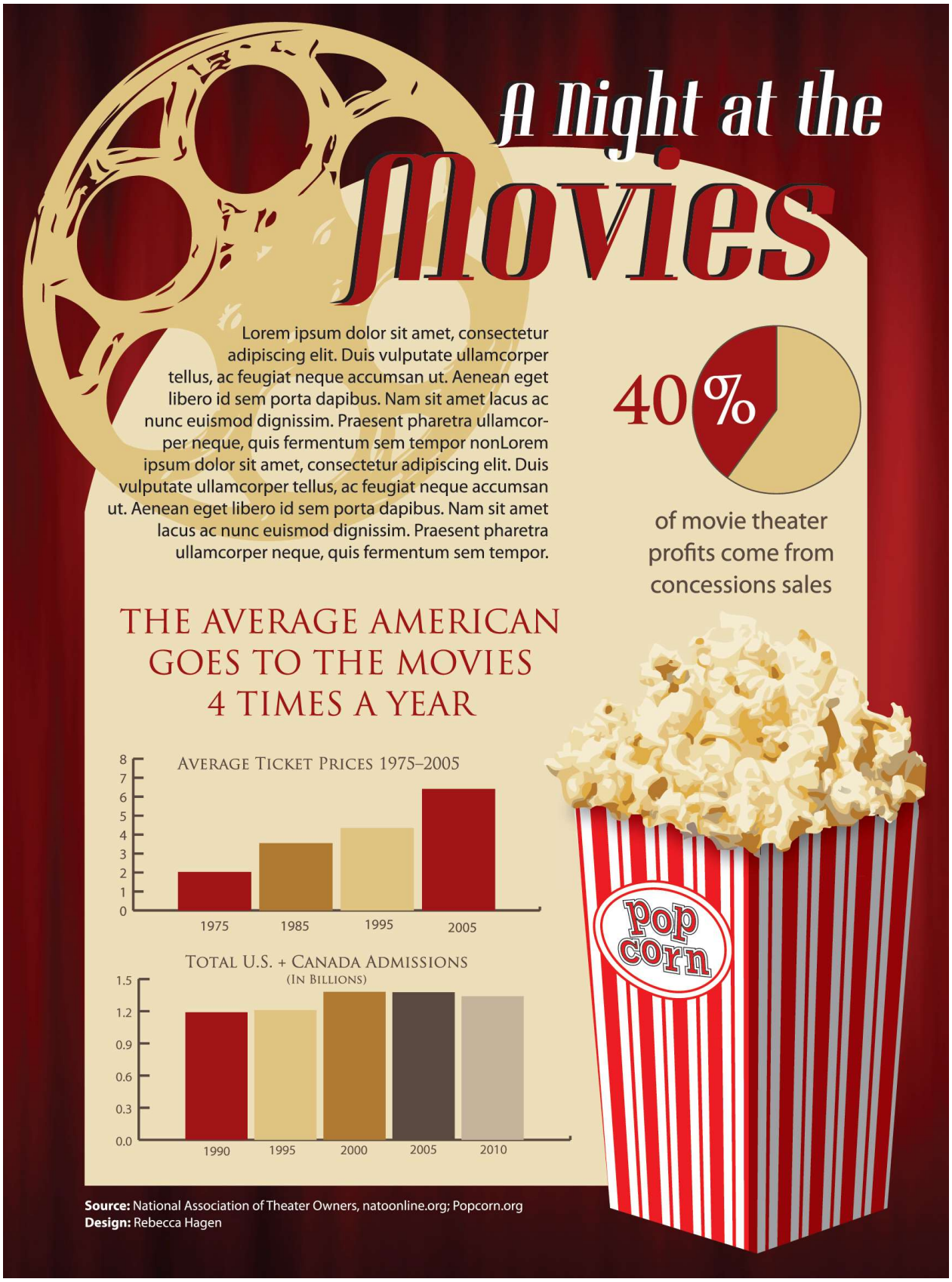
We have two recommendations about packaging graphics:

1. Don't avoid packaging stories because you're not in the news business. Visual storytelling can be effective and useful in any public communication context, including PR, advertising and social media.

2. Plan, plan, plan. Without serious coordination, a graphics package may result in visual information overload. Creating successful graphics packages requires significant preparation and cooperation. This may mean enlisting the help of photographers, illustrators, animators, researchers and writers, not to mention Web pros.

Most anyone can create simple charts and graphs. Effective graphics packages are the product of professional team effort.

Too much of a good thing? Infographics are excellent communicators, but too many in a homogenous layout makes you want to skip them all. Apply what you've learned about layout (remember focal point, movement and flow?) to make powerful infographics packages that engage and communicate.


A Night at the
Movies
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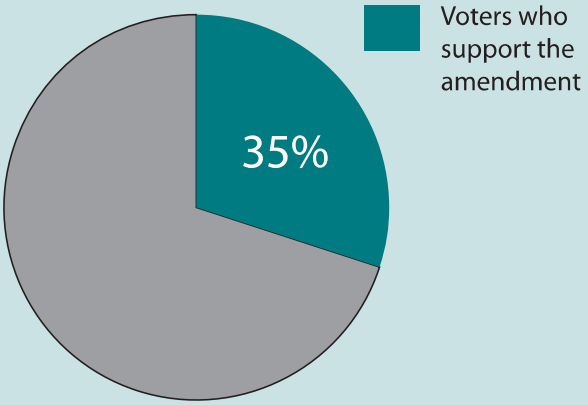
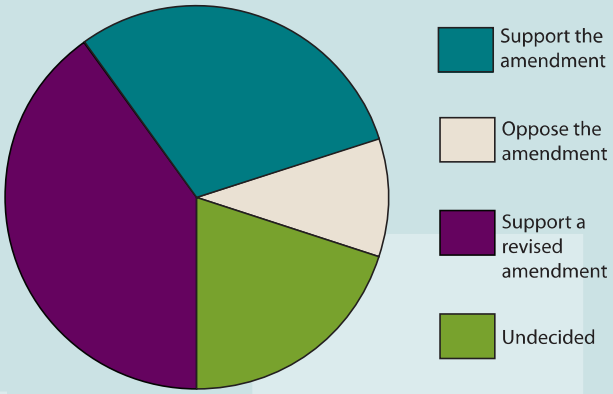
40%
of movie theater profits come from concessions sales
THE AVERAGE AMERICAN GOES TO THE MOVIES 4 TIMES A YEAR
Average Ticket Prices 1975–2005
8
7
6
5
4
3
2
1
0
1975
1985
1995
2005
Total U.S. + Canada Admissions
(In Billions)
1.5
1.2
0.9
0.6
0.3
0.0
1990
1995
2000
2005
2010
Pop Corn
Source: National Association of Theater Owners, natoonline.org; Popcorn.org
Design: Rebecca Hagen

CHARTS CAN LIE: INFOGRAPHIC ETHICS

Who supports the amendment? Each pie chart below contains accurate data. Yet each chart tells a completely different story. Poorly executed charts can be downright misleading. In this case, plotting cherry-picked numbers creates a false impression.





As with all public communication, there are ethical guidelines to follow when creating infographics. Here we cover a few of the biggies:

Can you spell plagiarism and copyright? Never reproduce someone else's graphic without permission. And after you get permission, you must credit your source. Usually graphics sources are noted in the lower left corner. Same goes for attributing the sources of your information.

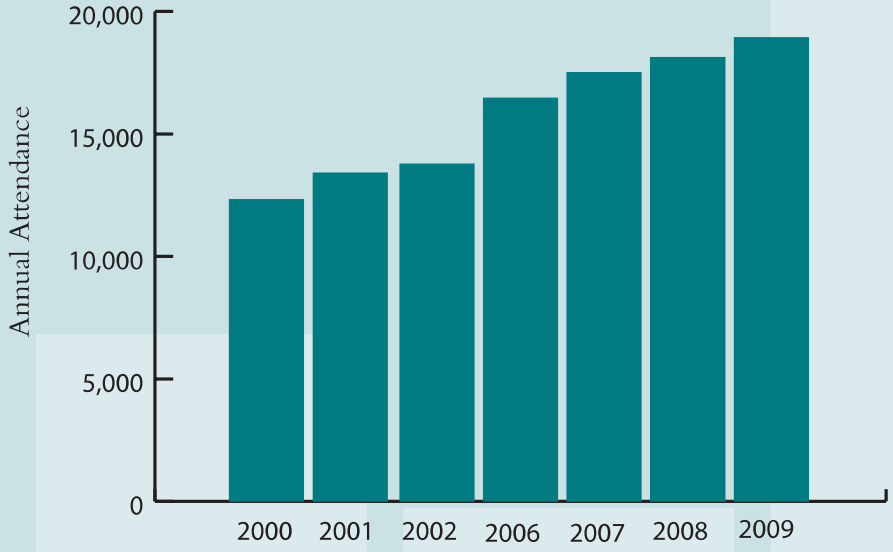
Stick with the facts, please. It should go without saying that guessing at or making up information to fill in the blanks of an infographic is a career-ending no-no. But we'll say it anyway: In infographics, the word is "information," not "fiction." Keep it factual from credible sources you can corroborate and attribute. If you have holes in your information, work harder at your research to fill in the blanks. Or drop the graphic.

Speaking of filling in the blanks with credible sources, do be critical about the sources of data. Who pays the research bills? What are the agendas of your sources and their funding arms? Perpetual skepticism is not simply an occupational hazard of the information business. It's a prerequisite. That fact segues to the ways so-called objective numbers can mislead.

Statistics (and people) can be shifty. There are two big ways you can get in trouble when using numerical data: 1. The numbers are flawed to begin with. 2. Your presentation of the numbers is questionable or misleading. Avoid both.

If you didn't collect the data for your infographic, put on that skeptical hat. Track down the original study to give it the once over. If you're clueless about stats, enlist the expertise of someone with a clue.

Even if the original data are good, your graphical representation of the data may not be. Some common ways to ruin perfectly good stats include:



Missing something?
This bar chart gives the impression of consistent annual attendance increases. But the chart doesn't actually include data for the years 2003–2005. For all we know, attendance dropped sharply in those three years.

- Cherry picking numbers to prove your point
- Failing to adjust money for economic inflation (or deflation)
- Inflating the significance of large numbers if they represent a small percentage of the whole (or vice versa)
- Specious comparisons (like comparing apples and oranges)

And there are others. So if you don't know what you're doing in the research and quantification department, partner with someone who does.

On the other hand, don't be one of those wimpy math-phobic communication types. Don't let numbers intimidate you. Read a book. Sign up for a class. Take an expert to lunch.

Being ethical also means accounting for diversity. Account for the diversity of your infographic audience. People respond best when you invite them to identify with your visual messages. Beyond being inclusive, stay alert for images and text that are inaccurate, inappropriate, unfair or injurious.

We've fast-forwarded from ancient cave painting to multimedia infographics. We've also suggested when infographics may be useful, along with some ethical hazards to avoid. Time for the fun part: the design how-to.

Not just for news reporting. Infographics and graphics packages, whether print or electronic, can be used to great effect in newsletters, magazines and annual reports, not to mention your website.

Designed by Rebecca Hagen. Reproduced by permission of the Department of Pediatrics, University of South Florida Morsani College of Medicine.

DESIGNING INFOGRAPHICS

Everything we've covered so far will serve you well in designing and evaluating infographics, starting with research, brainstorming and thumbnail sketches. You'll also use what you know about grids and layouts, along with the elements and principles of design, including Gestalt. Your knowledge of color, typography, photos and illustrations applies here, too.

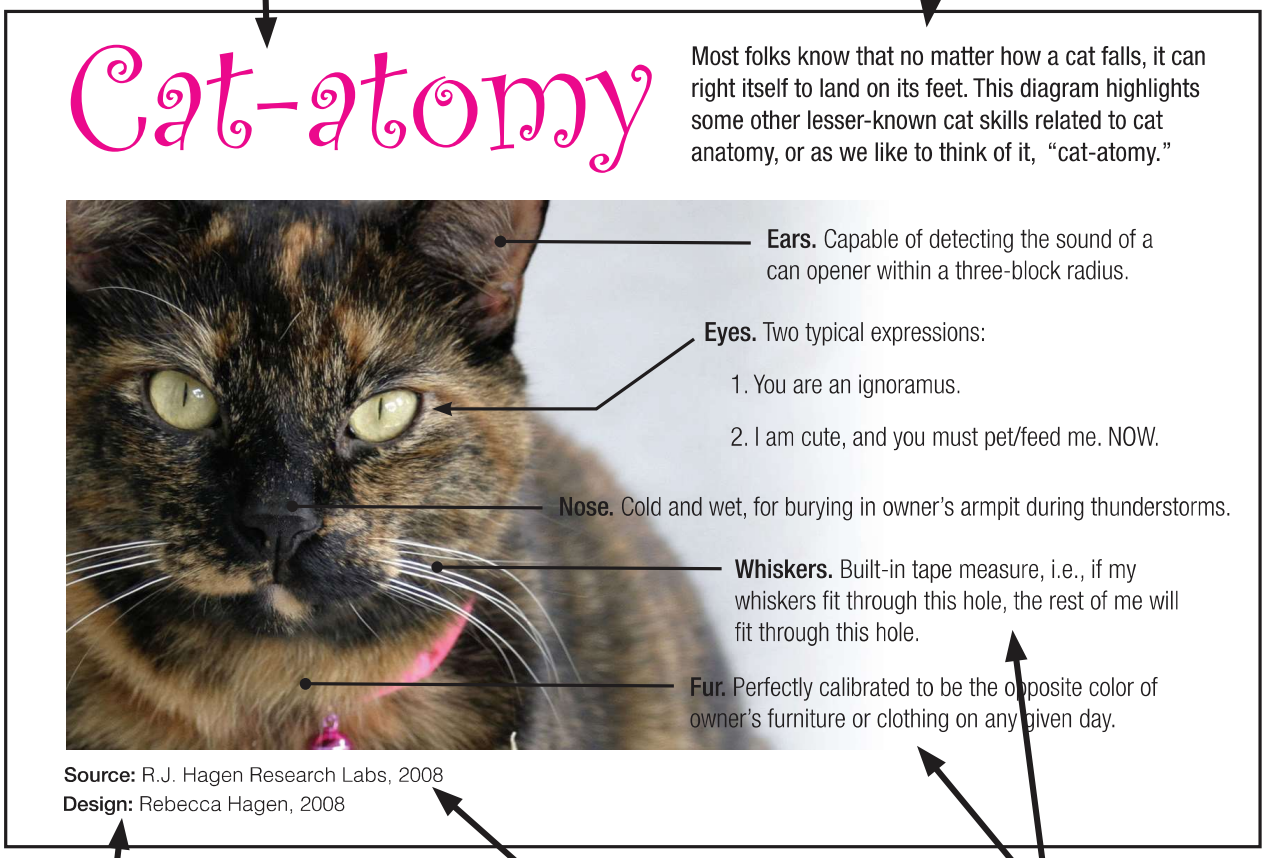
A word to the wise as you incorporate infographics into your layouts: Test before you launch. Never just assume folks understand your infographic. Allow us to share a cautionary tale. In 2004, Hurricane Charley devastated a completely unprepared Port Charlotte, Fla. In a research project shortly thereafter, a University of South Florida graduate student discovered two facts: One, people living in Port Charlotte misinterpreted the hurricane maps that weather forecasters use to predict the uncertain paths of storms. Study participants did not understand what the maps were supposed to communicate. Two, those widely used hurricane maps had never been audience-tested for comprehension, although scientists intended the maps to save lives. Sobering.

While accounting for audiences and employing the basics of good design, follow these tips on designing infographics:

PARTS OF AN **INFOGRAPHIC**

Headline. Make it big, bold, clear and pithy.

Explainer. Also called "chatter," this block of text explains what the whole graphic is about.



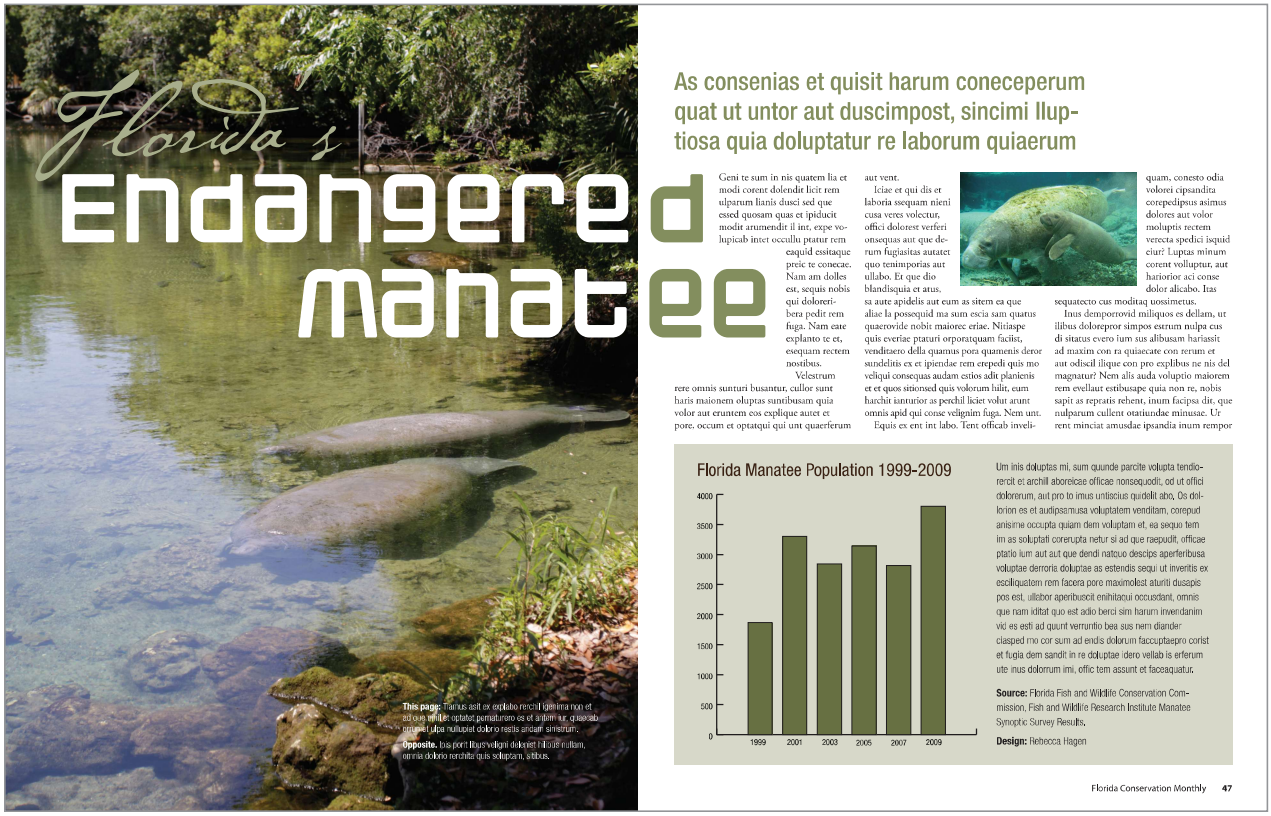
Byline. Give credit to the infographic artist.

Source line. The source line identifies the origin of your data.

Callouts. Also called labels, callouts provide details about specific elements.

Design tips for all types of infographics.

Infographics must be able to stand alone. This is perhaps the most important thing to remember when designing any type of infographic. If people are scanners searching for interesting things to look at, then the infographic may be the only thing the viewer sees. Infographics shouldn't rely on information buried somewhere else.



Don't forget unity. Choose a color scheme for your charts and graphs that coordinates with your overall design scheme.

Small embedded photo © Nicholas Larento - fotolia.com

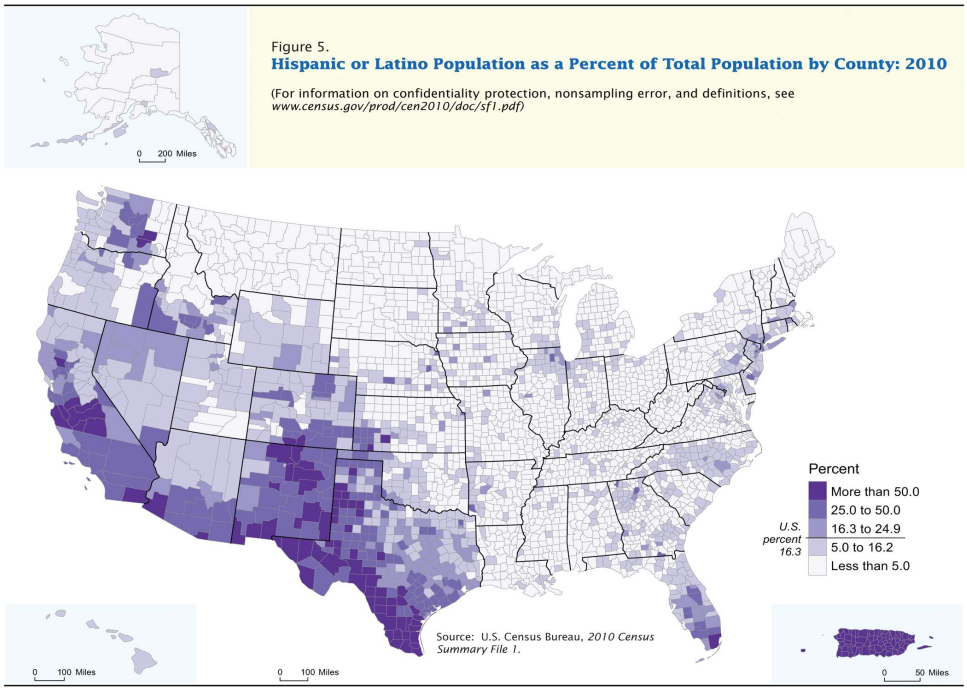
Thoroughly research your topic before you begin. It does make sense to understand the material you're attempting to illustrate. You won't be able to facilitate others' understanding if you don't get it, either.

Use a grid to organize and structure your infographic. Think of your infographic as a design within a design. The same rules for good layouts work for specific graphics and infographics, too. As in larger layouts, a grid provides order and organization for the various parts of your layout, such as explainers and callouts. Aligning elements to a grid provides cohesion and unity, and it will help your reader understand the flow of the graphic.

Group things. As you create your graphic elements, be sure to cluster related items, and leave ample negative space between items to prevent confusion. Employ proximity. Remember, clustering is good, and clutter is bad.

Choose a design scheme compatible with the overall design. Think colors, fonts and other design details. If you're creating an infographic for an existing website or serial publication, there may be a style guide that specifies the look of design elements. If there is no style guide, you're hired. You get the job. Create a style guide in order to maintain similarity and unity.

Use care if your graphic must appear in black and white. Color is one of your greatest allies, providing organization and way-finding for viewers. If you can't use color for your infographic, be clever with grayscale. But each gray should vary from the last one by at least 20 percent, or else the eye has a hard time telling them apart.



Data maps. Maps are commonly used to show location. But plotting location data also can be effective in identifying patterns. The colors in this map clearly identify Hispanic population centers in the United States.

Map reproduced from The Hispanic Population: 2010. 2010 Census Briefs, May 2011. United States Census Bureau.

Give credit where credit is due. Attribute. Cite. This goes for the source of your data and the source of any photos or illustrations you use.

Minimize ornamentation. You're shooting for a clean comprehensible infographic. Cutesy backgrounds and other embellishments can detract from your message. Easy does it.

Keep the writing tight. Keep headlines and titles short. If possible, explain your subject and purpose in six words or less. For explainers and label text, keep your writing concise and in the third person. Use action verbs.

Tips for common infographics.

Maps. Put your map on a grid and eliminate unnecessary details, called "map fat." Streamline and simplify. Be sure to include a scale showing distance. Include a legend as needed and directional indicators (at least North, if not all four directions), and indicate reference points for your reader.

Pie charts. Pie charts are intended to show parts of a whole. The full circle represents 100 percent. So don't forget to indicate what the "whole" is. This ain't no mystery. Then slice your pie portions accurately.

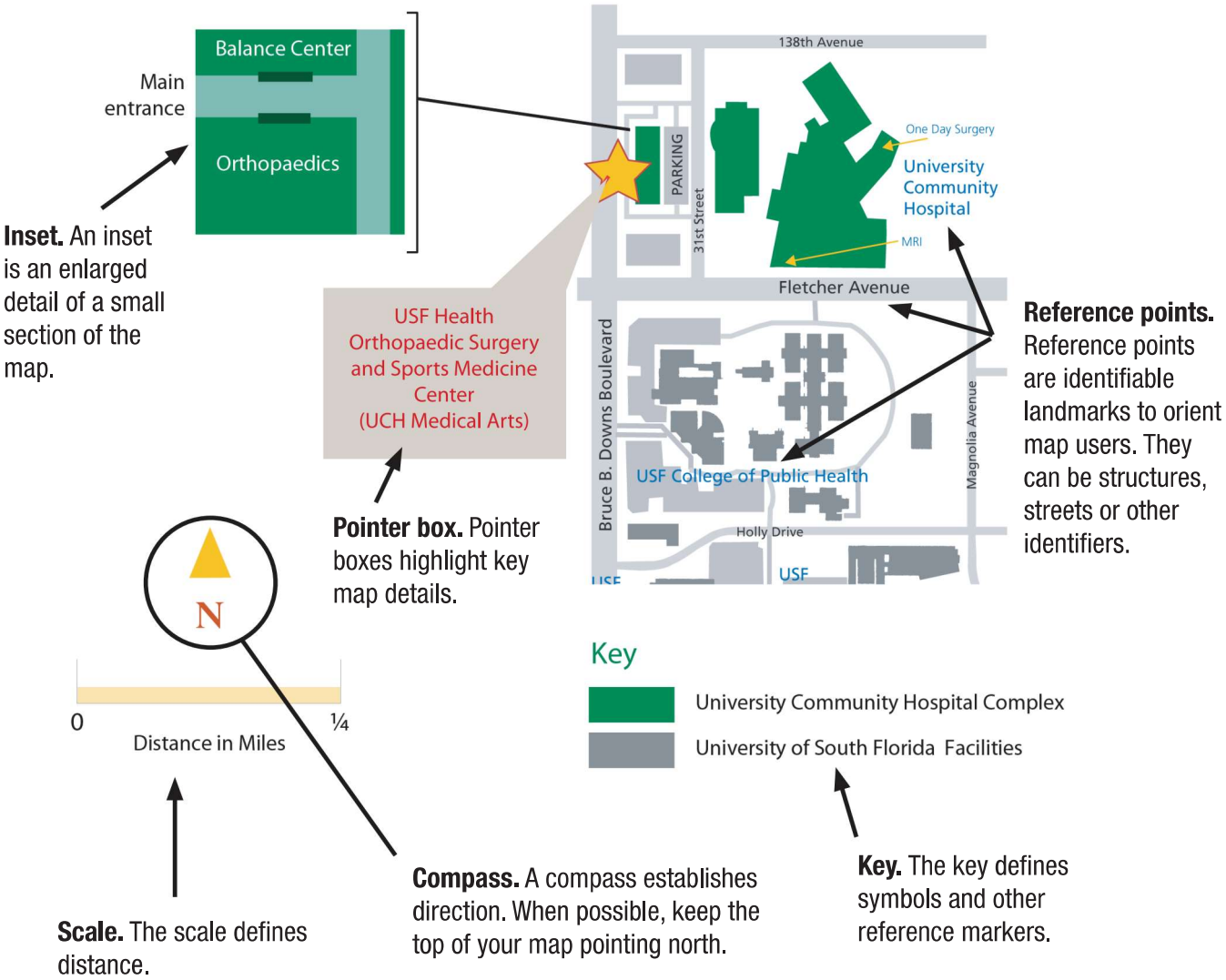
Fever charts. Known for their spikes and valleys, fever charts are good for showing change over time. A background grid helps readers quickly grasp the trends. Remember algebra, slope and "rise over run"?

PARTS OF A **MAP**

Maps are a common infographic form. There are several types, including locator maps, geological maps and statistical maps.

Reproduced by permission of USF Health.

USF Health Orthopaedic Surgery and Sports Medicine Center



Inset. An inset is an enlarged detail of a small section of the map.

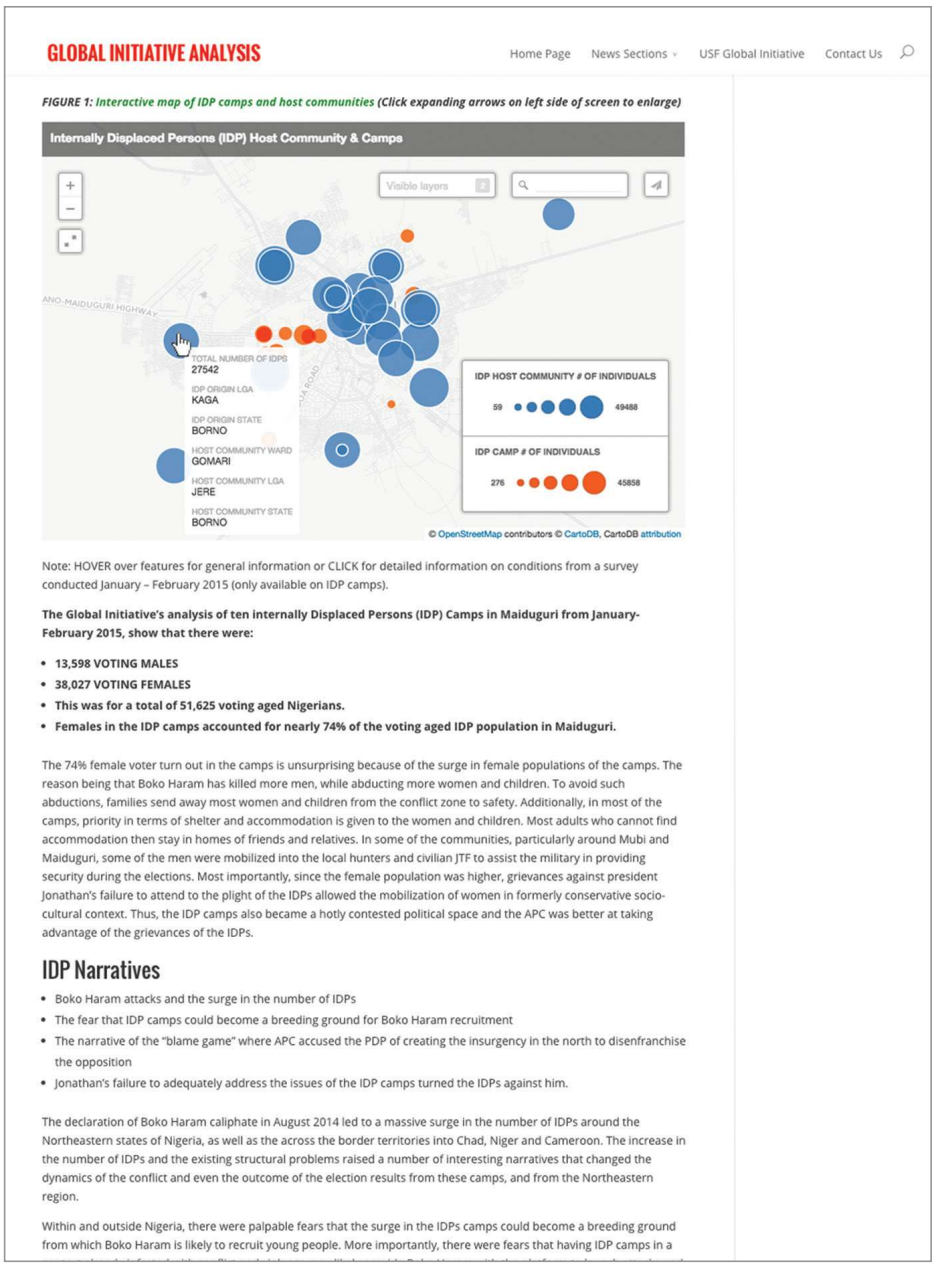
Pointer box. Pointer boxes highlight key map details.

Reference points. Reference points are identifiable landmarks to orient map users. They can be structures, streets or other identifiers.

Scale. The scale defines distance.

Compass. A compass establishes direction. When possible, keep the top of your map pointing north.

Key. The key defines symbols and other reference markers.



Data visualization. Data visualization is the art of rendering collected data in graphic form. On the simple end of data visualizations are basic pie and bar charts. On the opposite end are complex diagrams such as this interactive map documenting people displaced during the 2015 Boko Haram crisis in Nigeria.

Reproduced by permission of the University of South Florida Global Initiative on Civil Society and Conflict.

Didn't think so. But you do need to know that the Y-axis equals the rise going up and down vertically. What are you measuring? The stockmarket? Rainfall? Daily traffic? That's your Y. The X-axis is always time or "run," running left (from the past) to right (into the future). In 3D, the Z-axis pushes out towards the viewer.

Bar charts. Bar charts are good for comparing things. Generally, use horizontal bars—except if you're dealing with time. If your bar chart shows change over time, revert back to the idea of time as horizontal "run" going left to right, and lay in your bars as vertical blocks

and towers. In either case, label each bar with the actual number it represents. Once again, a grid in the background helps clarify relationships visually.

Timelines. Timelines are excellent for sharing history, providing context, demonstrating cause and effect, etc. The rules say it's good practice to limit a timeline to 10–20 items or "frames." The best timelines are visually to scale or proportional to the time range they represent, which suggests enlisting the help of a grid again. Or think in terms of the timeline-equivalent of a measuring tape segmenting and parsing out your particular units of time. If your timeline includes giant gaps, a list format may be a better choice.

Diagrams & illustrations. These are the most complex of the graphic styles and usually require real artistic skill to execute. Diagrams and illustrations are best when kept simple. Again, the rules for good composition will help you set up strong diagrams and illustrations. Give them focal points, as well as rhythm and flow.

Like all visual communication, the best infographics provide accurate information simply. Practice that, and you can't go wrong. However, we're not finished covering visual storytelling. Next up, storyboards for planning video.

TRY THIS

1. Design an infographic bio for yourself. First imagine a real-world use for it, such as putting it on a social media page or adding it to your digital resume. Then design it accordingly.
2. Following the rules for map design, execute a floor plan of one room in your home or office.
3. Find an online news story presented as a graphics package. Deconstruct the package. What are the text and visual components? What types of individual infographics are used? What data were needed to create the visuals and what was the data source? Create a diagram of the news story using your findings to create labels.
4. Design an interactive timeline demonstrating the history of infographics using an online infographics tool. Remember research comes first. No cheating.
5. Put your hands on some credible research statistics (we like the U.S. Bureau of Labor Statistics at http://www.bls.gov/). Using the research project's findings, thumbnail a graphics package for the Web. Execute one statistical graph or chart from your package.

CHAPTER ELEVEN

11

STORYBOARDING

PLANNING VISUAL STORYTELLING

Before we leave off talking about visuals—photos, illustrations and infographics—let's cover storyboarding, too. Storyboards lay out the visual stories of planned video and film, including the animated sorts. Computer games begin as storyboards. Today's computer-generated imagery (CGI) also begins with "previsualization" storyboards. In most cases, then, storyboarding involves representing moving pictures and sound with still pictures and type.

A storyboard visualizes the entire project in the form of individual scenes, shots or screens. A concept storyboard distills the project down to the minimum number of views necessary to tell the story. A production storyboard or a shooting storyboard provides more detailed information for a production crew.

If you're planning to produce video or film of some kind, you will enlist preproduction, production and postproduction assistance from professionals. But you still may find yourself concepting a storyboard for a TV commercial or spot, a public service announcement (PSA), a corporate video, a video news release (VNR) or even an animated Web ad. Sometimes a feature news film package also benefits from a storyboard.

Whatever the project or your role in the process, this chapter gives you some of the basics of storyboarding.

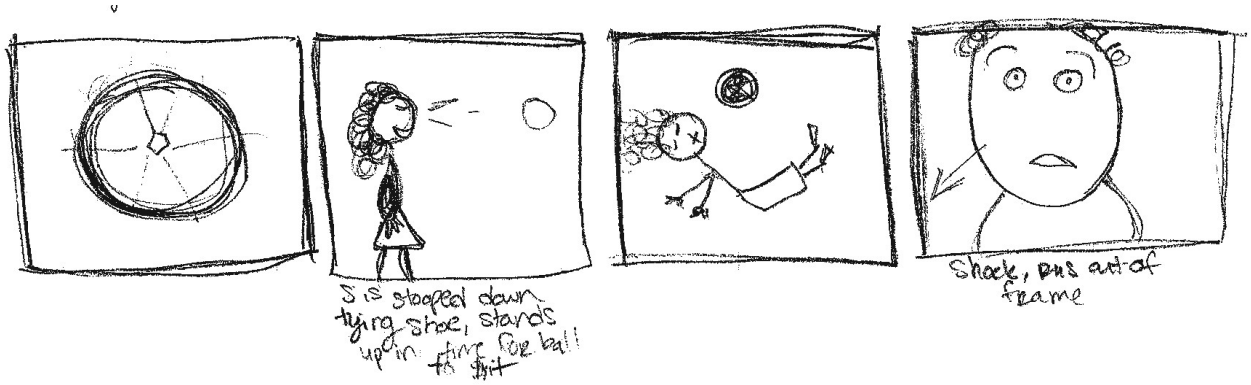
GETTING STARTED

Photo © mipan - Fotolia.com

Once you have a storyboard project, you have to think about how to tell the story shot by shot. Much of what we've covered in earlier chapters comes to bear in storyboarding. You begin with research and brainstorming for a concept. You account for format and aspect ratio, and you experiment with visual composition using thumbnail sketches.

The elements of design—space, line, shape, size, texture, value—become your tools for telling visual stories. As you'll see, the principles of design, including focal point, contrast, balance, movement, rhythm and unity, also become important storyboarding tools.

You don't have to be an accomplished illustrator to create a storyboard, either. You can indicate your ideas with rough drawing and



stick figures, just as you would with thumbnail sketches. Or you can use, mix and match stock images, whether photography or line art. If you fancy yourself a photographer, you might even grab a camera.

Our point is that you already have a fairly large visual toolbox for dramatic storyboarding. So take advantage of it. Your eyes, however, continue to be the most useful tool in your toolbox. As to acquiring new tools for storyboarding, below we provide some necessities regarding:

- Framing the Shot
- Perspective
- POV
- Camera Angle
- Movement
- Continuity
- Transitions
- Lighting
- Type
- Audio

FRAMING THE SHOT

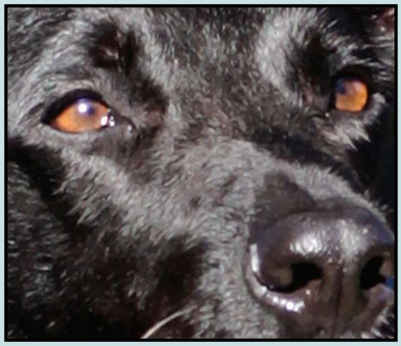
Your direction for how to frame a scene within the four corners of the visual screen is called framing the shot. Common shots include variations on the close-up, medium, full and long shot. Other frames include the split-screen and montage.

An establishing shot orients viewers to the visual scene in order to avoid confusion before proceeding with the story.

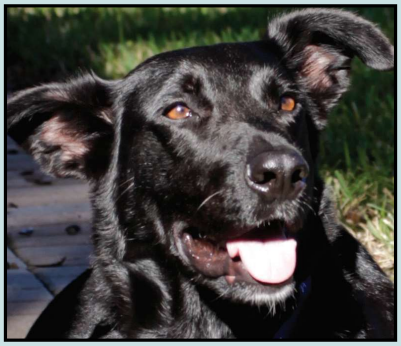
Storyboards, from thumbnail sketch to screen grab. Student filmmaker Sarah Wilson first sketched her ideas before committing her cast and crew to the week of shooting and editing it took to produce her award-winning short film "Rhapsody." In the sequence shown here, the POV is omniscient. Notice how the first shot of this scene in the final film demonstrates a low-angle shot from below, as well as a canted camera angle producing a dynamically tilted horizon line.

"Rhapsody" storyboards and screen captures reproduced by permission of Sarah Wilson.

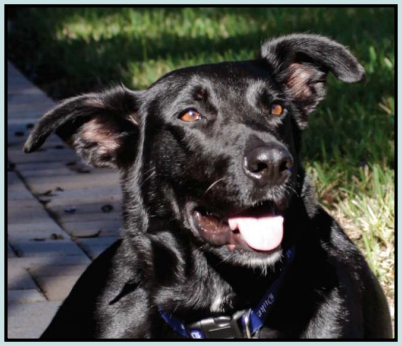
A VISUAL GLOSSARY OF WAYS TO **FRAME** THE SHOT



Extreme Close-up



Medium Close-up



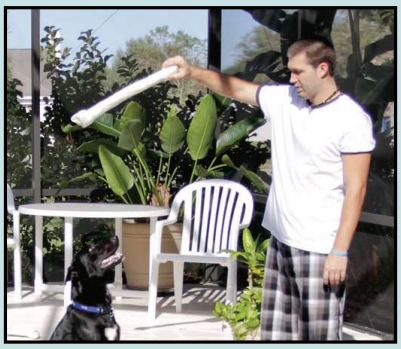
Full Close-up

Wide Close-up

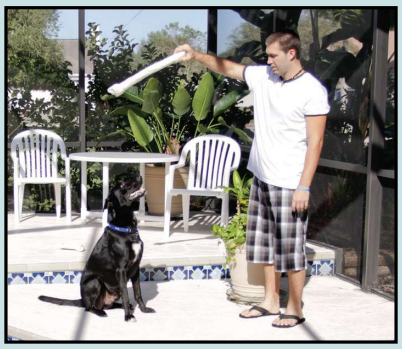
Close Shot

Medium Close Shot

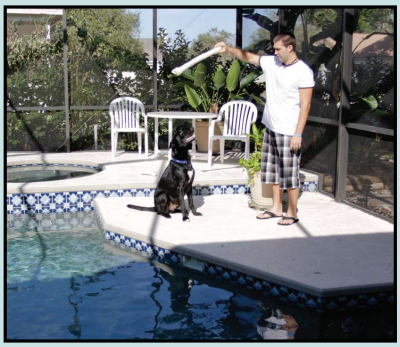
Medium Shot



Medium Full Shot



Full Shot



Long Shot

Montage

Split-screen

Establishing shots orient viewers. In the first frame, a third-person POV establishes the scene: a conversation. Subsequent frames then alternate between the two characters' first-person POVs.

Reproduced by permission of Willow Payne.

Advertising giant David Ogilvy reminded would-be advertisers to make the product the hero. A beauty shot frames an object or product to show off its best visual features, as if it were a movie star. "All right, Mr. DeMille, I'm ready for my close-up," said the aging film star Gloria Swanson playing an aging film star in the 1950 film "Sunset Boulevard."

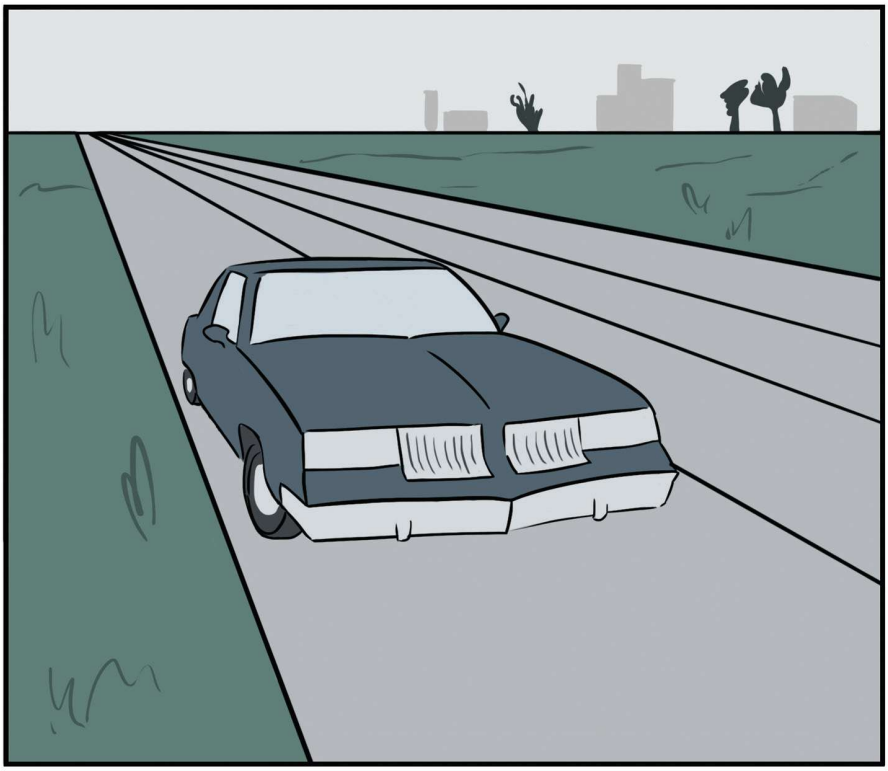
The farther the transparent "fourth wall" of the screen lies from the focal point of the shot, the more impersonal the symbolic tone. As the fourth wall moves closer to the focal point, the audience feels increasingly intimate with the focal point, whether it's a person or a thing.

PERSPECTIVE

Perspective becomes especially important in film and video, thus in storyboarding, too. If framing refers to how the shot crops the viewer's visual field, perspective refers to how deeply the viewer sees into the shot.

Where the horizon line sits in the composition communicates distance for the viewer. Atmospheric perspective via value as well as linear perspective via flowing sightline and vanishing point also help establish the scale of distance. Speaking of scale, perspective by relative size of objects in the shot can enrich the sense of distance, such as framing a sweeping vista in the background with two human figures in the foreground. And remember that depth of field refers to what in the shot remains in focus and what goes out of focus, whether foreground, midground, background or some combination.

More than communicating literal spatial distance in the narrative, perspective also communicates a sense of emotional distance or, conversely, intimacy. Perspective also may communicate symbolic meanings such as a sense of freedom from wide-open spaces versus the tension and anxiety of oppressive low-ceiling closed spaces. Yet a small close space also may seem warm and sheltering while a vast sky or plain may send a lonesome message about human frailty.



Perspective done four ways. 1) The "horizon line" in the upper third of the frame indicates distance. 2) The road's "linear vanishing point" also communicates distance. 3) The car's large "relative size" says nearby; the buildings' small sizes say faraway. 4) "Atmospheric perspective" is achieved by using light color value to make the skyline seem to recede into the background while the car's dark value feels closer to the viewer.

Reproduced by permission of Willow Payne.

POV

Perspective also leads to considering the camera's point of view or POV. If you think about the camera (or the screen) as an eye that looks, you need to think about whose eye is supposed to be doing the looking. While the viewing audience is always the implied eye, you can nudge the audience to identify with different points of view in the story.

Do you want the audience to remain an invisible omniscient third-person eye observing the story?

Or do you want the audience to participate in the story by seeing with the same eye as the protagonist? For example, both protagonist and audience, through the camera lens or screen, may look the villain in the eye to stare her or him down.

Or should the audience see as the villain sees, while she or he sneaks up to peer over an unsuspecting shoulder? In Alfred Hitchcock's famous shower scene from the 1960 "Psycho," Hitchcock famously shifts the audience's POV between victim and villain.

If two people onscreen are to have a conversation, you probably need to provide a third-person establishing shot of the two people framed together if you are going to alternate back and forth between the two characters' first-person POVs.

Sometimes you want the viewer to ignore the fourth wall in order to participate in an admittedly one-way conversation with an onscreen personality who maybe offers a how-to, reads the news, sells a product or runs a yoga class. Think of intimate confessions to the camera in reality TV and dramatic asides to the audience. Everyone remembers Ferris Bueller's running monologue with the audience in the 1986 "Ferris Bueller's Day Off." ("Oh Yeah.")

In short, plan the POV.

CAMERA ANGLE

Planning the camera's angle also relates to POV and perspective. In addition to shooting straight on or level, there are other ways to position the camera's angle for effect. A canted or tilted camera angle creates a sense of unease by tilting the horizon line and upsetting the viewer's visual equilibrium.

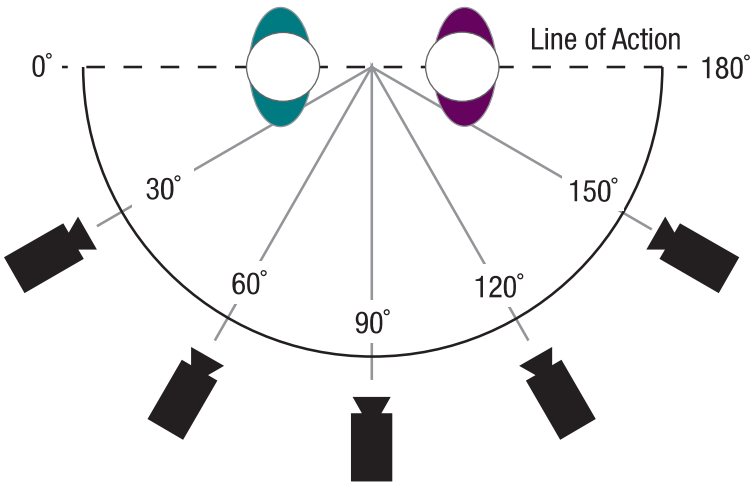
Framing the shot from above, as if the camera were looking down on the focal point, can make the focal point seem small, communicating symbolic insignificance and powerlessness. Shooting the focal point from below can have the opposite effect, communicating the focal point's larger size and power. Extreme versions include the crane or bird's-eye shot and the ground or worm's-eye shot. Both angles also can make for a comic effect because they tend to distort the proportions of the focal point. So be careful. Hard news, assumed to be objective, would avoid special effects angles.

You don't always have to shoot from the front, either. You may decide to shoot from behind, from the side or at a 45-degree angle. Mix it up, but do it with a visual communication purpose compatible with your subject matter and tone.

MOVEMENT

The design principle of movement shifts from being implied in stop-action pictures to being literal in live-action ones. Storyboarding movement shots involves knowing another vocabulary.

For example, a pan or panning indicates a stationary camera that sweeps across the scene. The effect is that of turning

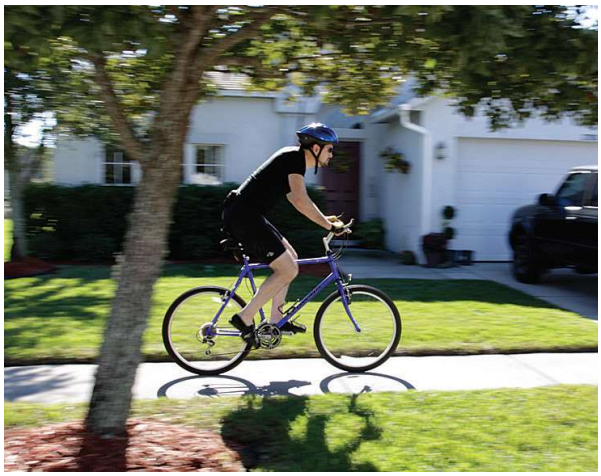


The 180-degree line of action. To avoid disorienting viewers, the 180-degree rule cautions against crossing the imaginary line of action intersecting two characters—unless you have a narrative purpose for doing so.

The 30-degree rule. This rule says any change of camera angle relative to the focal point should represent at least 30 degrees of change. Anything less reads as an editing error or the amateur hour.

Camera angles. Use camera angle to help tell your visual story. Starting in the upper left, these frames demo shooting from the side, from below, from above and, last, from behind at a wide angle.

Reproduced by permission of Willow Payne.



your head to look around. In a truck, usually accomplished with a camera on a dolly, the camera trucks sideways across the scene. The effect is like rubbernecking from a moving car. A tilt is a vertical up-and-down pan.

Handheld refers to the cameraperson holding the camera as she or he walks or runs through the scene—resulting in a bumpy visual ride. This can increase realism, as in breaking news footage, but may be difficult to watch for long periods of time. The steadicam is a kind of harness the cameraperson wears to hold the camera steady as she or he shoots a hand-held scene.

In a tracking shot, a stationary camera tracks along with a moving focal point. Think of the classic 1967 Patterson Bigfoot film tracking a tall hairy arm-swinging two-legged creature looking right at the camera as it walks off into the woods. Hoax or not, it's a memorable example of a tracking shot.

Push shots push into the scene. In a zoom, a stationary camera pushes into the scene by using the lens to zoom in on the focal point. In a dolly shot, the camera itself, positioned on a dolly, moves or pushes

Zoom. First the establishing shot (this can't be good). Next the push into the scene for a close-up (not a happy camper).

Reproduced by permission of Willow Payne.

Movement. This sequence demonstrates tracking. A stationary camera tracks along with the onscreen action-as-focal-point, which here is moving left to right. The effect is like turning your head to watch. In the example, the composition of each frame keeps the bicyclist positioned to the left of the scene but moving toward the negative space positioned to the right. Without that negative space, the action would appear to "hit a brick wall" or just disappear off screen.

toward the focal point. A rack-focus uses a stationary camera to shift a scene's focal point simply by refocusing from one object to another.

As is often the case, purity here is not required. You might achieve several effects at once. The infamous Bigfoot tracking shot is obviously handheld. We've seen movie scenes in which the camera pans and zooms from atop a trucking dolly.

CONTINUITY

Unity is critical when you're telling one story using many shots. Each shot must build on the previous one and prepare for the next. That makes for narrative continuity. Does the visual story hold together as one cohesive narrative from beginning to end and from shot to shot? Are the POV and chronology clear to avoid confusing the audience? Is the dramatic or comedic timing impeccable?

Think of your storyboard as having an obvious beginning, middle and end. Make each pull its visual storytelling workload. Beginnings should capture attention immediately—no warm-up necessary—and establish the relevant W's. Middles do exposition and drama. That's the convey information and evoke emotions part. Endings put closure on the tale or ask for the sale. Advertising always ends with a call to action, whether explicit or implicit.

Speaking of advertising, timing takes on special significance if you only have 10, 15 or 30 seconds of exposition. You can't storyboard a :60 or even a :12 if you only have :10.

Regardless of the type of project, make sure your storyboard is doable given your time constraints. Where appropriate, indicate the timing of shots on the storyboard, use a watch to test your timing and make sure your math is accurate.

TRANSITIONS

In film and video, part of continuity is transitioning or segueing between shots and scenes. The most common type of transition is the simple cut from one shot to the next, such as cutting from an establishing shot of two actors conversing to a close-up of one of the actors speaking.

A cutaway "cuts away" from the main action by inserting something else going on simultaneously in the scene. If the scene shows two arguing people standing beside a car stopped on the side of the road, inserting a shot of the dog's head poked out the car window watching the argument is a cutaway. A shot of cars whizzing past the arguing people would be a cutaway, too.

A cut-in or insert "cuts in" or "inserts" a close-up shot of something significant to the meaning of the scene. In the scene of two people arguing beside a car stopped on the side of the road, inserting a shot of the flat tire on the stopped car would be a cut-in underscoring the reason for the stopped car and ensuing argument.

You have to be careful with cutting so the viewer can keep up with the chronology of events. Some kinds of transitions are helpful for indicating different events occurring simultaneously, perhaps even in different locations, or, conversely, flashbacks in time. But, again, make sure the viewer is keeping up.

The wipe, the dissolve and the fade each transitions between shots in the manner their names imply. These transitions, while time-honored in the hands of professionals, may come off as cheesy or kitschy if you're not careful, however.

LIGHTING

In storyboarding, you can use light and shadow for dramatic effect. Here the principle of contrast comes into play.

A key light is the main or key light source in the shot, whether natural or artificial. Fill light supplements the key light by filling in unwanted shadows for less contrast. Backlight is a light source used to highlight the focal point from behind to give it contrast and dimension. Most shots require a combination of all three light sources to produce what viewers would perceive as a natural or realistic effect.

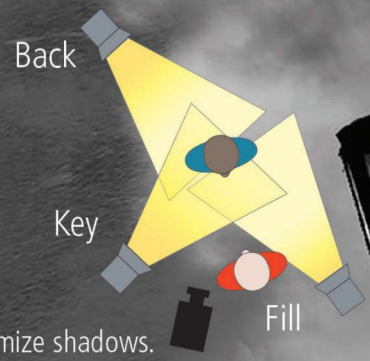
Opposite: Graphic by Karl Golombisky and Rebecca Hagen.

Clips courtesy of: Doug Alvarez, Karl Golombisky and Andrew Bailes.

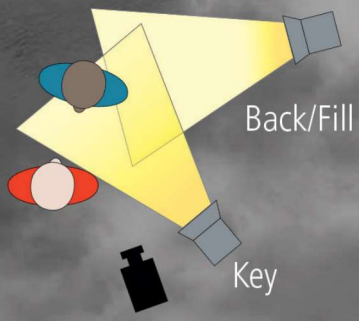
For additional drama, you might consider the amount and direction of light. Soft light or high key evens out the shadows to decrease harsh contrasts. It makes people and products look more attractive. ("I'm ready for my close-up.") Hard light or low key emphasizes shadows,

Lighting Film Noir

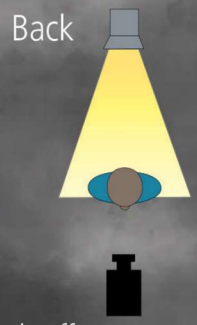
Film noir uses high-contrast lighting to suggest the "darker" side of human nature.



Classical film uses soft high-key lighting to minimize shadows.



Film noir employs hard low-key lighting to create dramatic shadows.



Here a single-source backlight creates a not-so-angelic halo effect.

Lower third. In TV business lingo, "lower third" refers to supers, which mostly appear somewhere in the lower third of the screen.

Remember the rule of thirds? And foreground, midground and background? Foreground, at the bottom of the screen, appears closer than mid- or background. Hence, supers get the lower third.

The lower third super might be copy or an image like a logo. It can be static or a crawl. But it must be visible and readable, especially if overlaid on moving images. Why is Channel 7's "Morning News" super readable?

Photo © David Lawrence - Fotolia.com

thus contrast, including shadows on people's faces—an interesting if less-than-flattering effect.

A key light shining directly from above (over lighting) or from below (under lighting) can form sinister shadows, especially on people's faces. Backlighting can make a focal point appear angelic with a halo effect or make the focal point appear powerful or significant (think backlit grand stage entrances of silhouetted super heroes, rock stars or pro wrestlers). Side lighting casts long shadows and increases the sense of three-dimensional space, as opposed to the flattening effect of soft light.

As you storyboard, think about how you might cast light as a supporting actor in your story. All these effects work for inanimate objects, too, as well as infographics. A side light on a pie chart gives it shadow and dimension. Go easy, though. Like a backlit super hero, overly dramatic lighting not only may seem cartoon-like when that isn't your intent but also may distract viewers from your visual communication purpose.

TYPE

Last we move on to dealing with words and sounds, whether onscreen or off and whether part of the show or merely behind-the-camera direction.

As for onscreen type, a super is any type or graphic superimposed over a picture. A crawl is moving type running—or crawling—across the screen. You see this on cable news channels or when your area comes under a severe weather alert.

When you super, design for typographic readability and legibility, whether the super is static or animated. Contrast, thus color and value, are crucial, whether you reverse or not. And when positioning your type, remember to keep it within the prescribed title-safe area.

If you're a beginner, focus on generating a killer concept. No amount of money can make a bad concept look good.

AUDIO

In a chapter about storyboarding in a book about visual communication, audio becomes the proverbial elephant in the room. Hello—sound? If your storyboard project includes audio, you obviously have to represent it visually on the storyboard by using textual direction.

Using a script setup, type your audio direction to correspond with visuals. Make your intent abundantly clear, including who is speaking when.

Also specify direction for things such as music, sound effects (SFX) or visual effects (FX). An off-screen voice, narrator or announcer (ANNCR) is called a voiceover, indicated as VO. Background music is called a music bed or track.

As far as dialogue goes, nothing is more difficult to write well. And nothing is worse than stilted unnatural repartee. So fair warning. We advise amateurs to develop concepts that avoid multiple characters engaged in dialogue, especially in extended conversations, which provide little visual interest anyway. "Show, don't tell."

On the other hand, don't shortchange audio because you've become a visual communicator. Audio—ear candy—can make or break your visual story. Think creatively and include the details on your storyboard.

AFTER THE STORYBOARD

After the storyboard and before the actual production shoot, there may be an in-between stage that cheaply simulates what the storyboard might look like as live action. This generally is done using software to cut together rough approximations of the shots. It might be accomplished with stock, archived or homemade footage or stills that come as near as possible to the storyboard's visuals. Or you might use animated illustrations or cartoons.

These kinds of preproduction pieces have been called spec cuts, videomatics, animatics and ripomatics. They tend to be more impressive, thus persuasive, when you're presenting your storyboard to the conceptually challenged or to the person holding the purse strings. But, lest we wax creative snobbery, speculative cuts also can be helpful as narrative, shot and timing trials before you start spending big bucks on production.

And that leads us, at last, to some final advice concerning production budgets: KISS. Video production is expensive, and film, even more so. Hollywood director Cecil B. DeMille developed a reputation for visual spectacle using elaborate productions and, as the expression goes, casts of thousands. But he had the financial backing of the Hollywood studio system. We're guessing you work with more modest budgets.

If you're a beginner, focus on generating a killer concept. No amount of money can make a bad concept look good. The best concepts are usually the most parsimonious anyway. Don't script for two warm bodies when one will do. Don't storyboard an on-location shoot if you can get away with a studio shoot. Don't storyboard multiple sets if one is sufficient. And don't storyboard more shots than necessary. If it isn't vital to advancing the story, cut it.

Be smart, have fun, and, as they say, "Break a leg."

TRY THIS

1. Develop a concept for a short educational video on storyboarding. Then execute a storyboard for your concept.
2. Storyboard a favorite scene from a favorite movie. Account for:

   - Framing
   - Perspective
   - POV
   - Camera Angle
   - Movement
   - Continuity
   - Transitions
   - Lighting
   - Type
   - Audio

   How does each contribute to the narrative?

3. Storyboard a TV commercial currently running. Account for:

- Framing
- Perspective
- POV
- Camera Angle
- Movement
- Continuity
- Transitions
- Lighting
- Type
- Audio

How does each contribute to the narrative?

4. Remember the Patterson Bigfoot film? Let's get silly to make a serious point. Choose three of the following and storyboard a few conceptual frames for each:

- A music video starring Bigfoot
- A televised interview with Bigfoot
- A reality-style episodic show featuring Bigfoot
- A wildlife cinematic extravaganza on Bigfoot in its natural habitat
- A sports highlights-style review of Bigfoot sightings
- An infomercial teaming up Patterson and Bigfoot to sell product
- A corporate training video using Bigfoot as the spokesmodel
- A PSA of some kind using Bigfoot as the spokes—ahem—person

This is definitely a use-your-imagination no-holds-barred exercise. Don't forget that "experts" believe the Patterson Bigfoot is female.

5. Storyboard a new :15 TV spot for a commercial consumer product currently in your kitchen, pantry, laundry room or bathroom. Start with a unique selling proposition (USP) or claim about the product. Then develop a concept. You know the rest of the drill by now.

Iodized Salt TV

Date: 11.30.09

Project: Salt-TV-001

Length: :15

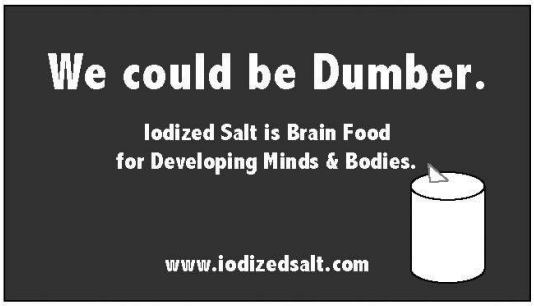
Creative Team: Susan Snyder & Meaghan Rose

SFX: children playing in the pool (throughout)

1st Child: A right angle is 90 degrees.

2nd Child: The U.S. has a bicameral Congress.

3rd Child: Haiku is a form of Japanese poetry.



ANNCR (VO): The iodine in iodized salt is essential for healthy brain development.

Embedded photos reprinted by permission of Kathi Roberts.

CHAPTER TWELVE

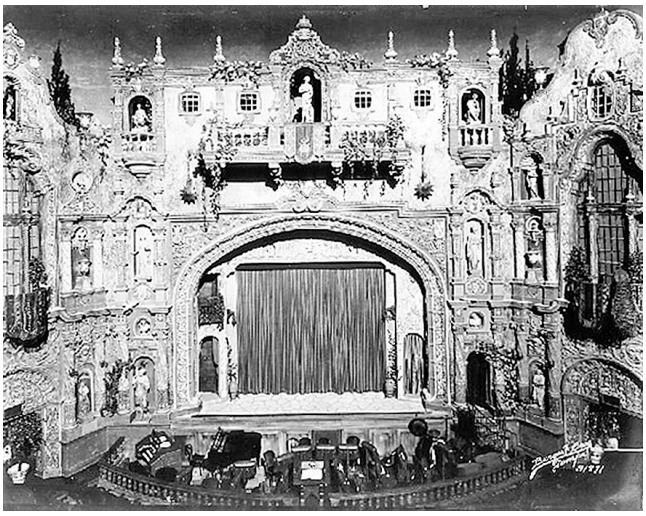
12

DESIGN FOR SOCIAL MEDIA

...BUT NOT REALLY

WORKING WITH MULTIMEDA ASSETS

Our readers often ask, "Why is there no chapter on designing social media pages in your book?" Our answer? Because you don't *design* your own social media pages. No user of social media can claim to have built a page from the code up (unless you are part of the lead design/development team at Facebook or something, in which case, you don't count). You don't choose interface methods or heading sizes and styles. You don't decide the types or positions of widgets or the items in the navigation menu. You don't choose the position of the main content or sidebar.



Multimedia: The early years. In the days before "talkies," live musicians played scores to accompany silent films. Note the Tampa Theater's orchestra pit at the bottom of the photo.

Tampa Theater, 1930. Burgert Brothers collection. Courtesy, Tampa-Hillsborough County Public Library System.

You do, however, customize pre-existing social media templates with images, video clips, animations and apps that you *can* design. It's the same with presentation decks and websites that use templates. So this chapter is not about designing social media pages. It's about how to design the assets used in customizing different types of digital communication.

WHERE TO BEGIN?

Visit any social media page or website and you'll encounter many different types of media on the same page. A single layout may combine type, image, audio, video and infographics, not to mention forms, polls and even games. All this must be available to active "users" on their desktop PCs, laptops, smartphones, tablets and TVs.

It's easy to get overwhelmed by the multimedia options out there. And it's equally easy to get discouraged by the myriad of multimedia-building tools available online and on your desktop. But don't give up just yet. For the novice digital communicator, here are some things to keep in mind.

First, multimedia design can be implemented in degrees. A simple digital slideshow may be all that is needed to enhance an otherwise static website. While it's absolutely possible to create online virtual worlds where audiences participate in massively multiuser online role-playing games (MMORPG), you don't need to start there. We suggest working your way down the bunny hill before you try to ski Dead Man's Peak.

Second, digital multimedia means multisensory, which translates into a richer user experience. It allows for communication via sound and touch in addition to sight. Users swipe, click, pinch and tap their way though all sorts of digital content. It's well worth the time to implement some sort of multimedia into your project. (No such thing as smell-o-vision yet, but maybe that's a good thing.)

Third, restraint is a virtue, and user control is appreciated. One animated GIF in one paragraph is (arguably) cute. One in every paragraph is decidedly *not* cute. Select the right multimedia components for your purposes. Do give user control where appropriate (video and slideshow controls come to mind). Offer the ability to search and sort when you can. Use forms and commenting to capture feedback, or start a dialogue where appropriate. Give your visitor a multi-sensory experience, not sensory overload.

Make accessiblity a priority when working with multimedia components. This website uses large, bold buttons and adjustable font sizes to make the site navigable for visually impaired visitors.

Finally, offering a multi-sensory experience is great. But be aware that not all users have the same abilities. From the outset, you should design not only multiple ways for your users to interact with your content but also alternative ways your users are able to access content. How will you accommodate, for example, the deaf community? Or folks with limited hand dexterity or the visually impaired? These are front-end planning issues.

It's true that the creation of some multimedia components remains better off in the hands of professionals. However, there are simple multimedia production tools available for the nonprofessional. Many are available for free online or come preinstalled on your computer. Just know that not all mobile and tablet devices support all Web-based applications and proceed accordingly.

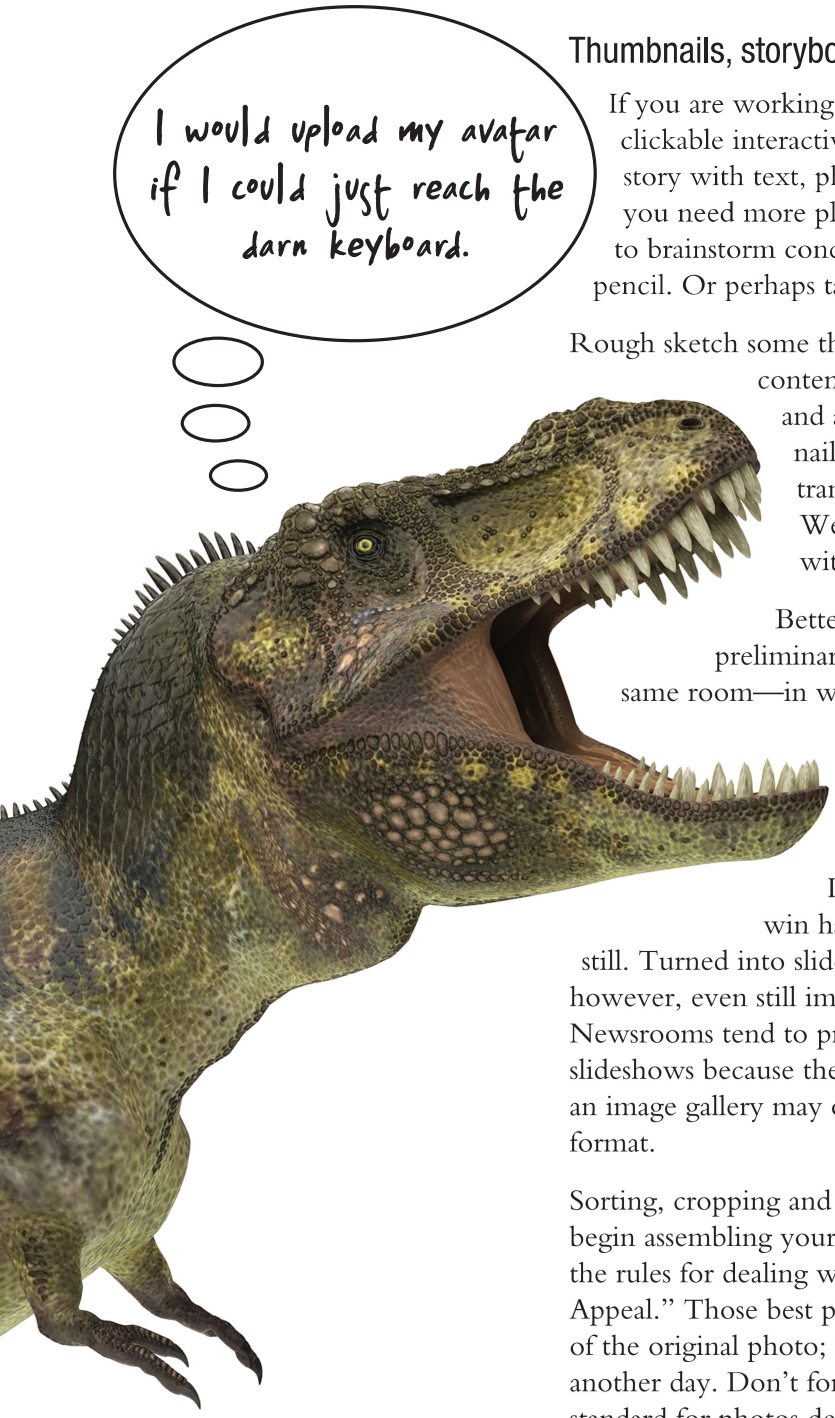
A DESIGN SPEED BUMP

Hold up. Before you sit down at your computer to take that new video-editing software for a spin, remember to step away from the computer for planning.

Get the specs.

Before you start any asset creation, figure out which elements you can customize. Then find the correct specifications for those elements. Such specs include but are not limited to pixel-by-pixel dimensions, file size and file format. Social media sites, for example, have recommended resolution and pixel-by-pixel dimensions for your

avatar image. Video sharing sites may only accept video rendered in certain formats. And even though social media sites are forgiving about photo uploads (they tend to resize your images to fit pre-set spaces), there are likely to be limits on maximum file size. Design your asset to fit the specs. You don't want to spend 4 hours photo-editing your face on the body of a T-Rex to use as a background image only to discover your efforts unusable due to incorrect format or file size.



Thumbnails, storyboards & site maps.

If you are working on a complex custom project such as a clickable interactive commercial or a big online investigative story with text, photos, footage and interactive infographics, then you need more planning than just looking up specs. You'll need to brainstorm concept, design and organization with paper and pencil. Or perhaps tablet and stylus.

Rough sketch some thumbnail layouts that imagine how all your content might go together. For slideshows, video and animation, use storyboarding techniques to nail beginnings, middles and ends, along with transitions, pacing and timing. And for multi-page Web projects, site-map content relationships along with user flow via intuitive links and navigation.

Better yet, to maximize creative synergy, do the preliminary noodling with the whole team sitting in the same room—in which case you'll need the big whiteboard and some colored markers.

WORKING WITH IMAGES

In the attention-grabbing department, images win hands-down. But still images are—you know—still. Turned into slideshows or placed in interactive image galleries, however, even still images become engaging multimedia components. Newsrooms tend to prefer interactive image galleries over automated slideshows because they seem to generate more viewing traffic. Yet an image gallery may offer viewing options that include a slideshow format.

Sorting, cropping and editing photos needs to happen before you begin assembling your slideshow or image gallery. We already covered the rules for dealing with photos in "Chapter 9: Adding Visual Appeal." Those best practices apply here. Plus, always work on a *copy* of the original photo; save and protect the original to be available for another day. Don't forget to optimize resolution; 72 dpi remains the standard for photos destined for screen viewing.

Image galleries & slideshows.

Image galleries. Image galleries are common on websites. Some social media platforms are *nothing but* galleries of user-uploaded imagery. Galleries allow the user to scan many images at once; interactive galleries allow the user to click through, sort and search a set of images to suit his or her own needs and interests. Such galleries are well suited to displaying creative portfolios, sharing organizational event photos and, of course, selling products.

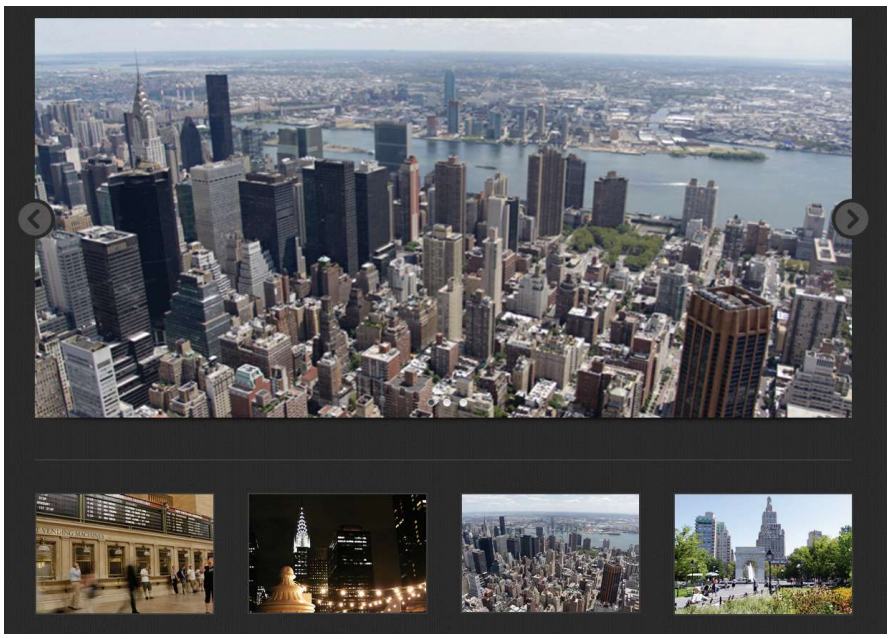


Image galleries. There are many inexpensive and free image gallery plug-ins available for displaying your photos on websites and blogs. The gallery above includes an interactive slideshow and thumbnail gallery.

Some photo-editing programs have the ability to generate Web-ready image galleries from your selected images. All you have to do is upload the files to your Web server.

Photo-sharing websites offer similar options. Signup is typically free, and once you have an account you upload your images. You can organize images into galleries and then put a link on your main website to your galleries. If you prefer to embed your galleries in your own website, photo-sharing sites offer plugins, widgets or code snippets that make this possible. Plug-ins and widgets allow photos stored on the photo-sharing site to display where you want them.

Slideshows. Slideshows have the visual impact of photos with the added bonus of eye-catching movement. They take up the same of amount of layout real estate as a still image but can display multiple different messages, including calls to action.

When creating slideshows, consider the content of your images, along with transitions and user controls. For a simple set of images intended to add interest to a Web banner or content area, choose quality images united by a theme (color, subject, etc.) with similar orientation.

If your slideshow is intended to tell a story, apply a video-like approach to selecting images. A storyboard of sequential sketches helps organize the storyline and assist with image selection. A storyboard also helps if the slideshow includes a narrative. Select photos with tight, medium and wide angles for variety. Use the best quality images you can. Nonetheless, an image that supports narrative continuity may be a better choice than a technically superior one.

Slideshow transitions. Slide programs offer many transition styles. Avoid the kid-in-a-candy-store impulse to use one of each. Simple tends to be best so choose one transition style and stay with it. Traditional cuts always work. In the end, you want your slideshow to be about the images or the story, not the funky transitions you used.

Pacing. Whether slow and measured or fast and frenetic, the duration of your images and the speed of transitions set an overall tone for your slideshow. If you expect viewers to absorb and appreciate your slideshow content, give them enough time to do so.

The "Ken Burns Effect." The Ken Burns effect is a gradual simultaneous zoom in or out and panning across still images in a slideshow. Burns uses the technique when featuring historical photographs, letters and maps in his documentaries. The effect is readily available on consumer-grade video software, but apply it with caution. Use it if the technique will enhance the slideshow's communication function, not because you think it looks cool.

Captions/cutlines. Not all slideshows require captioning. But news contexts probably do. In addition to having a narrative beginning, middle and end, three rules apply here: One, make the caption/cutline "go with" the image. Oh, yes, we have seen it go the other way. Two, don't state the obvious. A photo of a black dog doesn't need a cutline that reads, "This is a black dog." Instead, supplement the obvious, such as "Duke, a 6-year-old rescue lab/shepherd mix with exemplary manners, loves children." Three, do cover what's not obvious but relevant, such as a photo's W's. Clearly identify who, what, when and where. And don't forget to fact-check and proof. Also be kind and credit the photographers.

To loop or not to loop. You can set a slideshow to loop continuously or a particular number of times before stopping. Your choice here depends on where your slideshow will be displayed. If it is to be the backdrop of a Web banner, then a subtle continuous loop might

Pick just one. Don't let your slide transitions outshine your actual slides. Pick one simple transition style and stick with it. We recommend cutting and fading as opposed to exploding and twirling out of control.

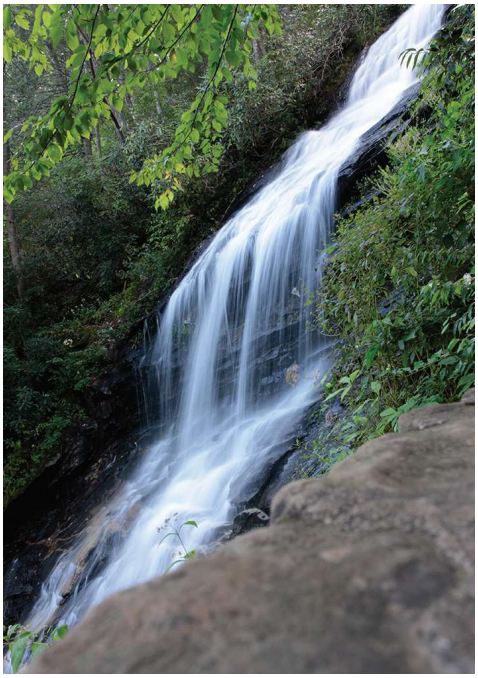
be appropriate. If your slideshow is intended to tell a story, letting it play through once is sufficient. As a rule, it's a good idea to provide user controls on video clips such as story slideshows. Viewers appreciate access to buttons that start, stop, rewind, pause as well as adjust volume.

Slideshows with audio.

Now think about combining everything you've learned about photo slideshows with our tips for working with audio. Hey, you're ready to produce audio slideshows. Don't be intimidated. The software is cheap (or

WORKING WITH AUDIO

Audio may seem off-topic in a discussion about visual communication. But audio plays a role in multimedia. Audio is the narration or natural (nat) or ambient (ambi) sound on captured video. It's the background track or bed in Web and DVD projects. Short audio clips as sound effects or SFX signal action, such as the sound of a button being pressed or email being sent. Audio can highlight what's important. It also reinforces tone and mood.



Can you hear it? Audio is a powerful multimedia component. Try to imagine the sounds that would accompany this image.

Back in the heyday of radio, great audio was "theater of the mind." That continues to be the way you should think about audio production. But if you find yourself unable to enlist an audio pro, stick to the basics. In general:

1. Use ambient audio sparingly, especially for trigger sounds like button clicks. A little goes a long way.
2. Background music should enhance the overall tone and message of the project. It should not be expected to set the tone by itself.
3. Give your user controls, preferably start, stop, pause and volume. We've all been blown out of our desk chairs by a Web soundtrack that was a big surprise, too loud or both.
4. When the audio is narration, an interview or some other situation where clarity is crucial, capture the highest quality audio possible. Use the best microphone you can—which may not be the one on your digital recorder, video camera or smartphone. Your audience is more likely to forgive a poor quality image than an inaudible soundtrack.

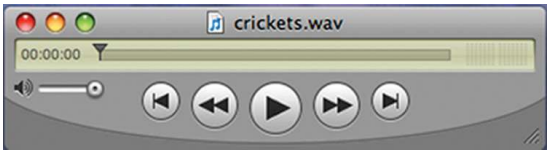
Where to get audio.

Ambient sounds and music as well as trigger sounds like button clicks are available for purchase from digital stock sites. There are also websites that offer free sounds and music. Be aware, however, that free downloads may come with restrictions or attribution requirements. Make sure you respect both.

free) and user-friendly, so much so that it's mostly the same software pros use. As they say, producing audio slideshows has become "ridiculously simple." Try it. It's fun.

Begin by assessing whether you have a story that supports audio and visuals. Audio and photos should supplement and complement each other, the same as captions/cutlines. Time audio and visuals to "go with" each other. Remember storyboarding and maintaining narrative continuity.

Before putting the audio slideshow together, finish editing and saving your photos in one folder. Likewise, edit and save your audio track. Convention suggests you'll need a couple dozen photos for every minute of audio—more or less—depending on the subject matter's tone and pacing. After the audio and photos files are completed, open your audio slideshow software, import your photos and audio, and finally tweak as needed. Remember that a 2-minute audio slideshow begins to stretch the limit of user tolerance.



In control. If your website includes video and audio clips, give your audience access to the controls. At the very least, provide volume control and start and stop buttons.

Audio slideshows offer a simple and easy tool for disciplining ourselves to tell effective stories in a short period of time with audio and visuals. Sound and pictures working together in time segues handily to video.

VIDEO CLIPS

Video runs the gamut from carefully orchestrated multiple-camera commercials to homegrown cell-phone-recorded clips posted on video-sharing websites. In between the complex and the amateur, there are video interviews and monologues, short clips of events and activities, and how-to tutorials, among others.

Simple video-editing software is as commonplace as slideshow-making tools, and nonprofessionals can create good quality clips. Video isn't designed so much as it is composed, shot and edited, although in some cases it may be art directed.

Like shooting photography, if the stakes are high, shooting video and film is best left to professionals. Nevertheless, if it's you or *nada,* follow these shooting and editing tips for beginners:

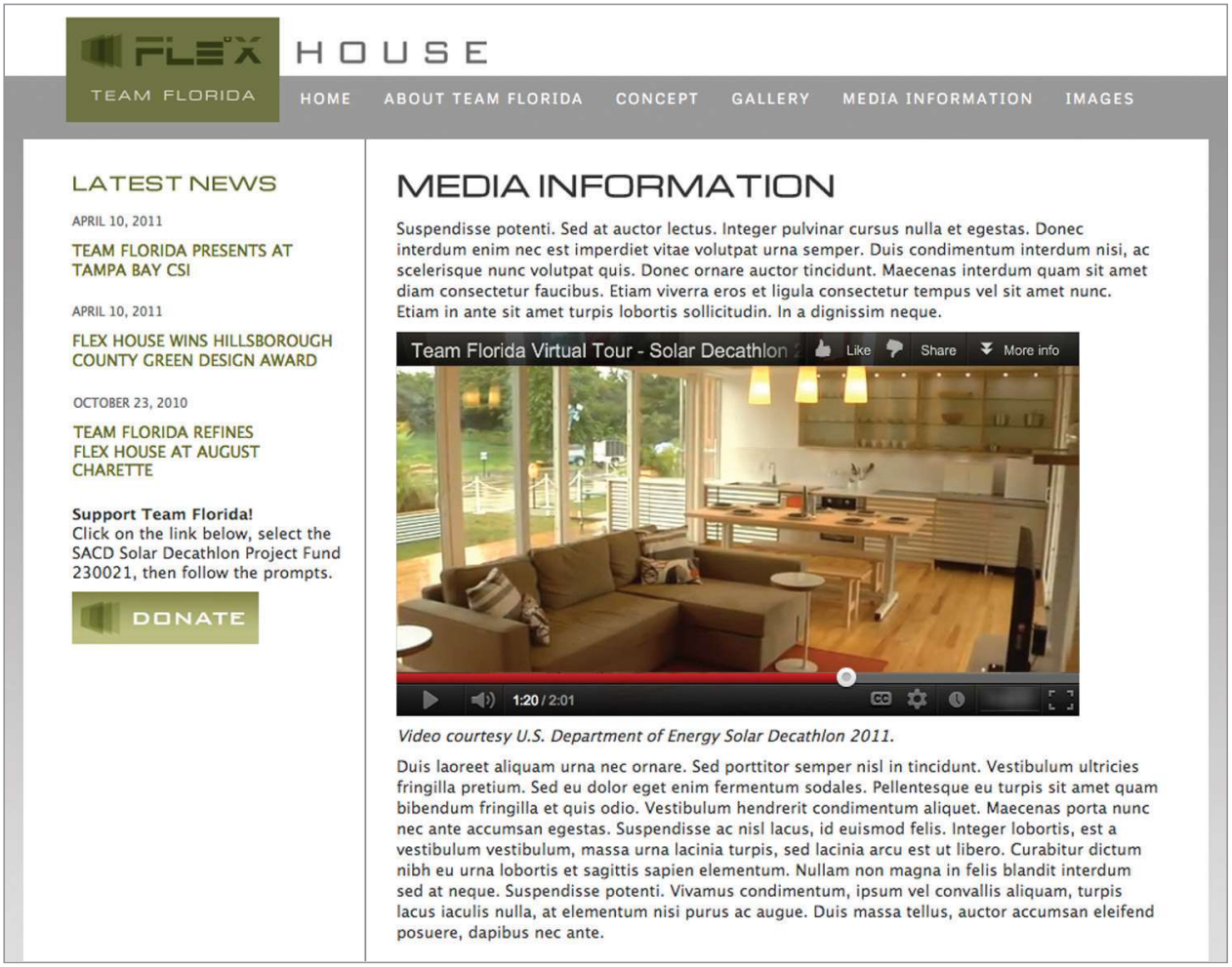
Not as easy as it looks. Capturing good video requires planning. Consider lighting, location and subject matter. And always shoot more footage than you think you'll need.

General shooting tips:

- Steady your camera with a tripod or other solid surface. Camera shake gets very old very quickly.
- Shoot in a location with bright, even lighting. Avoid harsh high-contrast lighting and backlighting, along with what you may believe are special lighting effects.
- When possible, shoot some test footage to check blocking, sound and light.
- Shoot more video than you think you'll need, at least 10–15 seconds for each shot you want to capture. You can always cut extra material, but you can't magically insert file footage no one ever shot. (B roll is file, secondary or archival footage used as visual fill or for creating transitions between clips.)
- Capture a variety of angles for each scene: tight close-up, medium, full, wide and long. Think about establishing shots versus detail/beauty shots.
- Avoid zooming and panning. Cutting from scene to scene is actually more natural.
- Compose your shots. Use the rule of thirds as your guide and place your focal point accordingly.
- Don't talk while shooting. The microphone may pick up your voice. Heavy breathers off-screen can be a problem, too.

When shooting interviews & monologues (talking heads):

- Shoot in a quiet location.
- Select your talking head wisely. Not everyone appears interesting and engaging (or articulate) on-camera.
- Test footage… Better safe than sorry.



Doing an end-run around format incompatibilities. Finding video formats that run on all browsers is no easy task. A good workaround is to upload your video to a video-sharing site, then use the code provided to embed the video back into your website. The sharing site manages the tricky browser issue for you. The tradeoff is that your video will contain branding from the sharing site.

When editing video:

- Begin with the best quality video possible, i.e., uncompressed raw footage.
- Make sure you have good usable audio, too. "Audio is half the picture," as they say.
- Select simple transitions—cuts and fades. Pick one transition style and stick to it. Attention should be on the video, not on the transitions.
- Try to keep overall video duration short. In multimedia contexts, viewers can drop out in seconds, and most casual online video viewers only hang around for 2-3 minutes.
- Don't forget title and credit slides (if needed) and a poster frame. A poster frame is an image that serves as the icon for your final video. A poster frame can be a still selected from the video, or a graphic created in another program. Title slides and poster frames

are excellent opportunities for branding. If your final video is being shared on a video-sharing site, create a final frame with links to your other videos you've posted to generate website traffic.

» When adding text to slides, style for contrast and readability. Heavier sans serif fonts at larger sizes will generally work well. Make sure to keep all text within the title-safe boundary.

Video encoding.

After editing, encoding is the next step in making a video. There are many file formats out there, and choosing the right one takes a little research. Video-sharing sites, for example, often post file size and format requirements. Meanwhile, different software and hardware brands peddle their unique file formats.

When choosing a video file format, try to avoid those that are exclusive to particular devices, platforms or software applications. You want your video to be viewable by the greatest number of people.

When choosing a file format, try to avoid those that are exclusive to particular devices, platforms or software applications. You want your video to be viewable by the greatest number of people. MPEG-4 (Motion Pictures Expert Group), or MP4 for short, is the most popular video file format for the Web (at the time of this printing, anyway). MP4 is friendly across platforms and supported by the most popular Web browsers.

In addition to file format, you'll also need to pay attention to aspect ratio, which refers to screen frame proportions, and final file size, which also includes modes of compression. Video files are huge and must be compressed before packed into files for transport. So compression and file size matter not only for uploading and downloading but also for storage space. Wherever your video is being housed or hosted, once again, a few minutes' research on the specs can save your—ahem—"project" at deadline time. Stay within uploading parameters. Quick downloading is critical, too, if you want your viewer to stay tuned long enough to see your clip.

Speaking of viewers, don't forget they need access to a video player of some sort for viewing. Fortunately, most modern browsers support common video formats. And if you come across a format your browser does not support, plug-ins are generally free and easy to find and install.

An excellent way to bypass many browser and video format incompatibilities is to post your video on a video-sharing site. Most video-sharing sites will provide a bit of code allowing you to embed the clip on your own website. A minor drawback of this method is

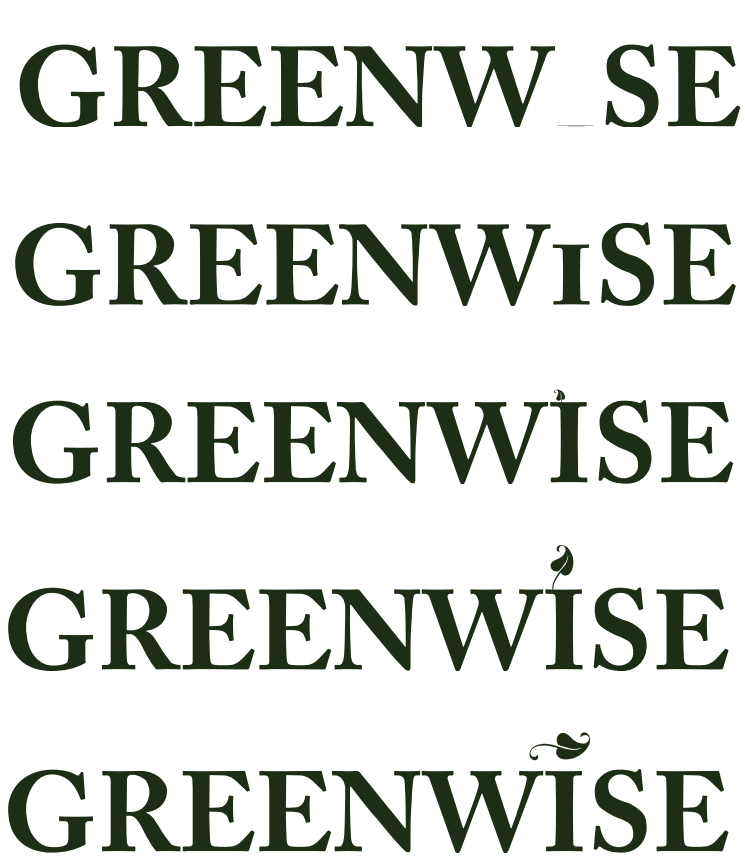
that the video-sharing site may require you to include its branding on your video clip.

Once viewers find your video, waiting for the whole clip to download, as in "progressive" video delivery, can be a real drag unless the clip is short and sweet. "Streaming" video is advisable for longer videos. But you would hire professionals for those longer videos anyway.

Shooting & editing video not your bag?

The same sites that offer stock images also offer stock video clips. Stock may not work for your situation. But if using stock saves time and money, it might be worth checking out.

Simple is good. Animation need not be complicated. This logo grows a letter "I" and sprouts a leaf over the course of a few seconds.



ANIMATION

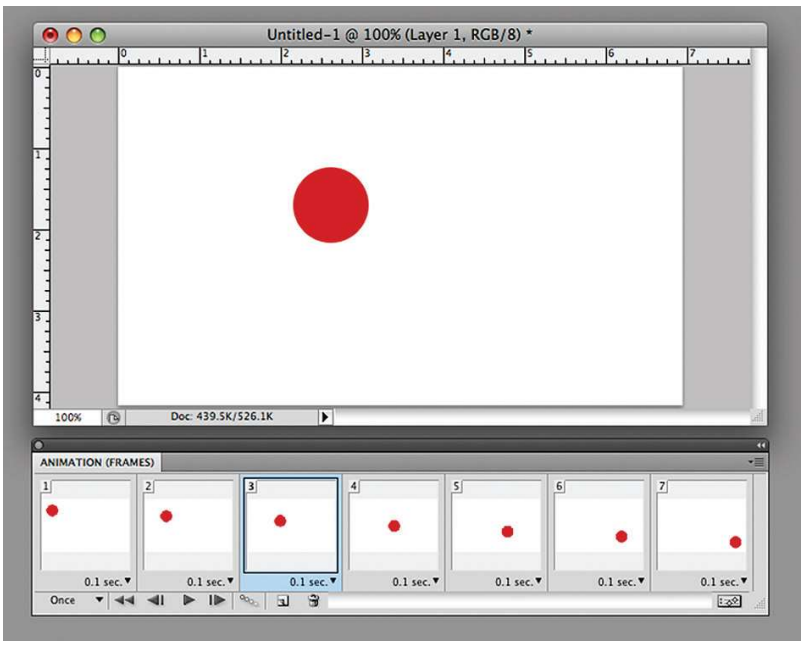
Generations of children have grown up watching animation as a Saturday morning cat-and-mouse anvil-dropping form of entertainment. Now animation has grown up, too. It's everywhere from the startup sequence on your cell phone to spectacular CGI effects in blockbuster movies.

Like other multimedia components, animation can be classified by complexity. Animation found in full-length feature films and complex interactive websites remains the bailiwick of highly skilled pros. More accessible animation, such as transitioning in presentation slides, is generated by the presentation program itself.

If you're inclined to try your hand at animation, affordable animation programs are out there. The learning curve for animation software is steeper than most but not insurmountable. It's absolutely possible for the average person to create simple animated logos, video title sequences, banner ads and animated website components without an advanced degree in motion design.

Motion tweens.

The simplest digital animations work on the same principle as original hand-drawn animation. A series of images, each one slightly different from the last, is flashed in rapid succession giving the illusion of movement. The digital animation rate is approximately 30 frames per second so 30 images are needed to create 1 second of animation. This is a lot of drawing.



Motion tweens. Computer-generated tweened animation works on the same principle as traditional hand-drawn animation. A series of images is flashed in rapid succession, creating the illusion of movement.

Adobe Photoshop CS4 screen shot(s) reprinted with permission from Adobe Systems Incorporated.

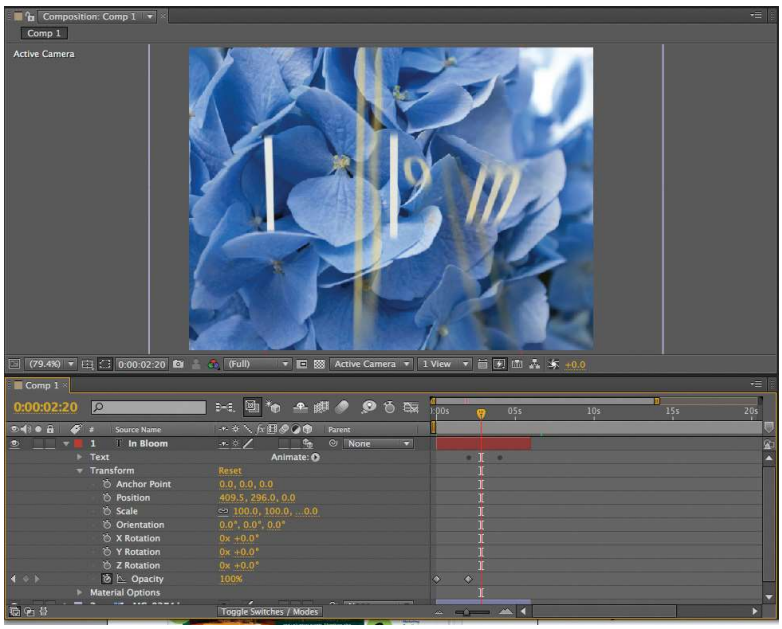
Fortunately, if you're using tweened animation, the computer will do the "drawing" for you. In tweened animation, only key changes in motion or shape are illustrated. For example, imagine the starting key frame has a red circle in the upper left corner, and the final key frame has the same red circle in the lower right corner. Based on the frame rate you specify, the computer will generate all the in-between frames necessary for an animation that moves the red circle from upper left to lower right.

Tweened animation is great for simple movement but also can be used for changes in color or opacity—tweening can be used to fade an object in or out.

Storyboards are an excellent tool for planning tweened animation. Arrows and other directional devices can signal the movements along with the relationships of shapes and type. Each sketch on the storyboard can describe the contents of a key frame, as well as—uh-huh—audio.

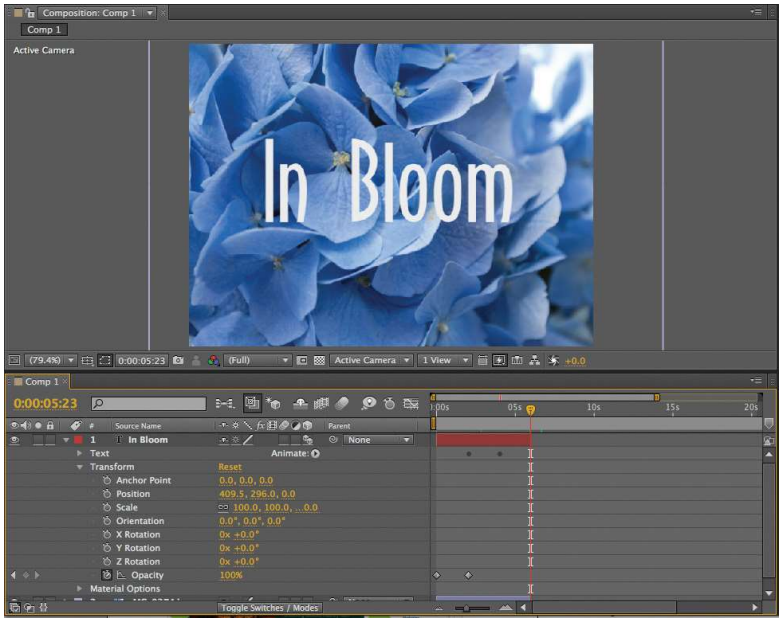
It's about time.

Actually, motion is not so much what makes animation different from other graphics. The element of time is. Animated elements appear, disappear and change shape at different points along a timeline. Pacing and transitions aren't issues when designing for print or even when designing static websites. But in animation and video, pacing and transitioning impact the overall feel, thus message, of the piece. A quick pace and sharp transitions give intensity and edge. Subtle, gradual changes are more soothing.



Space and time. In animation, objects move through space over time. Animation programs include a timeline, seen here in the lower right of each graphic. "Events" happen at points along the timeline. In these screen grabs, the red bar represents the duration of the animation. The yellow triangle is effectively the "you are here" on the timeline. The preview window shows what the animation looks like at a given point in the animated sequence.

Adobe AfterEffects CS5 screen shot(s) reprinted with permission from Adobe Systems Incorporated.



Duration.

How long does your animation need to last? Each situation is different depending on the job the animation is meant to do. However, the longer the animation, the greater the file size. So be aware of file size limitations—server, application or project-imposed. And, as a general rule, don't let your animations loop indefinitely. Have them cycle one or more times then stop. Don't loop animations that are particularly sharp and choppy. You don't want to give anyone a headache.

File formats for animation.

Again, choosing a file format requires a bit of research to determine what is acceptable for your particular project. Animated banner ads, for example, may have physical size, file size and looping requirements in addition to format requirements.

In general, use formats that are compatible across the greatest number of devices. Also look for those with good compression (file size) and good quality output.

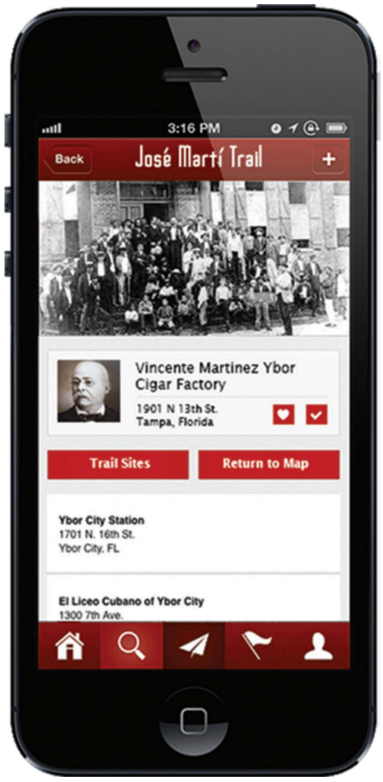
Use restraint.

Adding a little animation to a layout can help break through all the visual clutter viewers suffer every day. But don't let your animation add to visual clutter. Use animation with a purpose. Make sure it's the right medium for your message. Don't use animation just for the sake of using it.

APPS & PLUG-INS & WIDGETS, OH MY!

Perhaps the most exciting thing about multimedia is the opportunity it provides to engage the audience fully. For advertisers, interactivity is a luxury only dreamed of just a generation ago. Each element we've discussed thus far allows for some interactivity, be it the pause, play and volume controls on a video clip or the ability to browse photos in an online photo gallery. And don't forget the banner ad's click-through (cha-ching).

The good news is that you no longer need to be a credentialed computer programmer to include interactive multimedia components in your screen layouts. Plug-ins, widgets and apps make it possible for non-developers to add a wide range of interactive components with ease.



Do-it-yourself app building. There are increasing numbers of do-it-yourself app-building programs out there. It's now possible to create a simple app, such as this historic trail app, without the skills of a developer. We discuss more about designing app interfaces in Chapter 13.

Applications (Apps).

Applications, commonly referred to as "apps," are programs designed to run on a computer, tablet, smartphone, website or social media site. Large complex applications such as word-processing programs have been available on computers for decades. Since the introduction of smartphones and tablets, professional and amateur programmers have been adding to the slate of apps for those devices, too. Some common examples of apps include calendars, mileage trackers, restaurant finders and, of course, games.

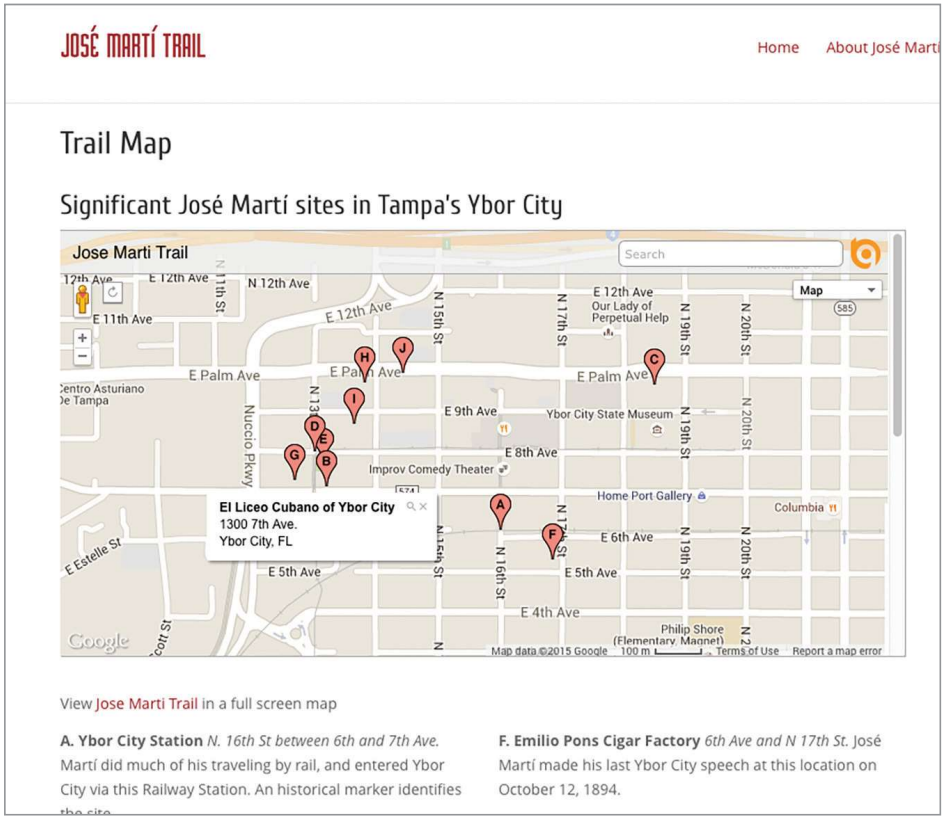
Some companies and organizations build custom apps to supplement websites. This makes sense as interaction with the smaller touchscreens of handheld devices is different from that of websites. A specifically designed app can provide the smartphone or tablet owner with a much better user experience.

The building of highly complex "native" apps (apps built for specific operating systems and sold in app stores) is still largely the realm of professional designers and developers. However, there are increasing numbers of do-it-yourself app-building programs out there. It's possible to create a simple app, such as the historic trail app pictured on this page, without knowledge of code.

Plug-ins.

A plug-in is code that gives a browser or website additional functionality. For example, when a website automatically displays the most recent posts from a separate blog, a plug-in is at work.

There are plug-ins available that can do everything from filtering SPAM or viruses to allowing game playing or viewing different media types. They are easily added to sites or browsers via an installation



Interactive map widget. This interactive map of locations on the José Martí Trail was generated by a free online map-generating service. A snippet of code provided by the service then embedded in the website creates a live map with clickable pins.

program or by copying and pasting code in the right location.

Plug-ins are commonly installed behind the scenes, and there may or may not be visible front-end evidence of their presence on a site or browser. If a plug-in requires input from a user, or needs to physically display some sort of content on a page, then a widget is needed.

Widgets.

Widgets are the visible expression of the existence of a plug-in. For example, imagine you want to measure social media activity on a specific page and display the results in a sidebar. An installed plug-in will track the activity, but the widget is what displays the results. Widgets are also required to gather user inuput, as in online forms. All widgets require a plug-in, but not all plug-ins have a widget.

There are widgets to display local weather, create tag clouds, play video and slideshows and even map the nearest pizza places.

With literally thousands of plug-ins and widgets available, the potential for adding interactivity to your projects is huge.

Where do I get plug-ins, widgets & apps?

The short answer: Search online. Most plug-in or widget code can be had for free or for minimal cost. Often all that is required is a code cut-and-paste. Oh, and sometimes a credit to the developer is needed, too. Don't forget to check, and provide credit where credit is due.

When searching for and installing plug-ins and widgets, pay attention to online reviews. Since these mini programs can be created by anyone, quality is all over the board. Some are not regularly updated. And many are not "supported," meaning if something goes wonky, you're on your own to fix it.

Another thing to look for is whether or not a plug-in or widget comes with an editable Cascading Style Sheet (CSS). Style sheets are used to dictate the way design features like fonts and colors display onscreen. If you can access a style sheet, you can tweak the appearance of a plug-in to better match your overall layout.

As mentioned, apps tend to be more complex, and building them requires the skills of a developer. However, if your organization needs a strong unique presence on tablets or smartphones, hiring a developer to create a custom app might be worth the investment.

MULTIMEDIA STORYTELLING

Back in our infographics chapter, we talked about the enhanced communication capabilities inherent in infographics packages. Multimedia components enhance your communicating abilities exponentially.

Imagine an interactive multimedia website devoted to the human heart. The centerpiece might be a high-end 3D animation of the inner workings of the heart providing something like a virtual ride through the pulmonary system. We could enhance the online experience with sound effects and narration.

Other interactive features and links would layer additional information. Users might click to learn more about platelets, heart chambers, red blood cells, etc., or even how to read an electrocardiogram (EKG) or become a cardiologist. Users might take a quiz to test their knowledge of or calculate their risks for heart disease. Maybe

MULTIMEDIA CONTENT TOOLBOX

Multimedia muse Vidisha Priyanka recommends the following for the digital editor/producer's toolbox:

Text
- headlines
- summaries
- external links
- audio transcripts
- photo captions/cutlines
- blogs/microblogs

Images
- still photos
- illustrations
- infographics
- photo slideshows
- photo galleries

Video
- recorded clips
- live feeds
- historical footage
- animation
- video logs
- tutorials

Audio
- narration (anncr, VO)
- dramatizations
- music
- sound effects (SFX)
- natural (nat) or ambient (ambi) sounds
- actualities (acts or ax)

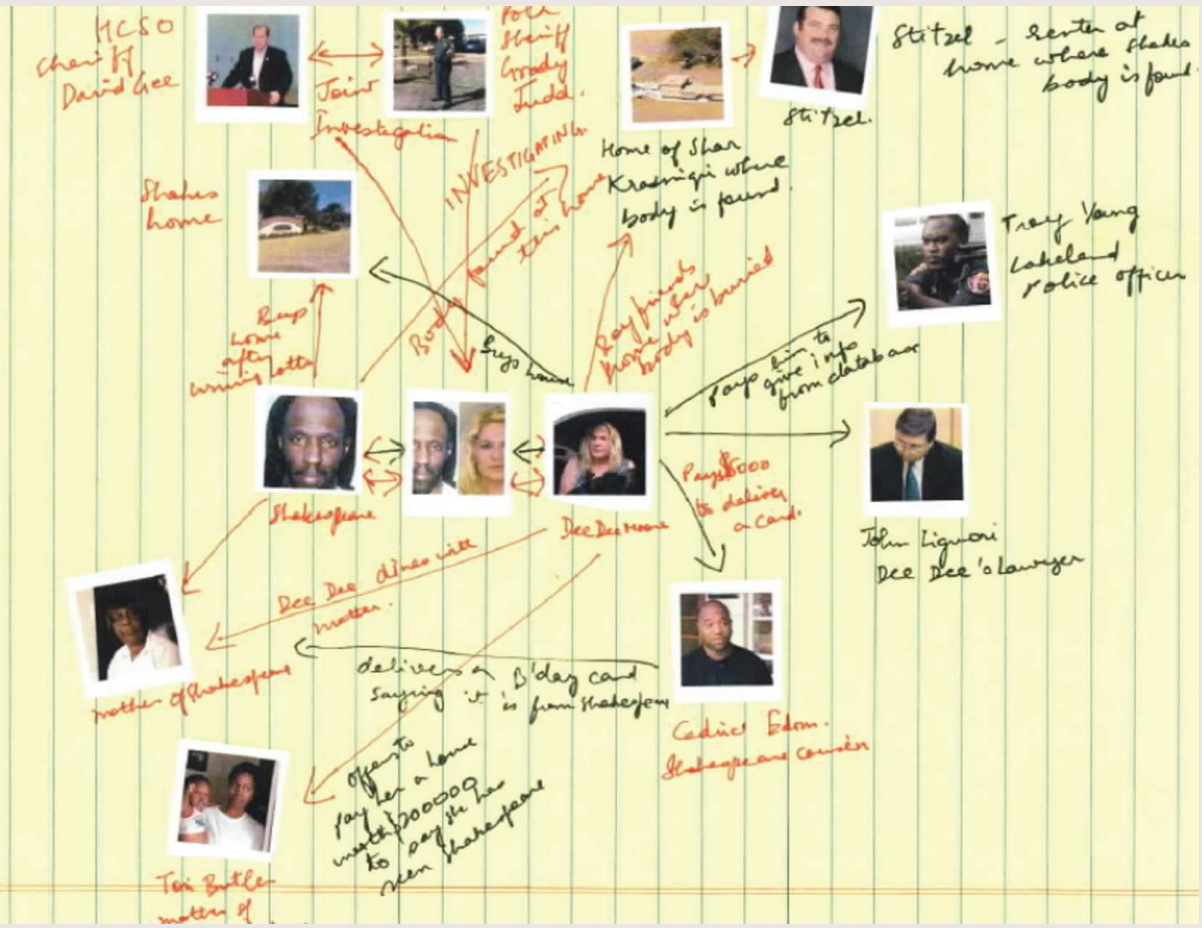
Interactivity
- live chat
- discussion forums
- feedback
- timelines
- polls
- games
- mashups
- searchable databases
- calculators
- guest books
- augmented reality
- widgets

Data
- numbers
- statistics
- spreadsheets
- lottery results
- archives

User-Contributed Content
- anecdotes
- comments
- photos
- cell phone/mobile content
- videos
- social networks
- user reviews
- wikis

Mobile Content
- really simple syndication (RSS) feeds
- music
- videos
- podcasts
- social networks
- quick response (QR) codes and other mobile scanning
- global positioning system (GPS) applications such as navigation and geo-caching

Site Exposure (going viral)
- content- and media-sharing sites for video, photos, news, information, networking

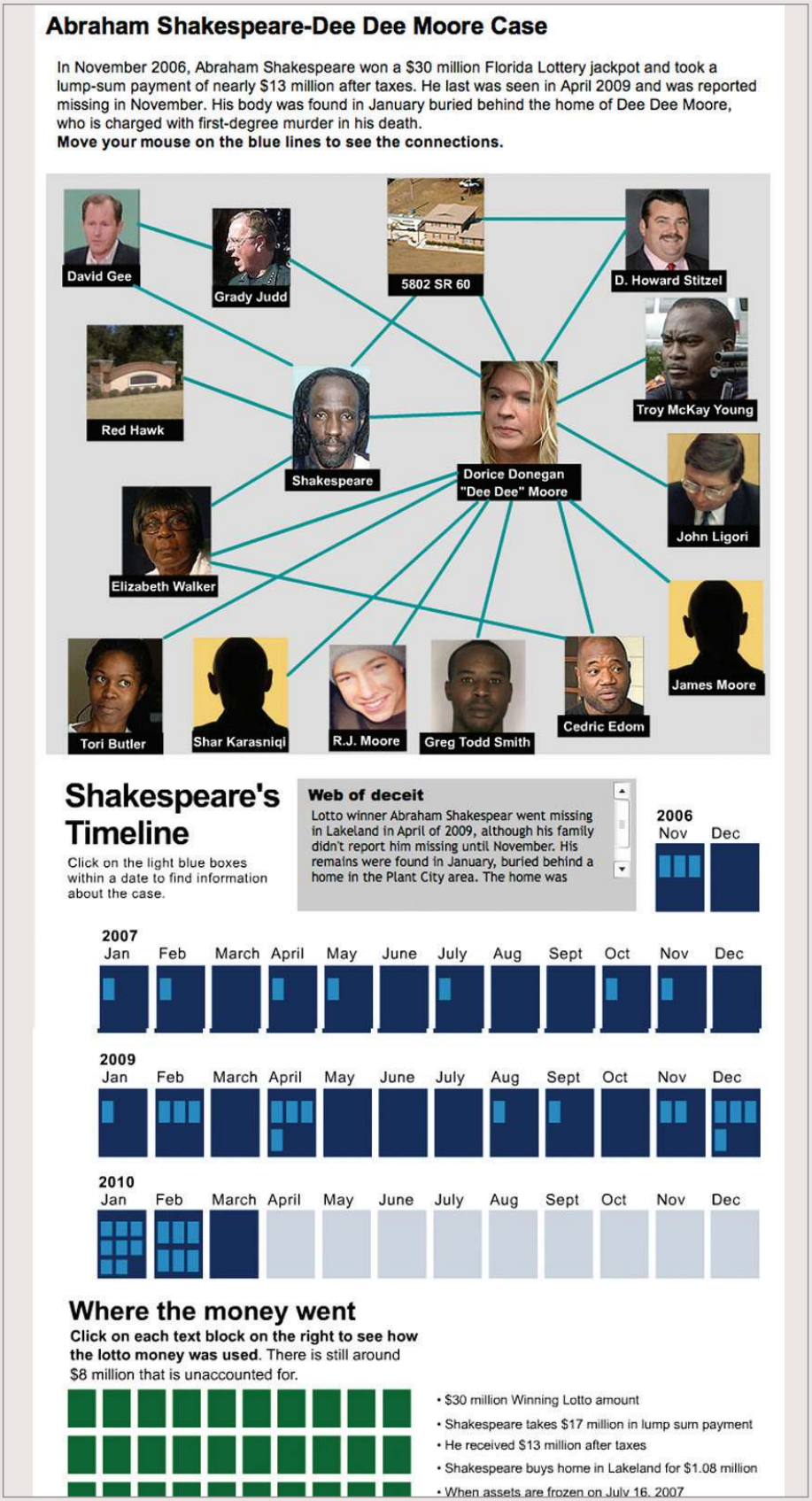


users entertain themselves competing in a heart health game that pits exercise and eating habits against genetics. How about chatting in real time with a medical expert? Anyone want to upload personal stories, share medical resources or add data to a map? You get the idea.

This type of multimedia design not only requires professionals, it requires teams of professionals. It also requires research, planning and a battery of thumbnail sketches, storyboards, site maps and wireframes.

Should you find yourself part of a team creating an interactive multimedia experience, here are some things to consider:

- Not every story or subject lends itself to full multimedia treatment. Make sure you have a deep, interesting and multifaceted topic to work with.
- Choose the best multimedia elements for your particular content. If you don't have a good candidate for a talking-head expert or spokesperson, don't plan to include a video interview. Do consider all your media options, including infographics.



Multimedia storyboarding. When multimedia news pioneers Tim Price and Vidisha Priyanka worked at TBO.com, they collaborated on stories that required all manner of rough storyboarding and site mapping. The storyboarded investigation shown here reported the tragic murder of a lottery winner.

Source: The Tampa Tribune, HCSO and PCSO

Multimedia designer: Tim Price/TBO.com

Multimedia producer: Vidisha Priyanka/TBO.com

Images courtesy of Tim Price, Vidisha Priyanka and TBO.com/Media General.

- Elect one medium to tell the main story, and let the other media play supporting roles. Think in terms of creating a content focal point.
- Decide on an overall look and feel. Then choose design elements that support that look and feel.
- Make the interface intuitive. Make buttons look like buttons, and make them easy to find and use. Same goes for links.
- Don't let the technology get in the way of the information or the story. The technology should be "invisible" to the user.

New technologies can and do inspire designers and visual communicators. But there's an old aphorism about the shortsightedness of designing the whole living room around the coffee table.

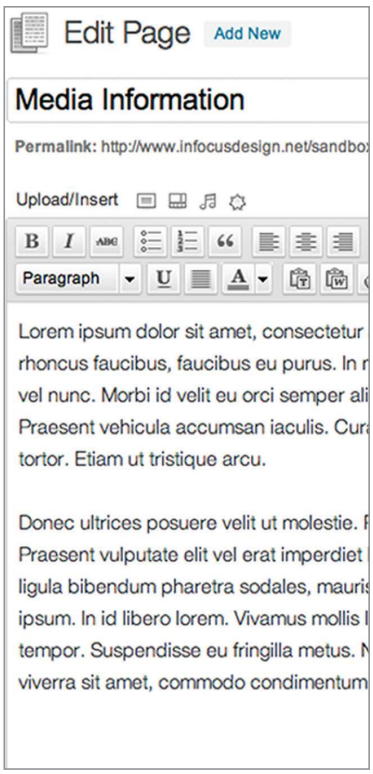
TRY THIS

1. Visit the website of a large news organization. Look for examples of multimedia storytelling. Which multimedia elements are employed? Write a brief critique.
2. Locate some simple logos. Storyboard three options for animating each of said logos.
3. Find a website or online magazine that accepts animated banner ads. What are the specs and requirements for file size, format, duration, etc.? Spend some time exploring the animated banner ads on this site. What animation techniques are being used?
4. Visit a site that sells video and audio clips. What formats do they come in? What styles and genres are available? Find a video clip and some audio clips you like. Brainstorm ways of using them in a website and create a wireframe demonstrating your ideas.
5. Produce a 1- to 2-minute photo slideshow or, better yet, an audio slideshow that documents reality. Story ideas to consider include a visual oral history of your oldest living family member, the status of adoptions at your local animal shelter or the hidden story of a nearby nature preserve. Maybe attending and documenting a public event, such as a quilt show, or a political rally is more your speed.
6. After you produce the slideshow above in No. 5, lay out a Web page for that same story that includes: a big header, a slideshow, a complementary type story, photo gallery, at least one infographic, and user feedback/comments. Don't forget to label everything with subheads, captions/cutlines and/or explainers, etc., as seems appropriate.

CHAPTER THIRTEEN

DESIGNING FOR THE WEB

STARRING ON THE SMALL SCREEN



Beats coding by hand. Content management systems allow you to create and update Web pages without hand coding. The content-generating parts of CMS interfaces are similar to word processing interfaces, making them more user-friendly for non tech-geeks.

The Internet impacts our professional and personal lives on a daily basis in countless ways. We text, instead of talk, on the phone. We get our news from websites or via feed. We blog, we email, we produce and publish our own videos. We shop. We critique. We collaborate. We have a million ways to get—and give—information.

The processes by which we get and give information have been in a constant state of change since the creation of the World Wide Web. Someone always seems to be announcing the next big social media tool or promoting the next great programming standard. While it may seem that the only constant is change, it's safe to say if you work in communications, you will work with websites on some level.

WHAT TO EXPECT WHEN WORKING WITH WEBSITES

Early websites were built by computer programmers who hand-wrote code and built applications from scratch. This has changed. So if you know nothing about programming languages or coding, don't worry. Your interaction with websites isn't likely to involve a lot of code. More likely, you'll be asked to do one of the following:

Prepare simple images and content for an existing website. You provide a basic text document or a graphic formatted for the Web to a webmaster (Kim prefers the term "webspinner"), who will upload the text and images for you.

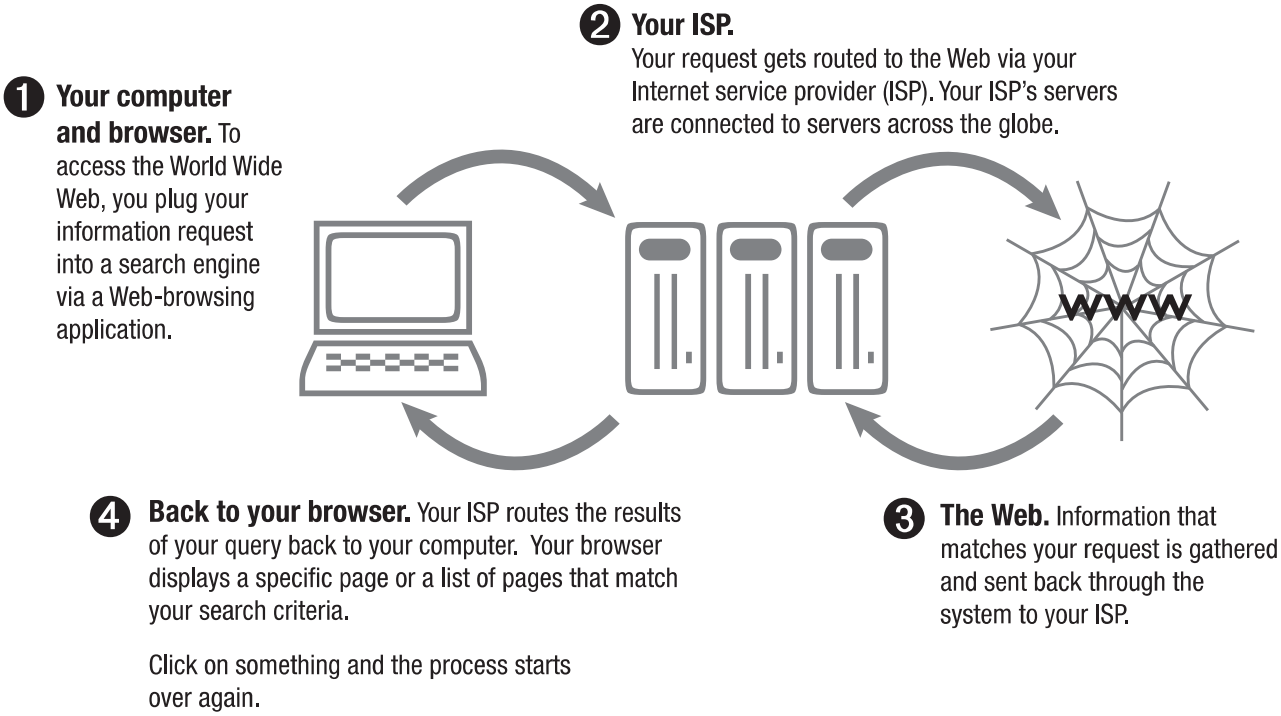
Work with a content management system (CMS). A CMS is a Web-based site-building and management application that dynamically generates pages from information you add to a database via a word processing-like interface. Content management systems were created so people with no knowledge of coding could build visually consistent sites. Such systems are excellent for organizations and businesses that require complex membership management or e-commerce. CMSs often have free or inexpensive plug-ins that add custom functionality to a site, such as tools for creating e-newsletters, calendars, maps or feeds from social media sites.

Create a site from a template. Templates allow you to pick an existing design and insert your custom content where appropriate. Templates can be hosted on the template provider's server, or they can be downloaded and installed on your own separately purchased server space.

Work with a professional Web designer and/or developer to create a custom site with custom functionality. This is the best option when you need a site with a specific look and feel, have extensive quantities of content or require highly specialized site tools. Working with

HOW THE **WEB WORKS**

Ever wonder how your computer can pull so much data from servers all over the world? Here's a 5-second explanation of how the World Wide Web works:



professionals is also advisable when high search rankings are crucial to your site's success. While site design has been automated to a large extent, search engine optimization (SEO) requires professional planning and implementation.

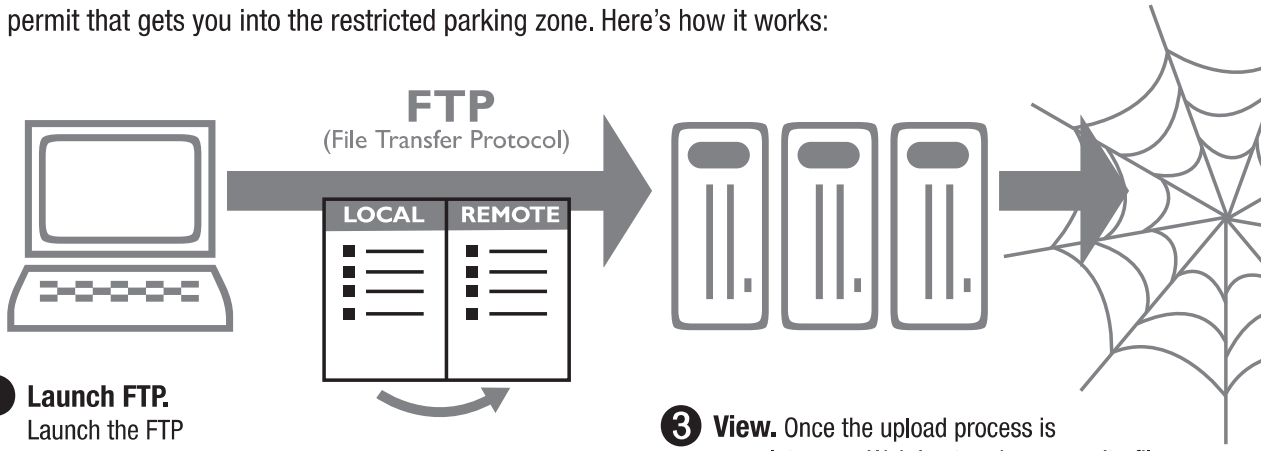
HOW THE WEB WORKS (THE 5-SECOND VERSION)

When working with Web content, it's important to understand how the files you create come to show up on the computer screens of your audience/customers. If you know how the Web works, you can troubleshoot why your content is not showing up properly, or not showing up at all.

Accessing existing websites. To access the Web, you need a computer or other Internet-capable device, a Web browser and an Internet service provider (ISP) or wireless network. When you type an information request (a keyword or search term) or a specific address (Uniform Resource Locator or URL) and hit enter, your request is sent to your ISP. Your ISP, in turn, sends the request to the World Wide Web portion of the Internet. Information on the network that matches your information

GETTING YOUR SITE **ON THE WEB**

Publishing your site files on the World Wide Web requires a computer with Internet access, a Web host and FTP software (called an FTP client). Think of your host as your paid parking place on the Web. Your FTP client is the permit that gets you into the restricted parking zone. Here's how it works:



1. **Launch FTP.** Launch the FTP client on your computer. Log in with your host-provided username and password.
2. **Copy.** FTP clients open two windows: One shows local files; the other, the files on the server. Move the files you want to upload from the local to the remote column.
3. **View.** Once the upload process is complete, your Web host makes your site files available to Web visitors.

request gets sent back through your ISP. Your browser displays either the page you requested by URL or a list of potential pages that meet your search criteria.

Adding your site to the WWW. A few additional things are needed to house and maintain a website: server space (also called a Web host), a domain name and a File Transfer Protocol (FTP) program.

Server space/Web hosting. Think of server space as your site's paid parking space on the Web. Your ISP may offer you server space as part of your package, or you can buy space through a separate host provider. Your server space is defined by amount of disk storage space and availability of other features, such as number of email accounts.

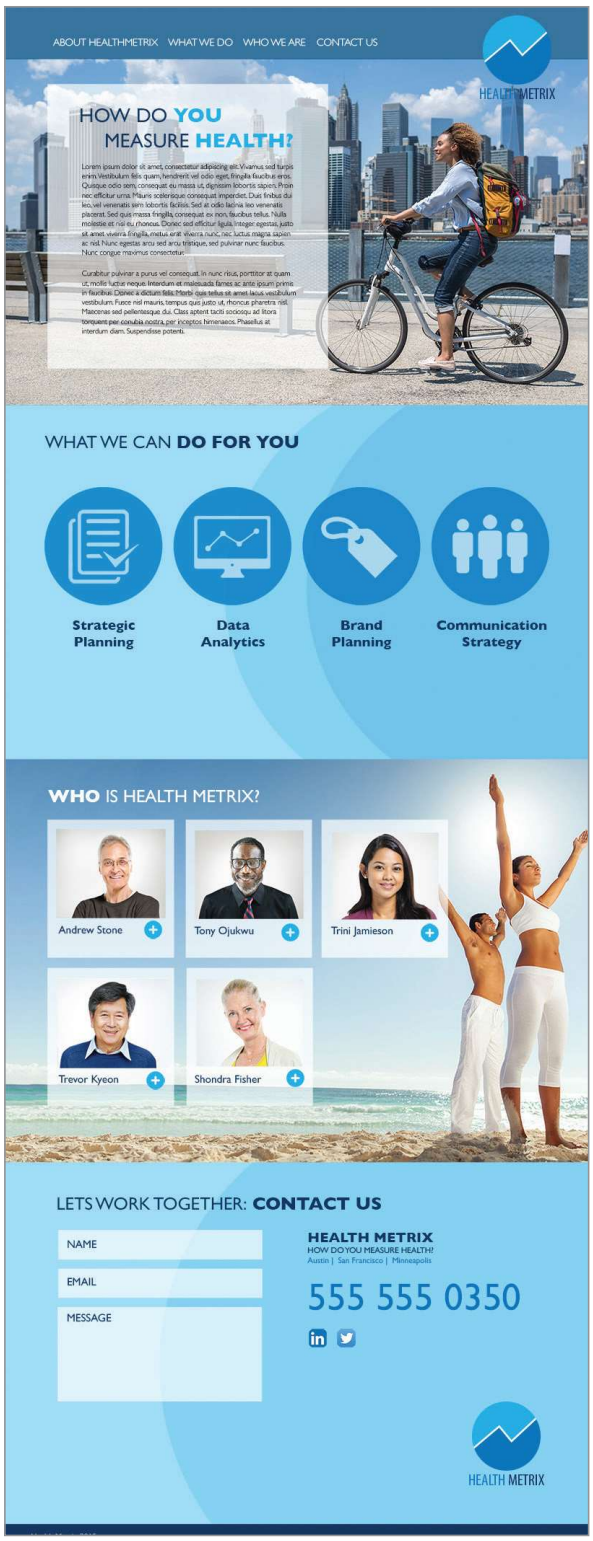
By default, the name of your server plus the name of the directory assigned by your host becomes your site URL. Your host also may give you a string of numbers called an IP address that also represents the location of your site on the Web. To continue the parking space analogy, your IP number is like your parking space number. But nobody wants a URL that reads www.yourwebhost.com/~sitename, or worse, 65.97.106.162. This is where domain names come in.

Domain names. A domain name is a custom URL you purchase through a domain name registrar. Think of the domain name as a personalized "reserved" sign that replaces the number identifying your parking space. Domain names are chosen to reflect the content of the website they represent. XYZgraphicdesign.com is much easier to remember than an IP address, and it says something about what the company does right in the name. The most common and desired domain suffix is .com, but hundreds of others exist. The suffix .net was intended for personal Web pages, .org for groups and organizations, .gov for government and .edu for education.

When you purchase a domain name, you must provide your registrar with the domain name server (DNS) of your Web host. This action "points" the domain name to your Web host, and subsequently, your Web pages. The end result is when a person plugs your custom domain name into a browser, the browser locates the domain name at your registrar, and the registrar redirects the browser to your website. If the stars, sun and moon all align, your website will show up in that person's browser window.

File Transfer Protocol (FTP). The final piece in this mix is the mechanism required to get your Web pages parked in your server space. A Web designer keeps two sets of Web files: a local set on his or her personal computer and a matched set on the server. Make your edits on your local files then upload the files to the server. The files on the server are the ones the rest of the world sees via Web browsers.

To connect to your server, which is essentially a remote computer, you need File Transfer Protocol (FTP) software. FTP software is inexpensive (or even free) and easy to use. When you provide the name of your Web host, your username and your password in a new connection dialog box, the FTP client will open a bridge between your computer and your server space. Uploading files is usually as simple as dragging and dropping.



It's inevitable. Whether you provide images and logos for an existing site, contribute to a blog or build sites from scratch, working with websites is a given.

Good design is good design. Well-designed websites demonstrate the use of compositional elements and principles, including focal point, balance, movement, line, shape, value and, of course, space.

Using an underlying grid is particularly important to maintain visual consistency across nonlinear pages.

CMS and hosted templates: No FTP required. If your website was built using a content management system, or utilizes a template provided by an online website service, you may not need a separate FTP client. CMS and hosted template systems provide an online interface so you can upload graphics and other assets to the host server. Text content is typed in via a word processing-style interface and stored in a database on the host server. You're still uploading content to a server; you're just doing it using more user-friendly tools.

PRINT DESIGN VS. WEB DESIGN

How Web design is similar to print design.

Good design is good design, no matter the medium. The end product must capture attention, control the eye's movement, convey information and evoke emotion.

Your website design will need a focal point, visual hierarchy, balance, rhythm and flow. If your site has more than one page you'll need consistency across multiple pages. You'll also need a consistent navigation system to keep visitors oriented.

While good design is good design, a Web page does differ from print in significant ways.

How Web design differs from print design.

You can't completely control the way your layouts will appear onscreen. A good print designer knows what she'll get back when she sends her files to the printer. Not so for the Web designer. Any layout created for the screen will look slightly different to each and every person who views it. For this, we can blame both hardware and software. In our color chapter, we discussed the issue of color-shifting on different monitors. Another issue arises from different browsers rendering fonts and spacing differently, causing changes to the intended appearance of layouts. When you design for Web, you design for a moving target.

Your layout is built on an incredible shrinking (or expanding) canvas. Back in the early days of Web design, the great debate was whether to design your page to 640 × 480 pixels or 800 × 600 pixels. Monitor technology was changing, and sites built at 800 × 600 looked great on new monitors, but were cropped and required scrolling on older monitors. And those were the good old days.

Today's websites are as likely to be viewed on a smartphone (starting at around 320 × 480 pixels) as on a 20-inch monitor. Or on a 15-inch laptop screen. Or on a tablet. You can't choose to have your site look good on only one device. It must look good on all devices. You must plan for a high degree of layout flexibility.

Websites are nonlinear. Unlike books, magazines and other multi-page documents, multi-page websites are nonlinear. Rather than move from Chapter 1 to Chapter 2, viewers can jump to any point in a website at any time, and things need to make sense when viewers arrive. They also need a clear path to get back to wherever they came from, or to find their next destination in the site. Design concepts of hierarchy, repetition and unity become crucial to site navigability and usability.

This is a sample headline set in Tangerine Cursive

This is sample body copy set at a font size of .9em. The body copy uses the Open Sans font by Steve Matteson. The Tangerine font in the headline was created by Toshi Omagari. Both are available through a free online font hosting service.

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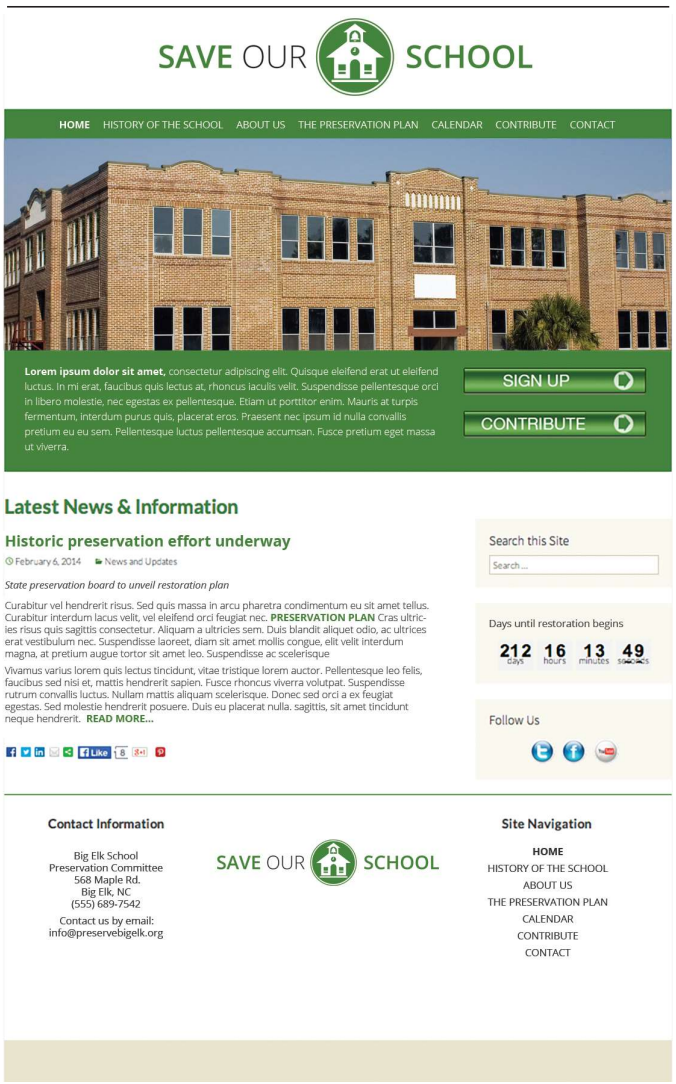
No, you don't need to get your eyes checked. Despite access to the exact same page code and style sheet, each browser renders fonts differently. Look closely at the line breaks, font size and overall height of the copy blocks. These subtle differences are enough to cause a layout to break on one browser or another.



The Web offers opportunities for interaction. This preservation initiative website encourages visitors to get involved through social media, a news feed signup and a contribute button. A countdown creates urgency.

The Web can be a multi-sensory experience. Websites allow for the addition of multimedia components such as animation, video and audio, creating a richer multi-sensory experience. This means entering a whole new world of video and audio formats as well as browser compatibility issues.

The Web is an interactive experience. Early websites were brochure- and book-like: We clicked, we read. In a few short years the Web has evolved into a device that reads you back. As we click, our choices are recorded and come back to us in the form of messages like, "Those who purchased this item also bought…" With a click we can control the "skin" of our online music service. We can add our own words and images to blogs, forums and social media sites. Websites are expected to be interactive and dynamic. A Web designer must create a framework that creates order and organization, despite constantly changing, oft-times user-generated content.

ANATOMY OF A WEB PAGE

While every website is different, there are some standard content areas found on most pages. Some content areas lend themselves well to the placement of certain Web assets or to specific functions. In fact, some types of content placement are considered best practices and make the site more user-friendly. For example, placing a logo in the upper left corner of the header and making that logo link to the home page is considered a best practice. Web page content areas can and should be repeated throughout a site for both visual consistency and ease of use. These content areas include:

Headers. Your header includes the name of your website, with or without additional visuals or type. More often than not, the header spans the top of the screen page, though there is no hard fast rule that this must be the case.

Navigation. Navigation includes the list of buttons or links that take folks to other parts of your site, hence the name. Navigation often sits above or below the header, or in both places when there is more than

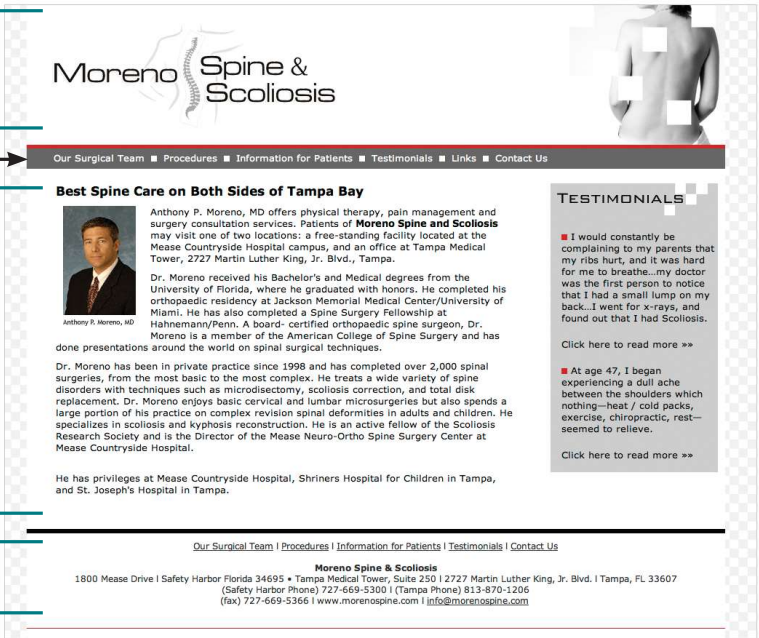
SOME STANDARD WEB PAGE **COMPONENTS**

Header. The header includes the name of the site and often includes a logo or other graphic.

Navigation. Navigation is a set of links that take you to other pages in the site. Navigation should be consistent across all pages.

Content. Content can include everything from copy to multimedia components.

Footer. The footer often includes organization address and contact information, as well as a text version of the site navigation.



Website reproduced by permission of Moreno Spine and Scoliosis.

one set of links. Alternatively, navigation may run down the side of the screen page. Left column navigation is the most common and is sometimes used for secondary navigation. Also consider side navigation if the list of links is too long to fit horizontally across the screen page.

Main content. This is your Web page's prime real estate. The main content area can house a wide variety of content types in an equally wide variety of arrangements. We discuss some best practices for organizing your main content area later in this chapter.

Sidebars. Like sidebars in print layouts, Web sidebars generally sit in a narrow column next to the main content area. They are commonly used to house various widgets (calls-to-action, calendars, forms, you name it) and of course, banner ads.

Footers. Footers typically span the page bottom. They are often set in columns and may include contact information, copyright and legal notices, social media links and bookmarking, social media feeds, calendar feeds and additional navigation links.

Some websites have all these parts. Others only have a few. Feel free to choose and use the content areas that make sense for your content and creative vision.

SEARCH ENGINE **OPTIMIZATION**

When Google introduced the Hummingbird search algorithm (the thing that ranks Web pages) in 2013, a good portion of the World's SEO experts panicked in unison. They feared their years of careful study on the inner workings of page ranking had just been rendered as useful as mudflaps on a turtle.

It turns out that SEO isn't dead, but some things have changed. Here's what you need to know now:

Content is *still* king. Algorithms consider the quality of your page content. If your site only offers basic information your visitors could find anywhere, your site will fail this test. To rank well you must offer something more, or better yet, something different. And you must offer something new on a regular basis. Update. Your. Site.

Keywords still matter. Resarch the right search terminology to use relative to your site topic. Look for language visitors would use, not just professional jargon. Then repeat those words throughout your site using natural phrasing. Balancing SEO with good copywriting requires a little finesse.

Include keywords in your code. Work keywords into the HTML code for your page titles, headings, hyperlinks, alt tags (alternative text for page images or objects) and descriptions. If you're really smart, you'll purchase a domain name that includes your keywords, too.

Make your site mobile-friendly. In Spring 2015, tech experts buzzed about "mobilegeddon" after Google announced another algorithm change penalizing sites for not being mobile friendly. So make your site mobile-friendly. Start by reading the section on repsonsive Web design later in this chapter.

In truth, SEO is complex and algorithms consider more factors than we describe here. If your website must rank well, then consult an SEO expert. Assuming he or she has recovered from the hummingbird panic attack.

THAT'S ALL GREAT. BUT HOW DO I DESIGN ONE?

Because websites are a complex combination of type, visuals and applications, the best sites are the result of the joint efforts of designers, Web developers, writers and Web usability experts. Whether you're designing on your own, editing an existing site or working with a team to build something new, you should understand the design conventions involved in creating a good website. And you should start with a plan.

Website planning.

In any design project, the final product is only as good as the initial planning. Plan a website the way you would plan any project—consider look, feel, message, content and delivery method.

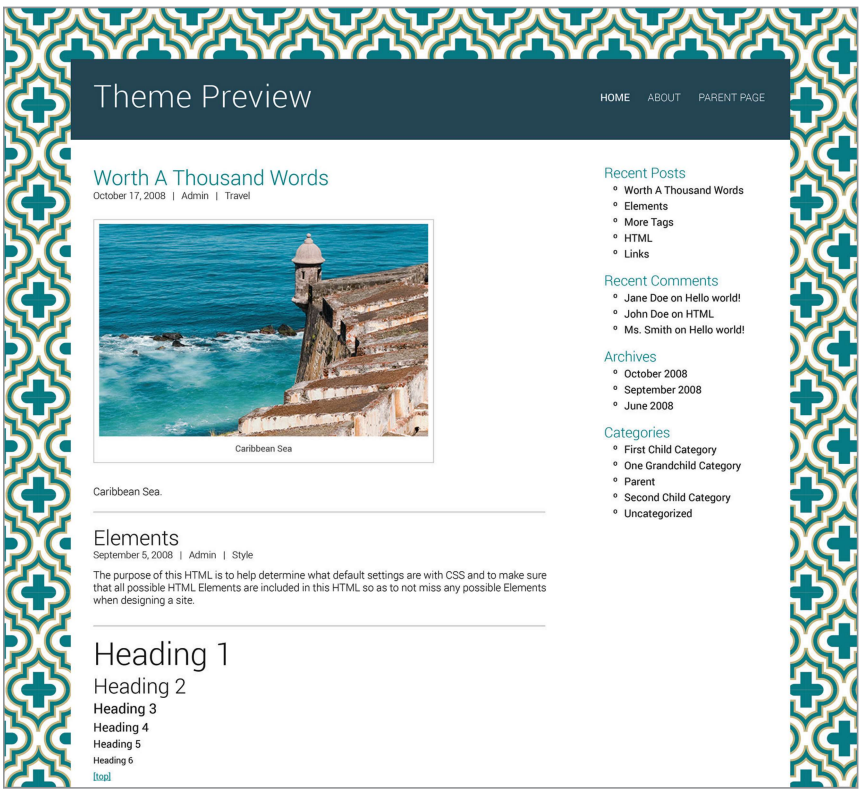
Setting clear objectives is crucial. As noted earlier, the original websites were little more than static online brochures. Now websites must have constantly changing updateable content and interactive components to engage and/or entertain visitors to keep them coming back. You need to know what you want your site to say and do, as well as what your visitors need your site to do. Sometimes those needs require extra software, programming or even specialized server space.

Start your project by writing a creative brief, followed by a content outline. This outline becomes the basis for developing the site map, a type of flowchart that lists all the pages within a site and their interconnections. The outline and site map provide the list of pages that

become the site's navigation. They should also include notes regarding specific page functionality, such as forms, multimedia components, dynamic content areas and any site feature that might require custom coding and the skills of a Web developer.

This is the time to assemble your site assets. Site assets include your copy, logos, photos, video clips, external Web links and even code snippets from other online sources if you plan to use dynamic content on your site.

If it is important that your site be highly ranked by search engines, search engine optimization (SEO) should be considered as part of the copywriting process.



Try before you buy. When searcing for a blog or CMS theme, check out theme previews and demo sites. They provide a sneak peek at font styling, color palettes and layouts available with the theme package. You can find thousands of themes out there for free download or for purchasee. Premium (meaning *not* free) themes not only come with better features but also often provide tech support.

Working with themes & templates.

If you are building a site using a remotely or locally installed CMS, you'll need to select a theme. CMS sites are built using a set of files that generate individual page parts, such as headers, footers and content areas. A theme is a packaged set of files you can install that dictate how the parts will go together and what they will look like once assembled. Most themes are editable to some degree, and many have simple no-code-experience-needed interfaces that let you make changes. At a minimum, themes allow you to change color palettes and font choices, and to replace images with your own.

More advanced themes might allow the addition of plug-ins for added functionality. Some have drag-and-drop interfaces that allow you to reposition content blocks.

If you have good coding skills and your particular installation allows access to the code, you can customize themes any way you choose.

Templates are pre-packaged sets of ready-to-go website files with placeholder content. Swap out the placeholder content for your own, upload to your Web hosting account, and you're good to go.

Templates come in all shapes and sizes, too. But editing them does require coding, and sometimes programming, experience.

There are thousands of theme and template options, some free, some not, some beautiful and functional and others just "meh." When choosing themes and templates, consider your laundry list of necessary content and find one that accommodates all your assets. Don't choose a theme or template designed for a grid of portfolio images when your content is primarily articles and social media feeds. Here are a few other things to consider:

Choose responsive themes and templates. This ensures your site will look great across all viewing devices. We'll explain more about responsive websites a little later in this chapter.

Look for good documentation. Unless you want to spend hours trying to figure out how to get the slider in your theme to work, it's best to find a theme that comes with instructions.

Drag-and-drop themes and built-in style editors are helpful when your knowledge of code is minimal or non-existent.

Consider the navigation. In some ways a site, especially a mobile site, is only as good as its navigation. Try viewing the template preview on different gadgets to see how the navigation behaves.

Don't choose your theme or template on looks alone. Looks are cosmetic and can be changed. It's more important to get a theme or template with the right content areas and functionality you want.

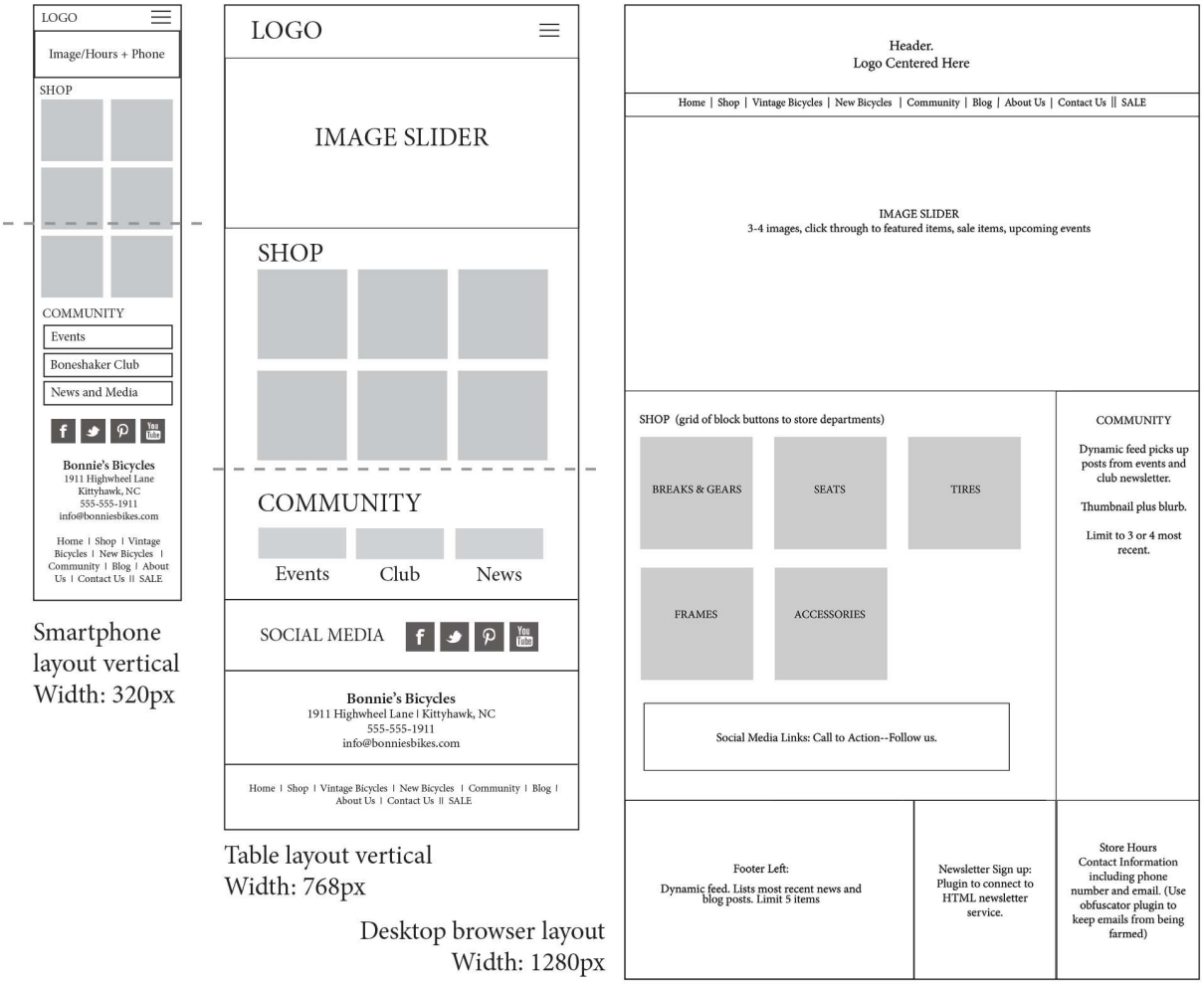
Doing your own thing: Websites from the ground up.

If themes and pre-packaged templates just won't cut it, you can design from scratch. After you've gone through the planning process, written your creative brief, created a site map and assembled your assets, your next move is to do some design sketching. You need to create wireframes.

Wireframes visually organize your content.

Wireframe sketches show the placement and functions of content on each type of page in your site. You may need one sketch or many depending on the number of unique page layouts in your site.

But before you start sketching, there is an additional wrinkle to iron out. We've mentioned (repeatedly) that your site must function well and look good across screen sizes that vary from smartphone to monster monitor. To address this issue, many designers and developers build sites that are "responsive." In terms of layouts, responsive websites adjust to fit the screen of any viewing device. Since one site



adapts to all, there is no need to build separate sites for each screen type. Which is good because we're pretty sure nobody has the time, budget or desire to build the same site four times.

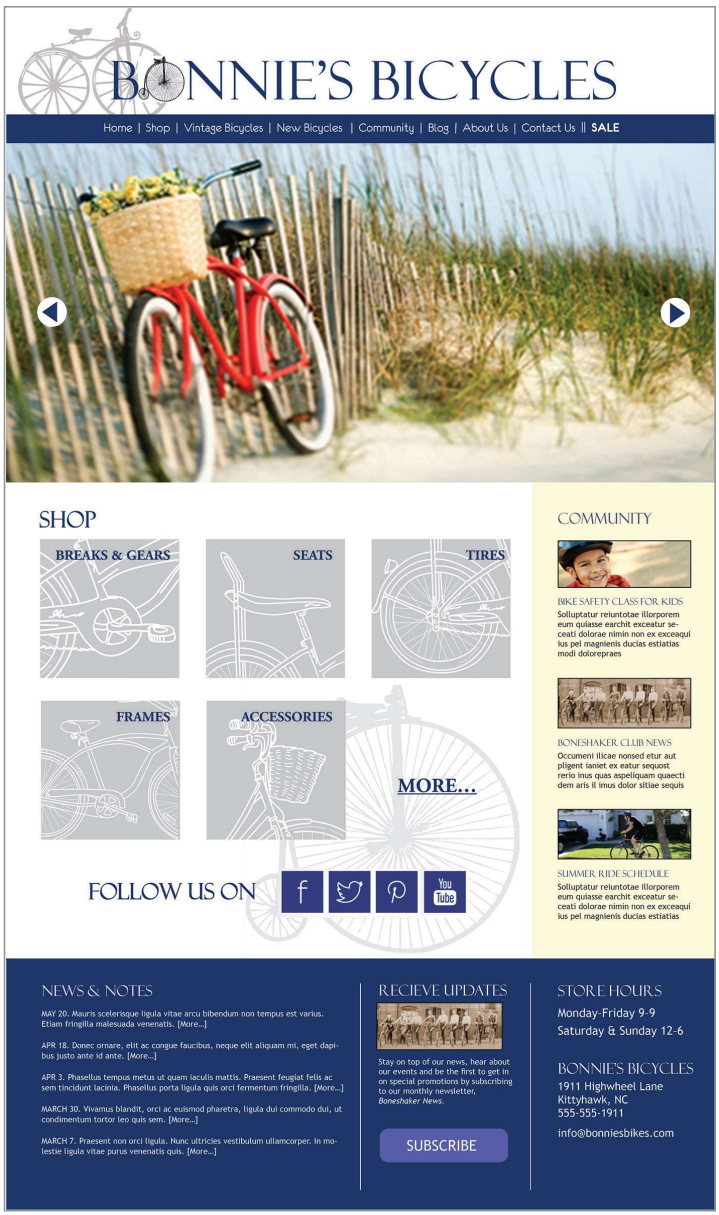
To return to the process of wireframe sketching, responsive design begs the question, "How do you create sketches for a layout that changes?"

Mobile first.

The simplest answer is you need a sketch for each type of screen. These types include smartphone, tablet vertical, tablet horizontal and desktop computer monitor. And while you might be tempted to start by creating the wireframe for a big desktop computer screen, there is serious merit to drawing a wireframe for the smallest screen first.

The mobile first concept was introduced by Luke Wroblewski in 2011. Because mobile phone ownership was on an exponential upswing, Wroblewski counseled the importance of creating equally

Mobile first. To follow the principles of mobile first, whittle your site content to the bare essentials. Then sketch that content to fit your smallest screen size. Create additional wireframes for progressively larger screens, taking advantage of greater space and additional hardware and browser capability. The result is a solid Web expereince across all screen sizes.



Using a grid. Many designers appreciate a 12-column grid, as it converts into 3- or 4-column grids with ease.

positive Web experiences across all screen sizes. In other words, viewing a site on a smartphone should not be a watered-down version of viewing the same site on a desktop computer. Instead of building a big splashy site for the desktop and having to strip it of features to make it work on a small screen, start by designing a solid feature-rich site for the small screen. Next, create designs for your larger screen sizes, adjusting the layout and features to take advantage of the additional space and hardware capabilities. This is known as "progressive enhancement."

Although not all designers embrace mobile first, it is worth consideration. At a minimum, it makes you take a hard look at website goals and proposed content. When your screen space is small, you only have room for the most important content and features. The mobile first approach forces you to deliver messages and provide functionality in the most efficient way possible. And that makes for a positive user experience.

Wireframe part one: Establish a grid.

In the Layouts chapter, we discuss starting a layout by setting up a grid. In a print project, your first gridlines create a box matching the aspect ratio of your final, trimmed layout. But here in Web-land no two screens seem to have the same dimensions. So draw your first gridlines based on standard-size screen widths of your choosing.

The height of your sketch is determined by the vertical space needed for your content. In the past, designers tried to squeeze all content on a page without the need to scroll. Mobile devices changed our browsing behaviors, and now scrolling is less of an issue. So your sketch, and therefore your page, can be as long as you need it to be. Within reason, of course.

Add uniform column gridlines to order and align the different assets on each page. Use the same column grid on all site pages to create a unified, harmonious look. Many Web designers use a 12-column

grid as that number allows for easy conversion to 4-, 3- or 2-column grids. If your design will use a grid of uniform squares or horizontal bands to organize content, add horizontal gridlines as needed.

Wireframe part two: Sketch content areas & assets.

Define the content areas (header, navigation, footer, etc.) with additional gridlines. Show the position of your site content (copy blocks, photos, video clips, etc.) by drawing boxes. Label each box, and notate the functionality of its content. As you sketch, several established best practices and some Web design conventions can help you decide where to place content:

Position your important items higher on the page. Style those items using size and color to set their appropriate level of visibility and utility.

Establish a focal point. Your site needs a big bold something to catch the eye and set the tone for the site. You have many options. Consider using an important photo, a slider, an animation sequence, a creative type treatment or something else entirely. Whatever you choose, place it in a position of importance near the top of the screen.

Create hierarchy. What are your most important site assets? A video testimonial? An important set of instructions? A signup form, purchase button or other call to action? Position your important items higher on the page. Style those items using size and color to set their appropriate level of visibility and utility.

Define relationships among assets on the page. Use continuity (alignment), proximity and similarity to define "what goes with what" on your pages.

Keep navigation "above the fold." In old-fashioned newspaper terminology, "above the fold" is where editors put the important news so folks could see it while the paper was still folded. In Web terms, it refers to the portion of a website that can be seen without scrolling. While smartphones and swiping technology have made scrolling less of a dirty word than it used to be, you still must ensure your site visitor can see how to navigate your site on first view. So keep navigation above the fold, preferably near the top.

Use a logo as a home page link. Place a logo or entity name in the upper left corner of your design. Make this logo serve as a link back to the site's home page.

Patterns in play. The Web has been with us long enough that many graphical user interface "patterns" are self-explanatory. We understand how the tabs, radio buttons, color swatches and image galleries work without having to ask.

Designing the main content area.

Site content can include everything from copy to video clips to dynamically generated infographics. And most content areas include more than one type of content.

Creating text-only pages is fairly straightforward. Reading-copy on the Web can be set in one or more columns, with the number dependent upon page width. Set copy in the most readable font format for the medium (sans serif) and use graduated heading sizes and styles to create hierarchy.

Place primary photos, graphics and video clips near the top of their respective content areas, using the grid structure as a guide. Make sure that none interrupts the flow of reading. Choose quality images. Place captions below images, and remember to make those captions keyword-rich for SEO purposes. Don't forget to add "alt tags" and descriptions to your photos and graphics for accessibility.

Pattern	Possible Uses/Examples	What it looks like
Grid of consistently sized boxes	When several bits of information are of uniform importance. Example: team headshots.	
Rotating feature	A consistently sized container with auto-play or click-to-advance images. Example: rotating banner ads.	
Sliding panels	Multiple variations of a single idea. Example: retail website feature showing "5 ways to wear a sweater."	
Module tabs	Display different aspects of the same product/concept. Example: Product details including dimensions, shipping info and manufacturing materials.	
Accordion	When you have a lot of heterogeneous content and not a lot of space. Content can be grouped under short headings; more than one group can be visible at once. Example: frequently asked questions and answers.	

The interactive nature of websites introduces a whole new layer of complexity to page design. Take, for example, an automotive website that allows you to create an image of your dream car. The core content element of such a page is the basic image of a car. But the page also must include images of the various options the buyer can choose: paint colors, trim packages, interior packages, sound systems, rims, tires, etc. How can you possibly get all that content on a single page without creating chaos?

Interface design. The answer lies in the conventions of interface design, which refers to the design of the user experience—the interaction between the user and the tool to achieve a desired action. When you design interfaces for websites, you are designing a graphical user interface (GUI). The acronym is pronounced "gooey," in case you were wondering.

The best graphical interface designs are simple, intuitive and unobtrusive. Interface design speaks to everything from the size,

Standard interface design conventions or "patterns." You'll recognize these common interface patterns and how you've seen them used. Think about how these patterns and their uses might help you design your Web pages to be user-friendly. What's good for viewers is good for you.

Pull-down and accordion menus. Pull-down and accordion menus can be real space-savers when you have lengthy and complex navigation. However, pull-down menus can be difficult for your visitors to use. Avoid them when you can, and really avoid those with multi-level drill-down.

style and placement of navigation buttons to the best background colors for pop-up windows. While it's beyond our scope to dig deeply into this discipline, we highly recommend additional reading on this topic for those serious about Web design. In the meantime, we can supply a chart of a few standard interface design conventions, or "patterns," to help organize complicated Web content.

Getting GUI. The patterns of interface design help us not only organize content but also address basic usability issues. As you sketch page designs, ask yourself some questions. Is your navigation easy to find? Do the links make sense? When you click past the home page, is it easy to tell where you are in the site? Can you tell how to get back? These are core issues of graphical user interface that apply to all Web page and website designs.

Some tips for creating good GUI include:

» *Make the purpose of each page clear at a glance.* Use simple descriptive headings and copy. Your visitor should never have to ask, "What is this page about?"

» *Keep link names clear and simple.* Don't title a link "The Sum of Our Experience," when "About Us" will do.

» *Make the link name match the title of the corresponding page.* In other words, when you click on "About Us," the page you arrive on should be titled "About Us." This seems like a no-brainer. But you'd be surprised at how often this doesn't happen on websites.

» *Make buttons and links look like buttons and links.* Make the text or the button itself change color when the mouse rolls over it—something to give a clue that your button is a button. Under no circumstances should your visitor have to work to figure out how to get around your site. They won't work. They'll just leave. You can take that fact to the bank.

- *Navigation should be persistent.* Navigation should include the same links in the same style in the same place on each page. That's a unity technique. For responsive sites, consider making the navigation "fixed" to the page. Fixed navigation stays put while the rest of the page scrolls, making the navigation available at all times.
- *Limit the number of navigation links.* The magic maximum number of items in your navigation is seven (plus or minus one or two). Any more and the quantity of links becomes difficult to visually process. If it is essential to have more links, consider using a primary navigation for your main links, and a secondary navigation with links to common pages such as "about us" and "contact us." Another option is to use accordion or pull-down menus. That said…
- *Be wary of pull-down menus.* While space saving, pull-down menus can be difficult for some people to utilize, especially when the pull-down menu has multiple levels. They present even bigger usability issues on mobile sites. Avoid them if you can.
- *Use color to organize and order.* This is especially true if your site is complex.
- *Consider using a breadcrumb trail.* Breadcrumbs help your visitors see where they've been and how to get back.
- *Provide a search box.* For complex sites, a simple search box can be the best tool ever.
- *Include a link to the home page in the navigation menu.* And if your design includes a logo in the header, make the logo link back to the home page.
- *Arrange your navigation items in descending order by use.* Place your navigation items in order of most used to least used, from top to bottom or from left to right in the navigation menu.

Web prototyping.

Once your sketches have made a place for everything and put everything in its place, the next step is to create some sort of full-color rendering. Since traditional renderings made with photo-editing software are static, many designers choose prototyping as a next step. Prototyping software allows the creation of a functional mockup. The mockup shows the layout, but also displays working versions of the site's interactive components. Individual site assets such as photos and video clips are designed with separate software then imported into the prototyping program.

DESIGN FOR MOBILE WEB AND SMARTPHONE APPS

The small size of smartphone screens makes it difficult to see, much less access, most content on traditional websites without excessive zooming and scrolling. In addition, many smartphones have touchscreen technology. It can be nearly impossible to click tiny links with our imprecise fingertips. To address the needs of smartphone browsers, designers are wise to create variations of websites tailored for tiny screens. These are referred to as "mobile sites."

Alternatively, mobile applications, commonly known as "apps" allow access to digital content. Apps are programs downloaded directly to your mobile device. They perform specific functions such as sharing photos or providing easy access to shopping. Some apps have the same capabilties as full-blown websites, but with interfaces geared for tiny screens. Some apps take advantage of capabilities unique to smartphones, such as historic tour apps that use GPS.

Techies debate whether the future of accessing digital content is best accomplished via app or mobile site. Mobile web vs. app aside, there are challenges to designing for the smallest screens. Here are a few interface design best practices for both:

» Simplify—but don't skimp on—content (whittle content to what mobile users need and want).

» Make clickable areas at least 44 × 44 pixels (the size needed for most fingertips).

» Think accessibility. Larger font sizes (readable without zooming) and good contrast are helpful for those with less-than-perfect eyesight. Add extra line-spacing while you're at it.

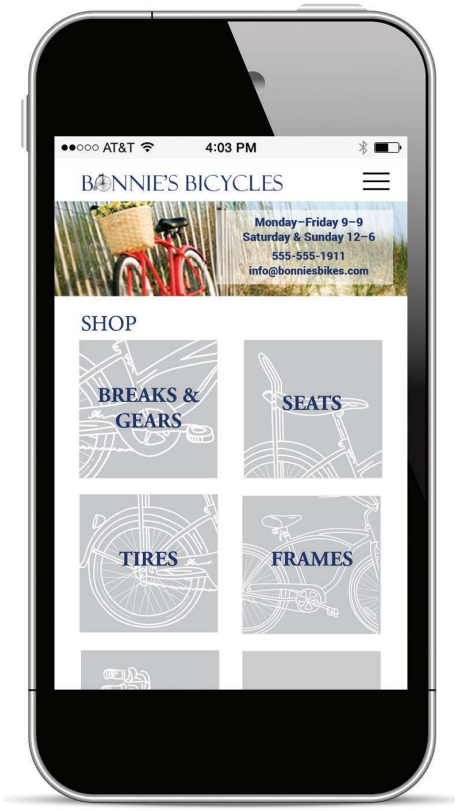
» Use proximity. Place controls close to the content they modify.

» Avoid "hover states" (where boxes and other popups appear on mouseover). Hover states behave badly on smartphone interfaces and may cover up other content on an already tiny screen.

» Use only broadly supported animation and video file formats.

» Strike a balance between optimizing for speed and providing high-quality graphics.

» Mobile sites should provide a link to the main website.



Touch interfaces and tiny screens… Mobile websites and apps have specific design requirements, including minimum sizes for clickable areas. Remember, your fingertip is not as precise as your mouse, and "fat-fingering" links can accidentally send you off to Internet parts unknown.

Another way to test-drive the interactive components of a website is to build a beta site. A beta site is a working version of a website that is hidden from public view. Both beta sites and prototypes allow designers and developers to work out any design issues before a site goes live.

And as responsive Web design becomes the standard, testing a website's interactive functions is not just a nicety, it's a necessity.

RESPONSIVE WEB DESIGN.

According to the Pew Research Center, 64 percent of U.S. adults own a smartphone, and a majority of those people use their smartphones to access the Internet. With such a significant portion of the population viewing sites this way, it's no surprise that designers and developers have moved to responsive Web design.

Responsive websites detect the type of viewing device and load the appropriately formatted site content and configuration. Interestingly, tools and techniques to build responsive Web pages have been with us for years. Designers simply needed to apply those same tools in different ways.

There are three components to responsive Web design: flexible layouts, flexible assets and media queries. Layouts and assets are made flexible by coding. Media queries are strings of code that impact what styling is loaded on what size screen.

How responsive design works.

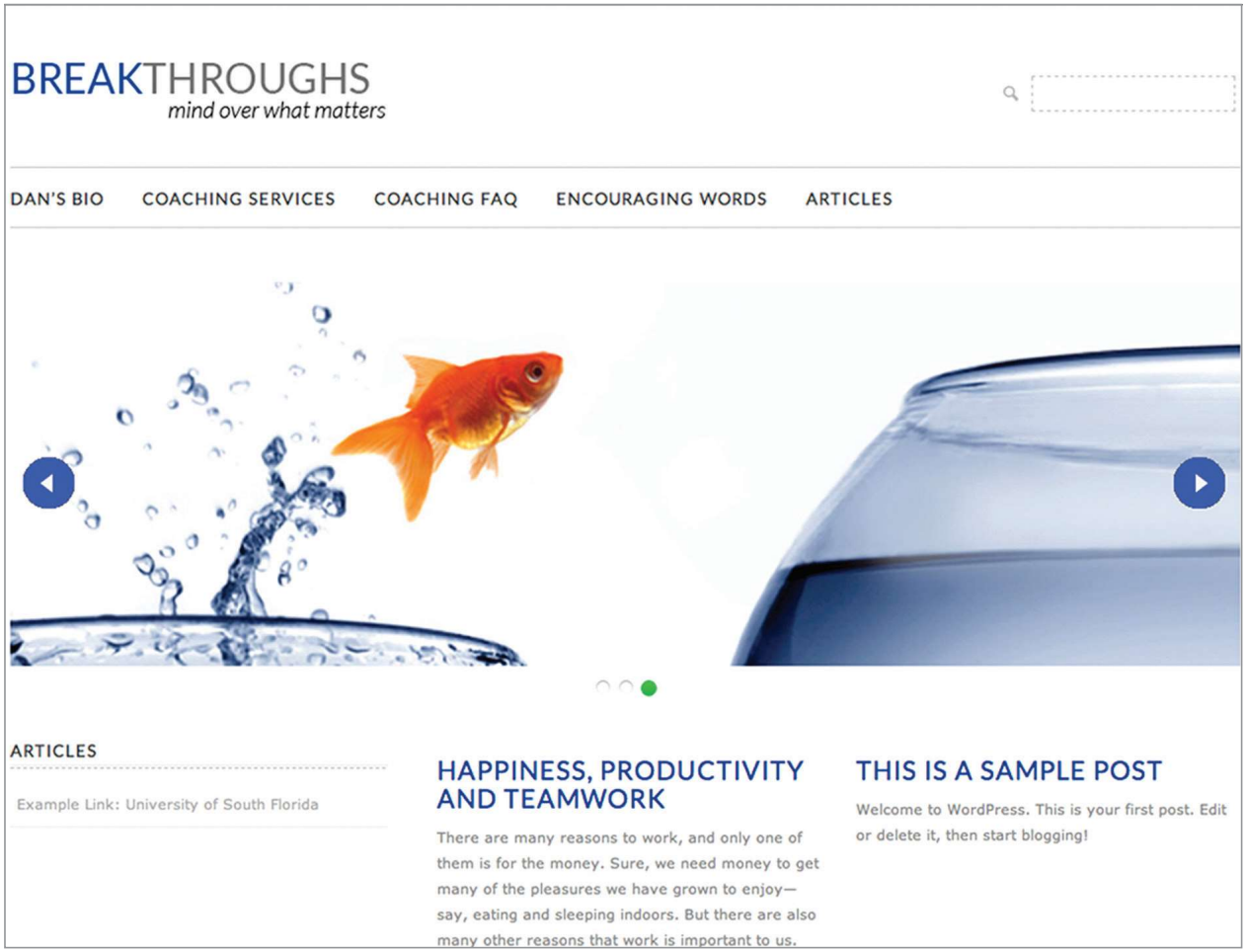
Web design best practices dictate that websites are created and styled via two types of page code: The first type is traditional HTML or a programming language defining the numbers and names of pages in the site along with the relationships among those pages. The second type is a Cascading Style Sheet (CSS), which sets the visual styling, or appearance, of all page components from background pattern to column widths to font colors. Page objects, such as text boxes or site navigation, are created in the page-defining code. Then those same objects are named and their styling is defined in an attached style sheet. A CSS is simply a long list of page objects and their attributes.

```
body {
    background-image:url(images/ginko-bg.
    background-repeat: no-repeat;
}

#content {
    margin-top: 1em;;
    width: 85%;
    margin-left: auto;
    margin-right: auto;
    background-color:#f4eede;
    background-image:url(images/leaves.pn
    background-position: left top;
    background-repeat: no-repeat;
}

h1 {
    padding: 2.7em 0 .1em 2em;
    font-family:"P22 Arts And Crafts Hunt
    font-size: 1.7em;
    text-transform: uppercase;
    color: #105210;
}
```

It's like having your mom tell you what shirt to wear. Web pages are created by HTML or programming language, but the appearance of Web pages is dictated by CSS. See if you can identify the CSS notations in the lower graphic that define and style the elements in the Web graphic at top.



Bend, don't break. Websites are viewed in many different screen sizes so it's important that your design responds accordingly. If it doesn't, your site might break when viewed with different devices. See what happened to this website-in-progress when it was viewed on a tablet?

Flexible layouts. You build flexible layouts by using the CSS to create fluid instead of fixed-width elements. Instead of setting your page width to an inflexible finite size like 960 pixels, you set your page width to be a flexible 100% of your browser. Structural elements such as columns also must be styled as flexible, or the layout will "break" when viewed on a screen deemed too small to fit the design.

Flexible assets. You can style some assets for fluidity with ease; others not so much. Adapt your fonts to fluid layouts by styling them in "ems" or "rems" instead of pixels. An em is a typographic measurement equivalent to the current font size. That current font size is either a browser default size or some other default size specified in the site's CSS. A rem is a "relative" em, meaning it adopts the base size specified by its parent (the code that encloses it). As you can imagine, styling copy at 130% of whatever the default size is would give you a larger font, while styling at 80% would give you a smaller font. Since both measurements are defined as percents of some original default size, both are fluid.

Style photos and videos as percentages to make them fluid. The drawback is that scaling graphics up does little to improve their quality onscreen, especially if they have been optimized. The solution is to create larger graphics than needed. Percentage settings in the style sheet will ensure graphics appear at the correct size onscreen, while the additional pixels available in a larger image will offset any loss of quality if the graphics must expand to fit a larger screen. Keep in mind, however, that optimization is still a must. While most people have relatively high-speed Internet access on their computers, Internet speed on smartphones and other smaller devices might not be so fast. Keeping file sizes, and therefore download times, small remains important.

Media queries. Sometimes, despite your best efforts to create fluid designs, layouts break in one browser or another. Or perhaps there are page components that you want to display on a full computer screen but that you would like to eliminate from your site when viewed on a smartphone. This is where media queries come into play.

A media query is a bit of code that kicks off a short conversation between a browser and your page code on the server. Essentially the browser knocks on the door of the website, and the website asks, "Who are you?" The browser responds with, "I'm browser A, appearing on viewport of x-pixels wide." The website does a quick check to see if there are any special instructions in its code to deal with that browser/screen size combination before it serves up either the standard site or a custom version of the site. The "special instructions" are often a separate version of the CSS written

specifically for different media parameters, or different browsers, that include, exclude or alter specified sections of styling.

Earlier media queries were written with device-specific widths in mind. For example, CSS for a navigation style would be set to change from standard to mobile navigation once the screen size hit 768 pixels, the width of a tablet in the vertical position. However, since screen sizes are all different and new sizes are introduced regularly, your media queries should be device agnostic. Preview your page design with tools that show you screen width. As you shrink your page, watch for design elements to break. Make note of the page width when the break occurred, and add the appropriate design adjustment to your style sheet. Device-agnostic media queries ensure a robust design regardless of screen size.

Advantage: Blog. One advantage blogs have over websites is that their text-heavy content makes them search engine friendly.

Sites you build for yourself or your clients need to function across gadgets and platforms. While you may not have to write this type of code yourself, you may have to find a responsive template, or work with a designer or developer to build one. So, yes, you do need to understand the concepts and the vocabulary.

A WEBSITE ISN'T ALWAYS THE BEST TOOL FOR THE JOB

A good website is the backbone of many businesses and organizations. But if your goal is to self-publish, to build an online network or increase your reach and influence among existing online networks, then a blog or a social media page is a better option.

Blogs. Short for Web log, a blog is an online self-publishing platform. Many blogs are simply personal forums for thoughts or rants. But the business world discovered that blogs have

a place in commerce. The blogosphere includes industry-specific bloggers whose influence rivals (indeed surpasses) that of journalists. This reality is a pro and a con for public information officers (PIOs) managing blogs for their own organizations while vetting media-relations inquiries from other bloggers. It's all part of the new reality of doing business on the Web.

The difference between a blog and a website is that blog content is syndicated. People can subscribe through an RSS (Really Simple Syndication) feed. When a blogger writes a post, the content of the post is automatically delivered straight to the subscriber's computer. Organizational bloggers publish mini articles, news items and even full news releases using RSS. On the flip side, a blogger with a bone to pick can influence a huge number of subscribers quickly through this same system.

Setting up a blog is easy. Keeping one updated is another matter. We recommend you do some research to educate yourself before you launch a blog.

Setting up a blog is easy. You can create an account through one of many online blogging services, or you can download the programs and install them on your own server. (Keeping a blog updated is another matter, so we recommend you do some research and educate yourself before you launch a blog.)

The rules for designing blogs are the same as the rules for designing Web pages. But because blogs are designed to appeal to people with no knowledge of HTML, there are literally thousands of template designs you can choose from. Many of them are free. And if you can't find exactly what you're looking for, templates are easy to tweak. You can change color palettes through CSS. With photo-editing software and FTP access to your server, you can create and upload custom banners of your choice.

Social networking and social media sites. Whether or not you engage in blogging, you likely will supplement website activity with participation in one or more social media sites or social networks. The number and types of these sites have expanded in recent years, and it requires planning and strategy to capitalize on social media activity.

From a design standpoint, social networking and social media sites may or may not have page customization options, such as custom skins (themes). Some may offer access to CSS, which allows you to change fonts, font colors, background images and banners. Generally speaking, there is little actual design involved in working with social media sites. However, you can apply good design practices to any video clips and custom graphics you add to your pages.

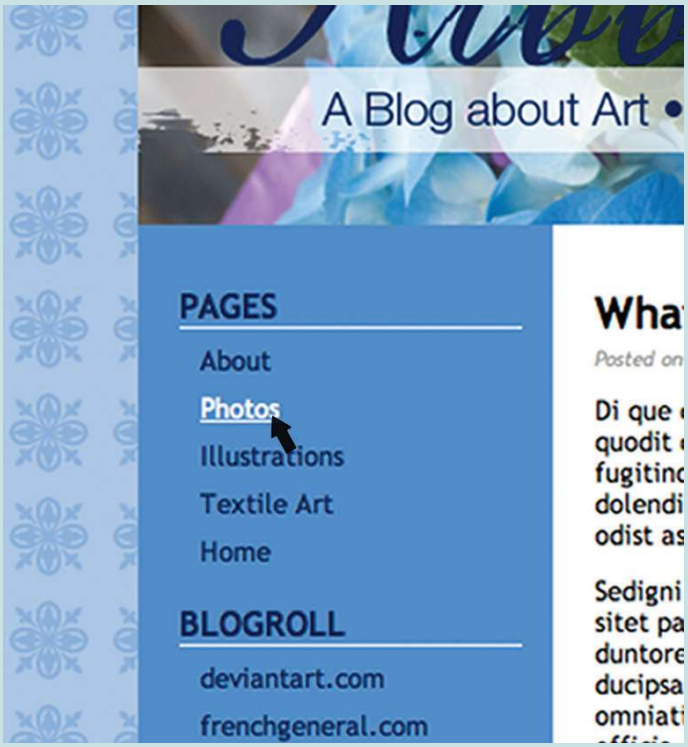
WEB DESIGN & **ACCESSIBILITY**

Despite the amazing multimedia capabilities of the World Wide Web, the primary mode of information delivery is still text, and the interface is largely visual and requires a keyboard and mouse for input.

The Web Content Accessibility Guidelines, published by the Web Accessibility Initiative, offer a road map for making websites available and useful to people with vision, hearing and other physical challenges.

Some tips for making your site accessible include:

- **Do not encase text within graphics.** Screen readers can't read words that are built into graphics. (Incidentally, search engines can't either, so this cuts down on your SEO.)
- **Make sure type is scalable.** Browsers typically allow users to increase type size for easier readability. Think Readers Digest large-print edition. But this only works if the font settings for the Web page are configured to allow it.



Make links reactive. Design your links to physically change on click or mouseover. A color change alone may not be the best option. For those who are colorblind, underlined links are easier to see.

- **Provide text equivalents for all graphics.** Again, screen readers can't read graphics. Most WYSIWYG page editors have a field for you to enter "alt-text," short for alternative text, for any graphics in your layout. Alt-text is like a mini caption for your graphic, viewable only by screen readers and search engines. You also can manually enter alt-text into page HTML. (Tip: When alt-text includes keywords, it also improves SEO.)
- **Underline hyperlinks**. It's good practice to make links change in some way on a mouseover. However, if the only change is a color change, the colorblind may not be able to see it. Underlines make links more obvious. (Indeed, live links are the only time we can endorse underlining type.)
- **Provide large clickable areas.** For those who aren't so steady with a mouse, trying to click on small buttons or hotspots can be challenging. Don't skimp on the size of your clickable areas.
- **Provide closed-captioning for video elements.** Or, alternatively, provide a sign-language version of the video. Likewise, provide a typed transcript option of audio components, and consider providing a reader-service version of content for the visually impaired.

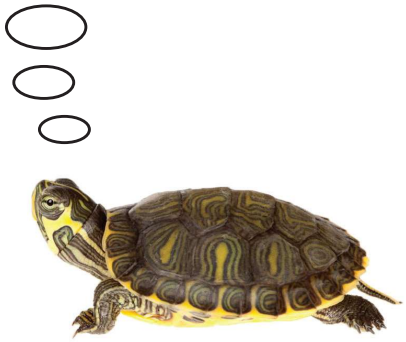
KEEP ON YOUR TOES

Communicating today means communicating digitally, and the changes in digital communication technology seem to come faster every day. Trying to stay on top of the trends and changes is a little like herding cats.

Don't let the technology scare you. Remember, the trend is towards do-it-yourself animation, video and Web pages. To keep on top of tech trends, subscribe to a blog, take a class or try some online tutorials. If you're feeling in over your head, you can always hire a professional to help you with your Web-based project.

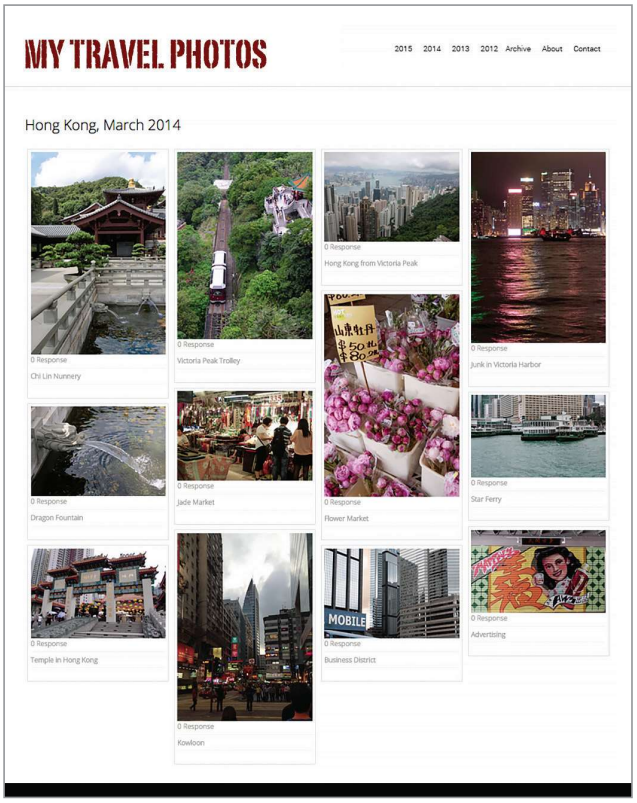
TRY THIS

1. Visit your favorite website. Create a site map and wireframe of the site showing all pages, links and functionality.
2. Locate the optimization function on your photo-editing software. Try using it on different types of graphics such as photos and logos. Save the images using different settings. Compare the results and final file sizes with your original graphics.
3. Find a website that you think is truly awful. Using page-layout software or an image editor, redesign the home page using good design practices and GUI.
4. Find two or three highly complex websites. As you navigate around the sites, be aware of navigational techniques being employed. What works? What doesn't? Is the site responsive? How does the navigation change? Do you feel lost in the site or always know where you are? Why?
5. Visit a large commercial website using a desktop browser. Visit the same site using a tablet and/or a smartphone. Are there different versions of the site for each device? If not, does the website look and function properly on all devices? If there are different versions of the site, how are they similar? How are they different?
6. In mini art school, you thumbnail sketched some ideas for an online personal portfolio. Now, using page-layout or image-editing software, execute a design for a responsive personal portfolio website using the concept of mobile first. Start with a site map. What pages and content will you need? Execute designs for a mobile site home page. Adapt your design to a horizontal tablet, a vertical tablet and a desktop computer. Make sure you account for persistent navigation and good GUI.
7. Visit one or more large commercial websites intended for the general public. Consider ability and accessibility. What has the site designer done to make this site accessible? What do you recommend for improving accessibility?



WHAT'S **TRENDING**

Increased use of mobile devices sparked some interesting Web design trends. Here are a few: single page websites, "big photo" layouts (often accompanied by parallax effects) and photo galleries coded with jQuery Masonry. Can you guess why these designs work on mobile screens?



CHAPTER FOURTEEN

FIT TO PRINT

AN OVERVIEW OF PAPERS & PRINTING

While we appear to be moving in the direction of a paperless society, printing is unlikely to disappear completely. Printed documents have a couple things electronic documents don't: portability and tactile quality. Handheld devices such as smartphones and tablets have made a dent in the portability claims of paper, but nothing yet replicates the *feel* of paper. Because of this added sensory input, paper can strengthen your ability to communicate through design.

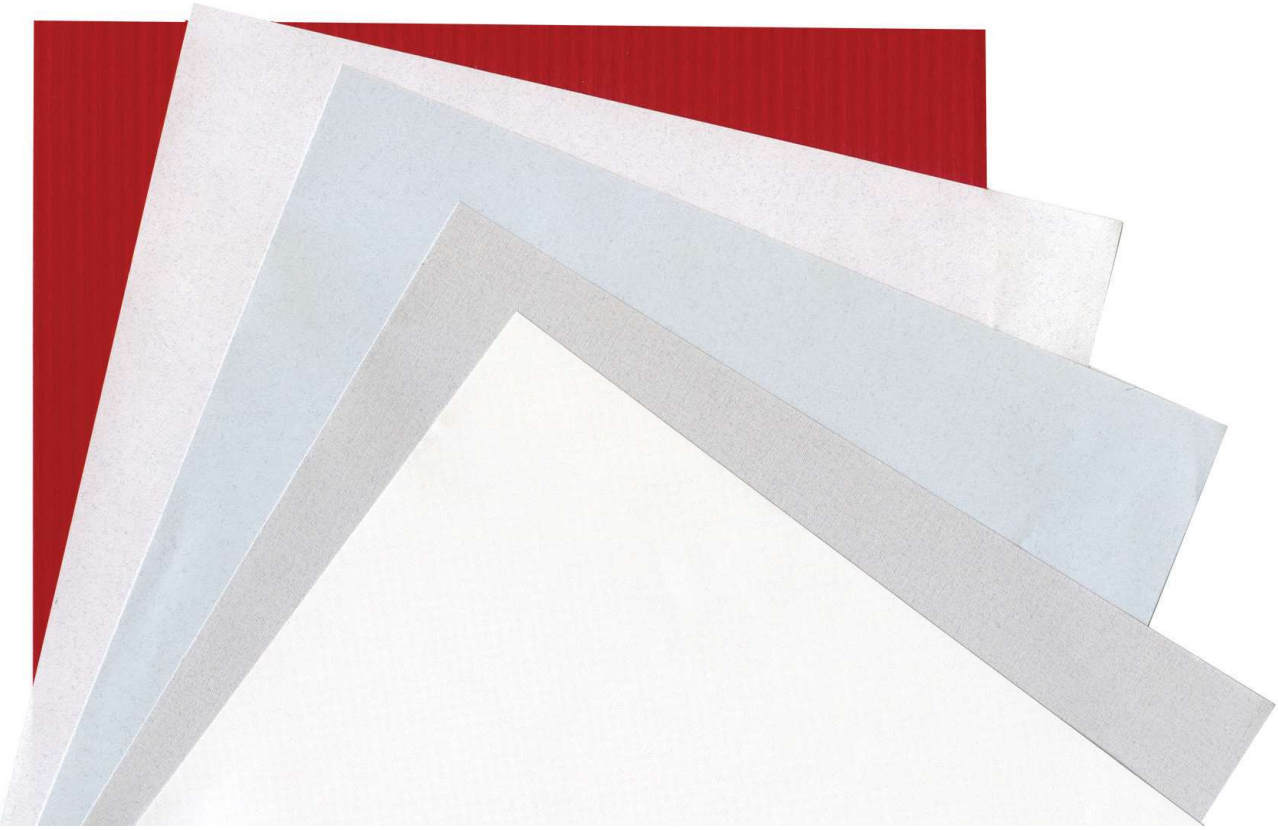
Like choosing the right font or the right color, the right paper selection can communicate volumes in an instant. If you need to send banquet invitations to the most important people in your city, we're thinking an invitation printed on textured linen paper enclosed in a translucent envelope with a matching reply card would be more persuasive than an electronic invitation.

In this chapter we talk about choosing papers and printers, as well as getting your print job done right from estimate through delivery.

Paper communicates. Paper offers a tactile experience that electronic documents can't replicate.

PLAN AHEAD FOR PRINTING: CHOOSING PAPER

Even though printing and distribution occur at the end of the design process, paper selection and output decisions happen at the beginning.



Deciding what paper and which printing method hinge on three things: how you want the finished piece to look and feel, the communication job the finished piece has to do and the size of your budget for accomplishing both.

Getting the look & feel with paper.

Paper is sexy. It comes in varieties of colors, weights and textures. Slick glossy paper might suggest a modern forward-thinking document. Thicker uncoated (not glossy) paper might imply a document of greater substance or importance. A heavily textured paper might lend the document a rustic quality. There are papers with pearly finishes, printed patterns, built-in textures and even flecks of flower petals.

To aid the paper selection process, paper manufacturers produce swatch books that include paper samples. Swatch books are free for the asking from paper distributors or manufacturers. These folks are only too happy to share what they know with you in the hope you'll "spec" or specify their papers for your printing projects.

To aid the paper selection process, paper manufacturers produce swatch books that include paper samples. Swatch books are free for the asking from paper distributors or manufacturers.

But you ought to bring yourself up to speed on the most common paper varieties. Basically, there are three categories of paper: coated, uncoated and specialty. Within each of those categories lies tremendous selection in terms of paper finish, use and price.

Choosing the right paper for the right task.

For choosing paper, functionality is as important as appearance. You can't, for example, make a pocket folder out of paper intended for a copy machine. Copy paper simply doesn't have the weight and strength to make a functional folder. Weight is just one of many paper properties you must consider in your selection process.

Paper properties also impact the way ink behaves on the paper's surface. For example, uncoated sheets absorb ink, which can cause fine lines, such as the thin strokes on modern fonts, to appear slightly soft and even a little blurry. Depending on the paper's level of absorbency, photographs and illustrations may appear duller when printed on uncoated sheets. Color and brightness of the underlying paper influence photo and illustration color as well. Photo and illustration colors are truest and most vibrant when printed on the brightest whitest papers.

PAPER TYPES, FINISHES & BEST USES

Paper	Finishes	Uses	Price
Coated	Gloss, Dull, Matte, Silk	Magazines, brochures, flyers, posters, annual reports, pocket folders, direct mail. Anything where color photos need to "pop." Tends to be less expensive than uncoated or specialty sheets.	$–$$$$
Uncoated: • Text • Writing • Cover	Smooth, Supersmooth, Vellum, Laid, Linen, Felt	Brochures, letterhead, business cards, invitations, annual reports, pocket folders. Good for high-end projects where tactile quality adds to project.	$$–$$$$
Specialty		Invitations, brochures, packaging, pocket folders, covers. Some papers for specific uses: safety paper, carbonless, etc.	$$–$$$$

Again, a swatch book is helpful when looking for information on paper properties. Swatch books usually indicate a paper's properties as well as compatibility with laser and inkjet printers. Because it can be difficult for designers to guess how inks will appear printed on particular papers, many swatch books include print samples. These are often drop-dead gorgeous designs demonstrating how ink and other finishing treatments behave on a paper product.

Paper varies across a number of qualities, such as opacity (see-through-ness) and smoothness (tactile quality). You need to understand how these properties impact the printing process before you can choose the right paper for the job.

Being green is easier than it used to be.

As a print designer, your paper and printing choices directly impact the environment. And you have cause for concern. Traditional

PAPER PROPERTIES

Paper Property	What it is	Why it's important
Opacity	The degree to which the paper is see-through.	If you need to print a sheet front and back, as in magazines and newsletters, you need a more opaque sheet.
Grain	The natural line-up of paper fibers as a result of the paper-making process.	Paper folds and tears more easily with the grain, so when you design folds and perforated tear-off cards, design with the grain.
Brightness/whiteness	Brightness is the amount of light reflected by the paper's surface; whiteness is the shade of white: warm, balanced or cool.	Colors print best on brighter papers. But the brighter/whiter the paper, the more expensive it is. When printing documents with pictures of people, choose warmer whites. For landscapes, choose cooler whites.
Weight	In the United States, a paper's weight is equal to the weight of 500 sheets in a specific size, listed in pounds. Paper weight influences stability, rigidity and often opacity.	Weight impacts the structure of the final document. If you don't choose the right paper weight, your brochure may flop over in a rack, or your direct mail piece may be mangled by post office equipment or, worse, be rejected or require additional postage.
Formation	The overall distribution of fiber throughout a paper sheet.	Good quality sheets have even fiber distribution. Poorer quality sheets have uneven fiber distribution. Uneven distribution results in uneven ink absorption, which means printing that's less crisp than it could be.
Smoothness	The tactile quality of the paper, sometimes referred to as "tooth."	The level of paper smoothness imparts character. It also impacts the way ink lies on the paper.

GO GREEN

Looking for environmentally friendly papers? Consult swatch books and ask your printer about options.

You also can find information about environmentally friendly papers and paper-making on these Web sites:

Forestry Stewardship Council
http://www.fsc.org/

Sustainable Forestry Initiative
http://www.sfiprogram.org/

Green Seal
http://www.greenseal.org/

papermaking and printing processes are not exactly eco-friendly. Aside from promoting deforestation, the methods for making paper and subsequently printing on it are energy-intensive, water-intensive and use caustic chemicals like bleach and petroleum-based inks. Printed paper often ends up in landfills.

For years, the go-to solution for environmentally concerned designers was recycled paper. Unfortunately, recycled paper was not exactly high-end stuff. Designers chose it for its green message, not because it was a quality medium.

In recent years, the quality of recycled papers has improved. Designers no longer have to sacrifice quality when they choose to use recycled. Nor is recycled paper the only option. Papers made from other sustainable materials such as bamboo and hemp are on the market, as are soy-based inks.

Paper manufacturers are also stepping up to the plate to clean up their processes. Some have stopped harvesting trees from virgin forests. Others have switched to nonchlorine bleach and other less-harmful chemicals. Manufacturers are making efforts to reduce energy and water usage.

Is printing on paper still an environmentally dirty business? Yep. But you have options. Educate yourself. Look for printers and papers that have environmentally friendly certifications such as FSC (Forest Stewardship Council), SFI (Sustainable Forestry Initiative), Green Seal and others. Do some research. Ask your local printer. Don't be shy about making inquiries.

Keeping it within budget.

Paper and ink are typically the most expensive parts of producing a printed piece. So budget is often the single most important criterion in the print decision-making process. Available budget dictates whether your paper will be an economy or premium sheet. Budget also dictates whether you'll print the job in-house or hire a commercial printer. A larger budget allows for printing extras such as four-color printing, specialty-printing processes like holographic (3D) and stochastic printing (cool use of dots to replicate images) or even finishing touches such as perforating, die-cutting, foil stamping or embossing.

While you're drooling over the paper possibilities for your design, you also need to be thinking about the kind of printing process best suited to your design.

TYPES OF PRINTING & PRINTERS

The quality of your finished printed design is not the only criterion for choosing a printer. There is also budget to consider, not to mention deadlines, timing and turnaround. As Rebecca says: "Speed, quality, price. Pick any two."

Printing in-house.

When you need it fast, have little or no budget and need relatively small quantities, in-house printing might be fine. You can use whatever software you have available, and font issues are less likely to occur.

But there are significant drawbacks. You'll need to know what paper sizes your printer can accommodates (usually letter, or legal, and sometimes ledger) and design within these parameters.

Unless you own a printing device capable of printing to the edge of paper (and most people don't), your design cannot bleed. Most printers have a built-in margin of approximately ¼ inch on the top and sides and ½ inch on the bottom. Anything you put outside the live area too close to the paper's edge won't reproduce.

Why won't my design print with a bleed? Most personal printers cannot print ink to the edge of the paper. If you are designing a piece to be printed in-house, build a border into the design. If you don't, you'll get one anyway, and you may be unhappy with the results.

You also can expect limited paper options. You may be restricted to inkjet or laser printer paper depending on your specific printer.

Printing documents designed to fold, such as newsletters and brochures, is painful to do in-house. When you take such projects to a commercial printer, the printer's prepress team manages page impositioning, that is, re-positioning pages so they will print front to back in the proper order. When you print in-house, you have to do this yourself. And getting text to line up properly and space evenly around folds is no easy task. Plus, even if you do manage alignments, uh, how many of those things are now sitting on the conference room table waiting for a folding party?

As a final insult, when you print in-house, don't expect any consistency with color. You can't assume your onscreen color will match your printer's output.

If you plan to print in-house, you need to design accordingly from the start.

Quick printers.

Surprisingly, depending on the quality of the quick printer, you may find printing with a quick printer as limiting as trying to print in-house. Nevertheless, quick printers have more paper choices, can print bleeds and offer a few more binding and finishing options.

Offset printers offer the greatest flexibility. If your job is 500 pieces or more, commercial/offset printers can print and assemble almost anything you throw at them.

Commercial/offset.

Offset printers offer flexibility. If your job is 500 pieces or more, commercial/offset printers can print and assemble almost anything you throw at them. They can print on a wide variety of paper sizes and offer a full range of paper stock. They handle bleeds, impositioning, folding, collating, some types of binding and even address labeling.

Offset printers also offer services such as die cutting (perforations, cut-out windows, pocket folders), embossing and foil stamping, either in-house or through subcontractors.

You can expect commercial/offset printers to produce matched and process colors faithfully to swatches, such as PANTONE® solid coated or process coated chip sets. Remember, however, that the color of your design as seen on your desktop screen will not match print output unless your computer and monitor are calibrated to your printer's.

It is important to note that with offset printing, the greater the print run, the lower the printing cost per piece. All the expense in printing is in the first run, meaning the setup. The cost of additional copies is negligible. For example, an initial print run of 500 pieces for a full-color flyer might cost $1,000. To print 1,000 of the same flyer might cost only $1,050. That's double the quantity for another $50.

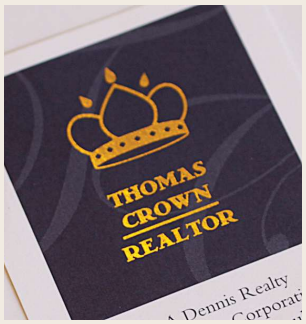
You save money per piece by printing the greatest number you can use.

Web offset.

Once upon a time in graphic design, "web" referred to a particular kind of offset printing press, not the World Wide Web. The time to use web offset printing services is when you need to print a very large run,

FOUR REALLY NEAT **PAPER TREATMENTS**

Ink is not the only thing printers can put on paper. There are a number of after-printing finishes and treatments you can apply to make your finished piece special. Here are four of the most common:



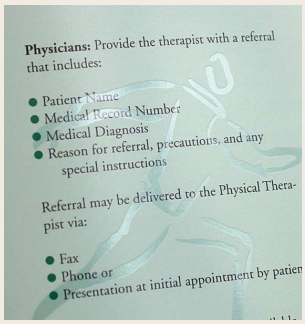
Foil stamping

Foil stamping involves applying a thin layer of shiny metallic foil to parts of your design. Foil comes in different shades from copper to silver to gold.

The effect is rich and becomes even richer when foil is applied with an emboss.

Embossing

To create an emboss, printers press a metal die into the paper to pop up a pattern on the surface of the paper. A raised pattern is called an "emboss" while a recessed pattern is called a "deboss." This technique can be paired with ink or foil stamping. If no ink or foil is used, the technique is called a "blind" emboss.



Varnishing

Varnish is a clear coat applied to parts of a layout (spot varnish) or to the whole page (flood varnish). Applied on press like ink, varnish provides a protective coat to the finished piece. Since it comes in glossy and dull finishes, it also can be used to create two-tone shiny and dull effects.

Die cutting

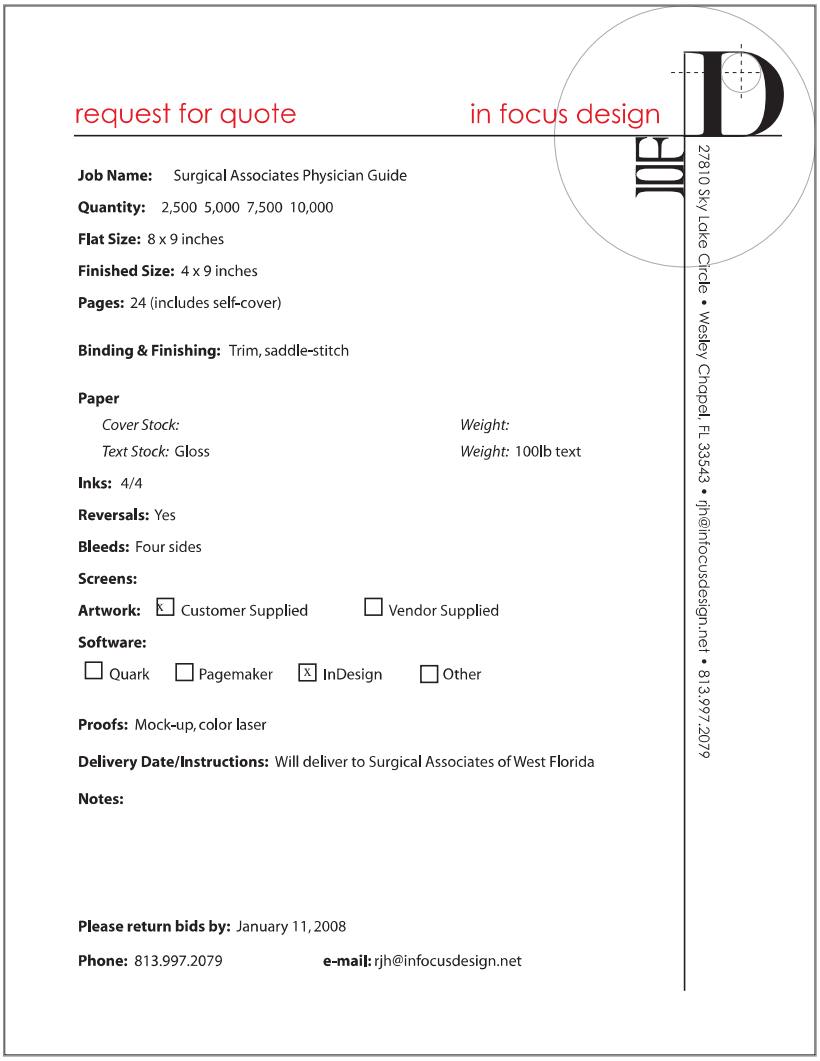
Die cutting is any paper cutting that is not strictly straight across trimming. Die cutting is used to create everything from rounded corners on business cards to the pockets on pocket folders. It also is used to create the perforations on tear-off cards.

10,000–20,000 pieces or more. Documents typically printed by web offset printers include newspapers, magazines, catalogs and books.

The biggest difference between standard offset and web offset printing is in the paper. Web offset utilizes extremely large rolls of paper as opposed to cut sheets used in traditional offset.

Digital printing.

Digital printing has gained in popularity in recent years. While offset printing uses traditional ink, digital printing uses toner and is closer to



request for quote

in focus design

Job Name: Surgical Associates Physician Guide

Quantity: 2,500 5,000 7,500 10,000

Flat Size: 8 x 9 inches

Finished Size: 4 x 9 inches

Pages: 24 (includes self-cover)

Binding & Finishing: Trim, saddle-stitch

Paper

Cover Stock: *Weight:*

Text Stock: Gloss *Weight:* 100lb text

Inks: 4/4

Reversals: Yes

Bleeds: Four sides

Screens:

Artwork: ☒ Customer Supplied ☐ Vendor Supplied

Software:

☐ Quark ☐ Pagemaker ☒ InDesign ☐ Other

Proofs: Mock-up, color laser

Delivery Date/Instructions: Will deliver to Surgical Associates of West Florida

Notes:

Please return bids by: January 11, 2008

Phone: 813.997.2079 **e-mail:** rjh@infocusdesign.net

JOE D

27810 Sky Lake Circle • Wesley Chapel, FL 33543 • rjh@infocusdesign.net • 813.997.2079

RFQ. Use a Request for Quote form to get accurate prices from your printer.

the processes of color laser printing or color photocopying.

The quality of digital printing has improved to the point where it approaches, and in some cases rivals, that of offset printing. Price-wise, for small print runs of fewer than 500 pieces, digital printing can be cost-effective. But, unlike offset printing, there is no price break for greater quantities. If 500 pieces cost $500, then printing 1,000 pieces will cost $1,000. Digital printing is best reserved for small press runs.

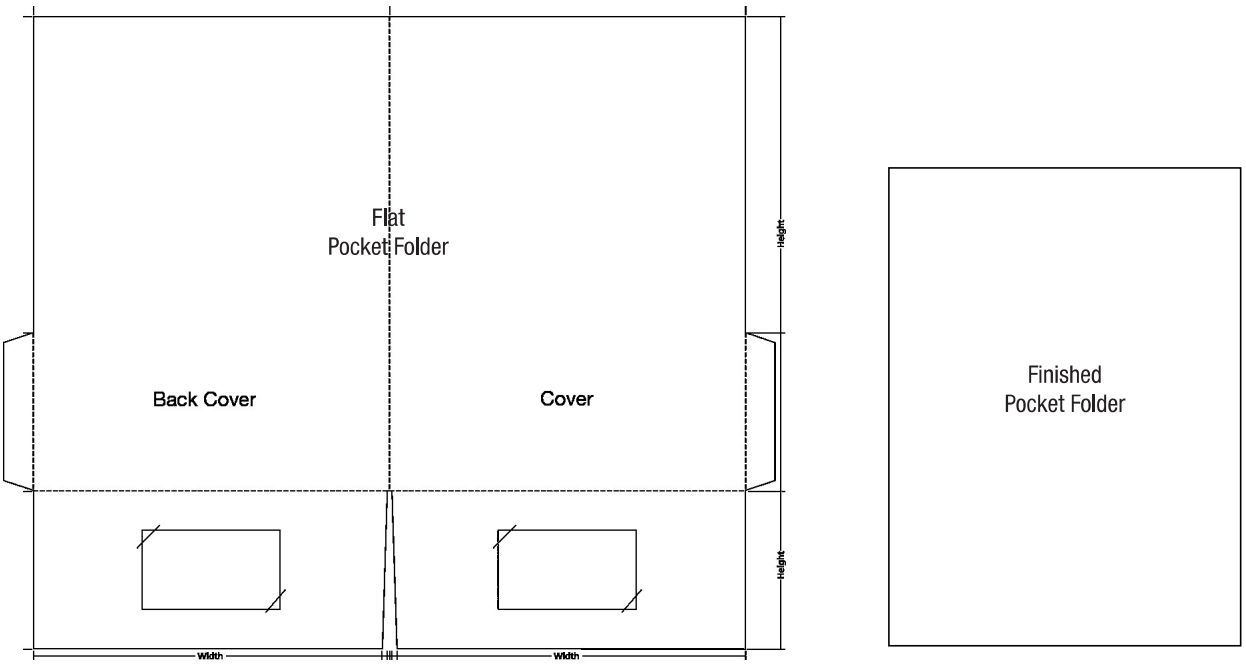
One compelling reason to use digital printing is its ability to output variable data printing (VDP). Think of VDP as a mail merge on steroids. Variable data printing allows a printer to take a database of names, images and other information specific to a recipient, and print customized pieces on the fly.

For example, say a pet store wants to send out a sale-promoting postcard to each of its customers. The pet store provides a database of customer names, addresses, pet names and breeds. The postcard is designed with placeholders for customer name, pet name and picture of the breed. During printing, specific customer information is fed into the appropriate placeholder. As each printed piece comes off the press, then, it has been tailored to one particular customer.

Whatever your grand vision for your design, to determine whether or not you have the budget to match it, get an estimate. Get several estimates.

GET A PRINTING ESTIMATE

Some organizations actually require estimates from a minimum of three different printers before awarding the job to one. Even so, most working designers have relationships with a variety of commercial printers and so can predict which printing outfits fit the bill for which



Flat vs. finished size. The size of a flat versus a finished print piece can differ significantly. Printers order paper based on the flat size so be sure to include this measurement in your RFQ.

jobs, which have the most to least competitive pricing and which are accommodating and appreciative of your business. Newbie designers, however, really ought to get competitive estimates for comparison. Furthermore, as in all things, the cheapest estimate is not always the best choice.

To provide the best most accurate estimates, printers need details and particulars about the printing job. You need to gather some information:

» **Quantity.** How many pieces do you need to print? It's a good idea to include a range of quantities on your request for estimate—for example, 500, 1,000 and 1,500. You might even ask your printer where the price break starts on quantity, if any. Remember, while overall budget outlay is important to consider, you also need to consider price per piece.

» **Flat and finished sizes.** These are the dimensions of the document before assembly and the size of the finished document when fully assembled. For example, the flat dimensions of a tri-fold brochure might be 9 × 12 inches, and the finished size after folding might be 4 × 9 inches.

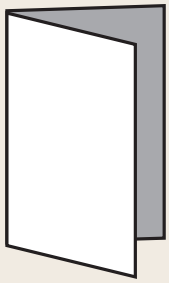
» **Number of pages.** With a brochure, specify number of panels. For larger documents like newsletters or annual reports, a page count is required. Because of the way printers print multiple-page documents, all printed pieces have page counts divisible by four. That requires a little forethought. If your cover design prints on the same paper stock as the inside pages of the design, then include

COMMON PAPER **FOLDS**

Folding makes a larger sheet of paper easier to manage. This lets you pack a lot of information in a small portable package.

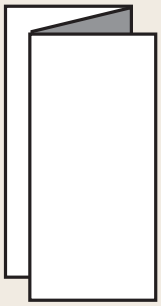
Here are some examples of common types of folds used for posters, brochures and other printed material. Since these are common, they tend to be fairly cost-effective when created in standard sizes.

If you really want to make an impact with a printed piece, consider an out-of-the-ordinary shape with an interesting fold. Be sure to consult with your printer first. For the most part, printers can print almost anything you come up with. However, they may have suggestions regarding paper, paper sizes and cost savings.

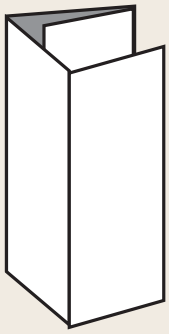


Single Fold

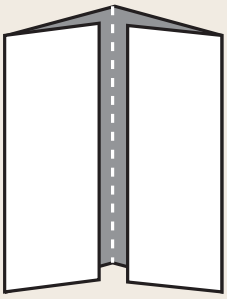
Brochure/Letter Fold



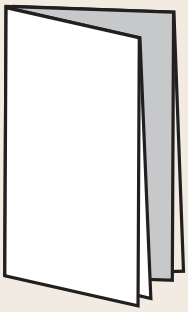
Accordion Fold



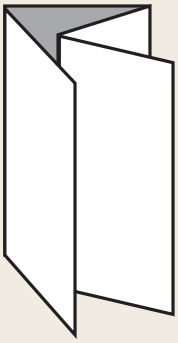
Rolling Fold



Gate Fold



French Fold



Double Parallel Fold

the front, back and two inside covers in your page count. If your covers print on different paper, you'll need a separate estimate for the cover, too.

» **Choice of paper and weight.** This can be very specific if you are choosing your paper from a swatch book, for example "Neenah Classic Columns 100lb cover, chili pepper red." Or it may be less specific, such as "100lb gloss text cool white." When you don't

specify a paper by name, your printer may spec your job on a "house sheet" that meets your criteria. House sheets or house papers are those that the printer keeps in stock and tend to be serviceable if generic. House sheets save money if paper quality is not an issue for your project.

» **Number of inks.** The notation for indicating the number of inks looks like a fraction. The top number indicates the number of inks required on one side of the paper, and the bottom number indicates the number of inks required on the other side. A document that prints full-color front and back would be noted as 4/4—four-color process on both sides—and pronounced as "four over four." A two-color document would be indicated as 2/2 along with a notation on which inks to use. Your estimate request also should note wether the project requires any varnishes—coatings that add shine and/or protection. Varnishes may cover the entire paper surface (flood varnish) or just specific areas such as photographs (spot varnish).

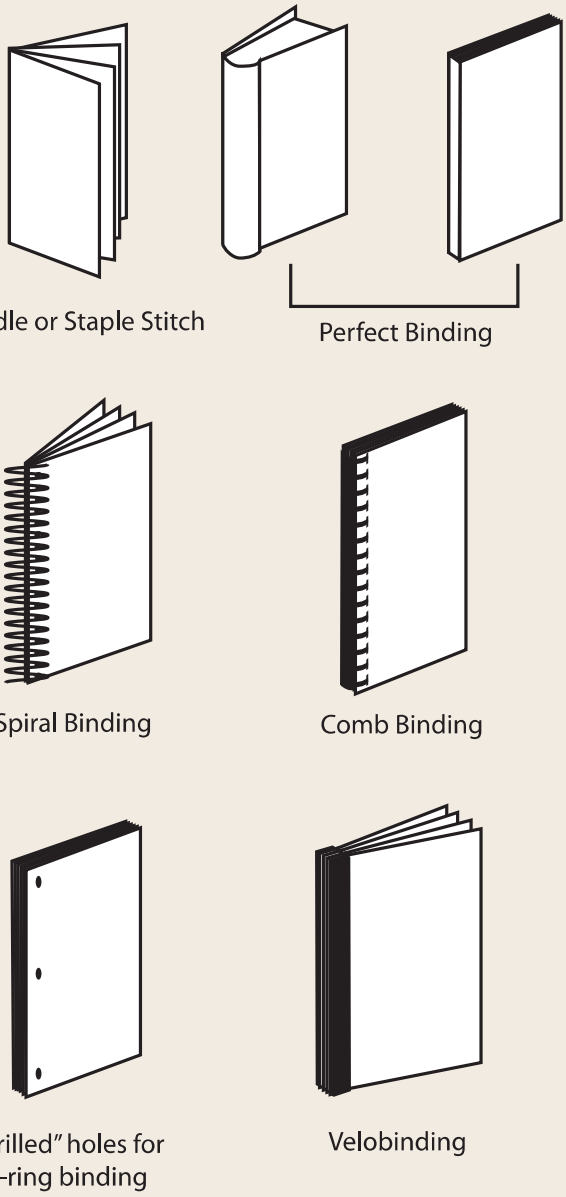
» **Bleeds.** Does the design bleed to the edge of the paper? Yes or no, and on how many sides of the page?

» **Binding and finishing.** Beyond putting ink on the paper, make note of anything the printer must do to or with the paper in order to achieve your design. This includes folds, binding, die cutting (including slots for business cards, holders for media storage or promotional items, perforations for tear-offs and pocket-folder pockets), foil stamping, embossing, debossing, putting sheets into pads, etc.

COMMON **BINDING** TYPES

Binding style is determined by a variety of factors: budget, presentation quality, the need to update the document and the needs of the document's end user.

Here are some of the more common binding types.



» **Delivery date.** At any given time, a printer may have several jobs in production. To help your printer meet your schedule and the schedules of others, be specific about your due date.

» **Delivery instructions.** What happens to the completed job? Will it be delivered to you, the boss or the client? Are you sending it to a mail house for distribution? Do you need the job shipped to multiple locations? Make sure your printer knows what to do when the printing job is complete.

When proofreading, pay particular attention to headlines, cutlines and other non-body type. Nothing is worse than a big fat error in a big bold headline.

PREPARE YOUR DOCUMENT FOR PRINTING

Of course you want to do everything possible to make sure your project gets done right and on time and on budget. Here are some tips for getting there:

Give the document a thorough proofread.

Yes, someone does have to proofread. Additionally, pay particular attention to headlines, cutlines and other non-body type. When people proofread, they tend to focus on body copy and often skim over potential typos elsewhere. Nothing is worse than a big fat error in a big bold headline.

Beyond someone taking responsibility for typos, give your design a second (and third) look before it goes to press. Pay attention to typographic consistency. Do you accidentally change font styles, sizes or colors anywhere? Are there elements that don't line up, especially across facing pages? Are all images or visuals treated consistently, such as outlining?

A good way to look for design errors is to print a draft copy of each page, put it all on the floor and look at each page upside-down. When reading the copy doesn't distract you, potential design errors are easier to spot.

If your design includes binding, folding, die cutting or other specialized techniques, create a full-blown working mockup to make sure things line up properly and that your measurements are accurate.

With certain types of binding, especially perfect and spiral bindings, double-check the gutters. You don't want copy that folks need to read to fall too far into the gutter, be swallowed up by the binding or get perforated to make room for spiral or comb bindings.

Once you're happy with the shape of the document, make sure that the boss or client gets a final chance to approve the work before it goes to print.

Other document details.

In addition to correcting any design typos, you'll need to check a few more things:

- **Image resolutions.** Make sure all your images are high resolution and in the proper format.
- **Spot or process?** Make sure your color setup is appropriate for your final output (change spot colors to process or process colors to spot depending on your needs).
- **Set up document bleeds.** If you're printing anywhere other than in-house, and your design bleeds to the edge of the paper, you'll need to go through your document and extend your bleeds 1/8 inch beyond the document edge. When printers print a document with a bleed, they print the design on a bigger piece of paper and trim it down to size. If your design doesn't extend the extra 1/8 inch, you risk ending up with white edges around your design where the bleed should have been.
- **Clean up your pasteboard.** Remove any extra/unused graphics and text boxes from your file's pasteboard. Nonessential materials cluttering up the document just add unnecessary file size. This can cause problems with commercial printing processes.
- **Clean up your swatch palettes.** For the same reason as above, remove unused colors from your list of available swatches, too.

Do your own flight check.

When you give your design files to your printer of choice, the first thing she or he does is a flight check, a quick test to make sure you've included all the parts necessary for printing. If the flight check turns up missing parts, you'll get a call. Tracking down missing parts and having to correct design errors at this stage costs time and money. So wouldn't it be smart to run your own flight check ahead of time?

Professional-grade page layout applications include flight check options. When you run them, they check for missing fonts, missing graphics and graphics in the wrong format or the wrong color space. The program dialog boxes typically allow you to correct any errors on the spot.

WHAT TO TAKE TO THE **PRINTER**

To ensure your final print product matches your original vision, give the following items to your printer:

- A copy of your document in its native format
- A copy of each visual used in your layout
- A copy of each font used in your layout
- A hardcopy of your document, preferably mocked-up
- A note with your contact information

Alternatively, send your printer a press-quality PDF file. If you choose this option, ask for PDF specifications and create your file accordingly.

The final beauty of the flight check process is that it allows you to package your document to take to the printer. The packaging process creates a copy of your document, including all fonts and graphics.

WHAT TO GIVE THE PRINTER: A CHECKLIST

To print your project, any printer will require the following files:

- **Your layout.** Include a complete copy of your design document in the software format in which you created it. And, yes, that would be professional-grade design software.
- **All images used.** Include a copy of every visual or image in your design, at high resolution, saved at the size required for the design and in the proper file format (usually TIF or EPS).
- **Fonts.** Include files for all fonts used in your design.

  (If you use the preflight package option in your professional-grade software, it will assemble the previous three items for you.)
- **A hardcopy of your document.** If your document has unique folds, pockets or anything other than standard pages, provide an assembled mockup of the design as it should be in its final form. Your printer will use your mocked-up hardcopy to make sure everything shows up in the right places when she or he opens up your original files.
- **Contact information.** Include a note with your name and contact information, a list of the contents of any and all files, and the name and edition/version of the software program(s) you used. Include your after-hours phone numbers in case the printer has an emergency with your print job.

If you're new to the design process, working with a new printer or have a complex design (more than a couple pages and a couple of pictures), meet with your print rep in person to deliver your files and hardcopy proof. This gives you both an opportunity to discuss the job and ask questions, such as confirming proper resolution of the files you will provide.

Alternatively, most commercial printers can accept files electronically, and, no, we do not mean via email. By the time you have more than one high-res image in a document, you've already exceeded the file size capacity of a lot of email programs.

If your combined folder of file, font and graphic is more than 5MB, you will need to use your printer's File Transfer Protocol (FTP) site to transfer files. FTP clients allow you electronically to transfer huge amounts of data not possible to send through email. FTP requires

some software on your end and some access information. When you plug in the correct information (host location, username and password), you gain access to a Web server. You can copy files to and from that server.

If you choose to submit your files to the printer this way, we recommend two things. First, use some software to compress your folder. We've seen strange corruptions in files transferred without compression so better safe than sorry. We also recommend that you email a PDF of your completed document to your print rep separately from the file upload. This PDF serves as your proof in lieu of a hardcopy.

NOW WHAT?

Once your printer has your files, the next thing you can expect is a printer proof. This is just another hardcopy mockup that your printer produces using inks and paper closer to those you have specified. This is your last opportunity to make sure the document is in order before the whole project is printed.

Ask your printer ahead of time what kind of proof you can expect—and when. If color quality and consistency are important, ask for a color proof. If your project includes multiple pages, folds, die cuts or any other special features, ask for a paper dummy. A paper dummy is a full-size, fully functional mockup of the final product.

Your printer will require you (or the boss or client) to approve the proof before the project goes on the press. When you get your printer proof, pull a copy of your own most recent draft and compare the two. Systematically examine the following:

Printer proofs. Printer proofs come in many forms, including full color composites and paper dummies. Paper dummies are full-size fully functional mockups.

WHAT TYPE OF **PROOF** SHOULD YOU EXPECT?

Document Type	Proof to Expect
Letterhead, Business Card, Envelope	Composed Color Proof/Color Laser Proof
Poster	Composed Color Proof, Loose Color Proof (may be ½ actual size)
Pocket Folder	Paper Dummy, Composed Color Proof, Die Strike
Brochure	Composed Color Proof, Loose Color Proof, Paper Dummy with scoring sample—if needed
Newsletter	Paper Dummy, Loose Color Proof, Composed Color Proof
Annual Report	Paper Dummy, Loose Color Proof, Composed Color Proof
Postcard Mailer	Loose Color Proof

» **Text.** Make sure none is missing. Also look for rewrapped text.

» **Fonts.** Make sure there are no dropped fonts. Dropped fonts typically default to Courier, are ugly as sin and easy to spot.

» **Folios.** Look to see that every page is accounted for and in the correct order.

» **All photos and/or visuals.** Check for proper placement and cropping.

» **Margins.** Look at all margins, inner and outer, and all elements, including alignments, that cross over spreads.

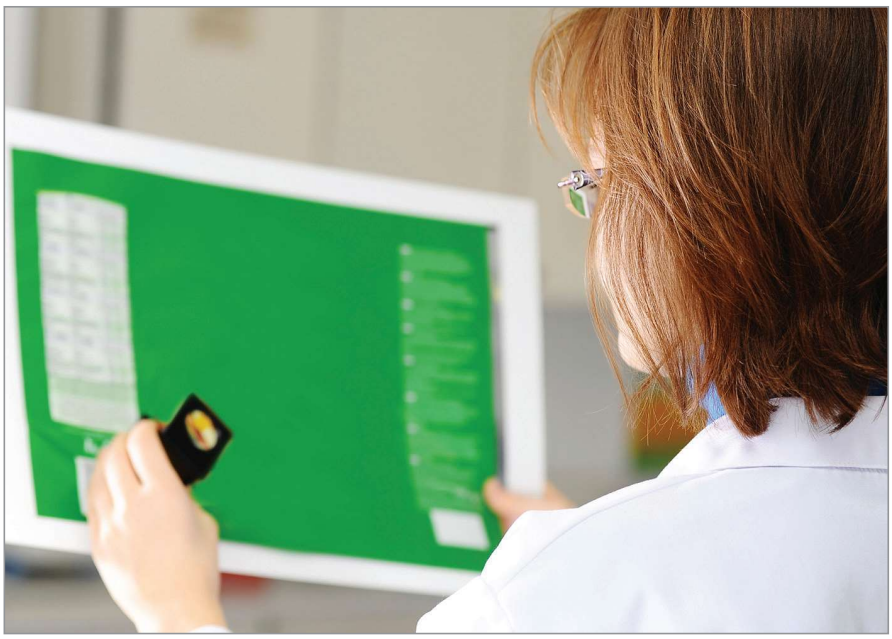
» **Spot colors.** Check placement of spot colors as needed.

» **Specialty items.** Double check special design elements such as die cuts, perforations, folds and foil stamps.

» **Typos.** Proof one last time, paying particular attention to headlines and cutlines, as well as any chatter, etc., associated with infographics and figures/exhibits.

Right on the proof, circle any errors or things that need correcting. Your printer's rep will ask you to sign a form indicating one of the following:

- The job is ready to print.
- The job is ready to print with corrections indicated.
- A new proof is required.



Matching spot colors. Do a press check when a close color match is important to the final product. Be sure to bring a swatch book along for comparison.

You would be surprised how many previously overlooked errors miraculously appear when the printer proof shows up. Sadly, once the printer provides a proof, further edits will cost you. Printers charge for each "author alteration" you request. So do your best proofing and editing before you turn over the files for a printer's proof.

When to do a press check.

For extremely important print jobs where color matching and quality are essential, consider a press check.

A press check allows you to view the first sheets of your actual print run as they come off the press. It's an opportunity to check color and other details before the full run is completed. Be warned, if you want a press check, you'll be at the mercy of the printer's run schedule. Your job might be scheduled for the middle of the night, and neither you nor your boss or client can ask the printer to reschedule to accommodate your sleep.

If you decide your project is important enough for a press check, here's what you should be looking at:

- **Paper.** Confirm that the project is being printed on the correct paper, in the specified weight, finish and color.
- **Visuals and type.** Look closely at the flat sheets to make sure no elements are missing and that none of your typography is re-flowing itself incorrectly.
- **Registration.** Check the registration of multiple sheets. Registration marks printed on the corners and center points of

Other services. In addition to printing, commercial printers also may offer collating, labeling, mailing and other services.

Reproduced by permission of Odyssey Marine Exploration.

each sheet should line up. If you see that they don't align, ask your pressperson. Sometimes paper stretches a bit on the press, which can cause registration marks to misalign.

» **Color.** Look closely at the color on the sheets. Make sure your spot and process colors are printing properly—the printer should have a swatch book handy, but you may want to bring your own. Also make sure that the color is even across the whole sheet. You may have to fold the sheet to see a color comparison from front to back.

- **Varnishes and other finishes.** Check locations of varnishes and other coatings, if any. Also confirm the correct finish (gloss, matte) is being used.
- **Ink.** Using a loupe, take a good look at the actual dots of ink. They should be sharp. If not, there may be issues with the ink mixture. Ask your pressperson about this.

Look for and circle any visible defects on the sheet.

Once everything is working to your satisfaction, give the go-ahead to finish the press run. Be sure to thank everyone for the extra time and trouble.

The finished product.

Once the final print job arrives, check it one last time against your own proof to make sure everything is in order. If you find something on the final piece that wasn't on your original, ask the printer to check the printer proof. If the glitch occurred between the printer proof and the final output, you are justified in asking the printer to reprint your job on the printer's dime.

OTHER THINGS YOUR PRINTER CAN DO

Your print representative can be a fantastic resource for other things aside from just printing your work. Consulting with a printer while still in the planning stages of your project also can help you avoid design and printing pitfalls. Print reps can help you get samples of papers you are considering and even plain paper mockups of your print pieces so you can get a better sense of weight and other properties before you commit.

Once your print job is complete, your printer also may be able to help with distribution. Many printers have the ability to print mailing addresses directly to your pieces. They may be able to tab-seal folding pieces per postal requirements. Printers sometimes have in-house mailing services or relationships with mail houses if they do not offer those services themselves.

While you carefully are planning your design, dotting your I's and crossing your T's from design and paper choice through the press check, a good working relationship with the printer is worth its weight in gold.

TRY THIS

1. Locate several printed pieces. Complete a request for estimate form as the pieces' designers originally would have "spec'd" them. Or create a request for estimate based on one of your own designs.

2. Find the preflight and package functions for your design software. Practice using them with a design you've created. Try it on a single-page document and a multiple-page document. Compare the results.

3. Make your own full-color mockup of a multi-page design you've been working on. Some document types to try: a tri-fold brochure, a multi-page newsletter, a mini pocket folder, a restaurant menu, a table tent-card for a party or event. Or how about that banquet invitation to the city's movers and shakers—the one we talked about at the beginning of the chapter?

4. Visit a local quick printer or the website of a local quick printer. Get a list of available services. Does the company bind? fold? score? die cut? emboss? What papers are available? What other services are available?

5. Do some research on the greening of graphic design and printing. Then write and design an electronic newsletter alert on the topic.

6. Figure out a way to get an invitation to a press check.

7. Acquire several swatch books from a local paper distributor or paper manufacturer. Using the swatch books, see if you can find the answers to the following questions.

    a. What are the available colors and weights?

    b. Is this an economy sheet, a premium sheet or something in between?

    c. What is the paper's brightness?

    d. What finishes does the paper come in?

    e. Is the paper laser-printer compatible? Does it have recycled content?

    f. Does it come with matching envelopes? If so, in what sizes?

Then invite your paper distributor representative to come and chat with you about paper lines.

Photo © Moreno Soppelsa - Fotolia.com

CHAPTER FIFTEEN

15

CONCLUSION

NOW THAT YOU KNOW ENOUGH TO BE DANGEROUS, THANKS FOR STOPPING BY

If you're starting to annoy coworkers, friends and family with your constant design critiques, then congratulations. You've learned to recognize bad—and good—design when you see it. Our work here is done. Before you unleash the full force of your new powers to set the universe right, allow us to leave you with some final and somewhat contradictory thoughts.

EVERYTHING IS CHANGING

We don't need to tell you the media business is in flux. That's old news. As the cliché goes, change is the only thing that doesn't change, especially in communications where we're all technophiles.

While industry turmoil may be inspiring innovation in visual styles and trends, the grammar of visual communication hasn't changed.

The new news is the contemporary assumption that everyone is a fluent multi-platform visual communication designer. And everyone means everyone. Sometimes the amateurs and the audiences are better visual communicators than the pros. Meanwhile, the media bosses operate as if anyone who wants to work in the business can produce effective visual communication across any platform. "Anyone" covers the self-described wordsmiths, too, such as journalists, copyeditors and copywriters.

This reality requires you, whatever your specialty, to develop the good eye that goes beyond memorizing layout rules. You also need to know why those conventions work—or don't work—and that means knowing something about art, design and formal composition. Otherwise, you show up for work with an embarrassingly poor visual aesthetic.

THERE'S NOTHING NEW UNDER THE SUN

Even as everything about the media professions from business models to technology is changing, when it comes to graphic design, there really is nothing new under the sun.

Advertising and marketing communication folks produce public relations materials. Public relations practitioners produce advertising, marketing and news materials. The news industry borrows visual conventions from the entertainment industry, which adopts innovation from the advertising industry. And vice versa and so on.

We're all visual communicators using and abusing the same rules of graphic design and layout. While industry turmoil may be inspiring innovation in visual styles and trends, the grammar of visual

communication hasn't changed. Regardless of the platform or the format, the fundamentals don't change. Good design is good design. Form follows function. Use visuals and type to capture attention, control eye flow, convey information and evoke emotion. White space is not your enemy.

SOMETIMES YOU JUST NEED TO HIRE A PROFESSIONAL

If nothing else, you now have enough knowledge to work alongside visual experts without drawing their scorn.

Knowing enough to know the good stuff when you see it also means knowing your own limitations. Sometimes you do just need to hire a professional. Appreciate the talent, skill and experience of the full-timers—artists, designers, art directors, illustrators, photographers, videographers, cinematographers, Web designers and developers, etc.

WORDS OF ENCOURAGEMENT

If our little book is your first foray into visual communication and design, there is way more to learn if you're interested. If you think graphic design might be your future, get busy. Take a class. Find some online tutorials. Read, read, read. Glom onto a mentor. If, for you, some knowledge is plenty, we salute you for reading along with us this far.

Regardless, we hope you enjoy your new know-how. Try to avoid becoming an overzealous visual snob alienating colleagues and loved ones. Don't be afraid to break the rules with a purpose. Strive always to delight your audiences. Treat professional creatives with respect. Don't forget to have some fun.

Finally, as we say to our neighbors, thanks for stopping by.

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GLOSSARY

Numerics

30-degree rule: In film and video, this rule says any change of camera angle relative to the focal point should represent at least 30 degrees of change. Anything less reads as an editing error.

180-degree rule: In film and video, to avoid disorienting viewers, the 180-degree rule cautions against crossing the imaginary line of action intersecting two characters, unless there is a narrative purpose for doing so.

A

Alley: An alley is the negative space between columns, modules or units on a grid.

Alpha channel: Alpha channel, or "A," controls color transparency in the RGBA Web color system. (See also RGB.)

Analogous color: Analogous colors sit next to each other on the color wheel and work well together in color palettes because they contain some of the colors sitting next to them.

ANNCR: The abbreviation for announcer is ANNCR.

App (application): Apps, short for "(software) applications," are programs designed to run on a computer, tablet, smartphone, website or social media. Since the introduction of smartphones and tablets, apps have become increasingly popular and accessible. Common types include calendars, mileage trackers, restaurant finders and games.

Ascenders: Ascenders are the tall parts of font glyphs that ascend above lowercase x-height, as in the lowercase letterforms b, d, f, h, k, l, t.

Aspect ratio: Aspect ratio refers to the ratio of width to height for electronic screens.

Assets, site: Site assets include all the items and materials used to populate a website, including copy, logos, photos, video, audio, external Web links and code snippets from other online sources.

Asymmetrical balance: With its visual fulcrum or center of visual gravity moved off-center, asymmetrical balance is visually balanced but not symmetrical.

B

B roll: B roll is file, extra or archival footage used as visual fill or for creating transitions between clips.

Backlight: A backlight is a light source used to highlight the focal point from behind in order to give it contrast and dimension.

Baseline: This sentence sits on the baseline, the line guiding the horizontal alignment of type at the bottoms of words.

Beauty shot: In camera work, a beauty shot frames the focal point, whether person or object, to show off its best visual features.

Beta site: A beta site is a working test version of a website that isn't available to the public.

Bleed: Bleed refers to content that runs beyond the specified live area or safe area into the margins and off the edge of the page or screen.

Breadcrumb trail: As in fairytales about children lost in the forest, a breadcrumb trail in Web design is a system for keeping users apprised of their location in cyberspace.

Brief, creative or design: The document that briefs the creative team on the project, the creative or design brief answers basic job order and research questions about the project.

Built color: Built color uses the CMYK 4-color or full-color printing process to build any color.

Burning & dodging: Burning and dodging refer to techniques that darken or lighten photographs, respectively. Traditionally achieved by increasing/decreasing exposure to prints in the darkroom, these techniques mostly now are accomplished digitally.

Byline: The byline is the name of the writer, artist or photographer given credit.

C

Callout: Also called labels, callouts "call out" or call attention to details of infographics.

Cap line: The invisible horizontal line against which the tops of capitalized glyphs align in a particular font.

Cascading Style Sheet (CSS): Although Web pages are built with programming languages such as HTML, the appearance of Web pages is dictated by Cascading Style Sheets or CSS.

Chatter: The brief typeset explanatory copy on an infographic is called chatter.

Close-up: In framing video and film shots, a close-up frames the focal point as a detail shot. Variations on the close-up include extreme, medium, full and wide close-up shots, as well as close and medium close shots. These frames move from an extreme close-up framing only an actor's eyes to a medium close shot that frames an actor from the waist up.

Closure: The Gestalt law of closure predicts the way people mentally fill in gaps to complete a perceived shape.

CMYK: CMYK is the 4-color or full-color printing process of building any color with just four inks: cyan, magenta, yellow and black.

Color management: Color management is the formal term for getting your color to match properly across devices, from scanners to digital cameras to computer screens to printers.

Color separation: In commercial printing, each ink color has to be separated out of the design into its own printing plate.

Comp or complimentary image: A comp image, short for complimentary image, is a low-resolution stock image, usually with a watermark, available to sample in a layout before purchasing.

Comp or comprehensive: A comp, short for comprehensive, is a mockup of the final design and is used for getting approvals before spending time and money on final production.

Compass: The compass establishes direction on a map.

Complementary color: Color complements sit opposite each other on the color wheel.

Concept: The concept is the big idea uniting and driving the design's message.

Condensed font: Condensed fonts are drawn to be narrower (condensed) to take up less space than standard fonts.

Content management system (CMS): A content management system or CMS is a Web-based application that manages page content and generates pages on the fly from information stored in a database. CMSs allow people with no knowledge of coding to build visually consistent websites.

Continuity: The Gestalt law of continuity predicts the way the eye will follow the direction of a line.

Crawl: A crawl refers to superimposed moving type crawling across an electronic screen such as TV.

Creative or design brief: The document that briefs the creative team on the project, the creative or design brief answers basic job order and research questions about the project.

Crop: To crop is to trim excess from visuals such as photography.

CSS: Although Web pages are built with programming languages such as HTML, the appearance of Web pages is dictated by Cascading Style Sheets or CSS.

Curly quotes: Curly quotes or smart quotes are the correct punctuation marks for quotations. Curly quotes are curly, as opposed to prime marks, which are straight. Prime marks indicate feet and inches, not quotations. See also smart quotes and prime marks.

Cut: In film and video, part of continuity is transitioning or segueing between shots and scenes. The most common type of transition is the simple "cut" from one shot to the next.

Cutaway: In film and video, "cutting away" from the main action by inserting something else going on in the scene is called a cutaway.

Cut-in or insert: In film and video, "cutting in" or "inserting" a close-up shot of something significant in the scene is called a cut-in or insert.

Cutline: In news contexts, captions for photos and visuals are called cutlines.

D

Decorative fonts: Decorative fonts have no common feature other than they are mostly novelty fonts best used for "decorative" purposes.

Depth of field: In camera work, depth of field refers to what in the shot remains in focus, whether foreground, midground, background or some combination.

Descenders: Descenders are characters or glyphs with tails that descend below the baseline, such as the lowercase letterforms g, j, p, q, y.

Design or creative brief: The document that briefs the creative team on the project, the creative or design brief answers basic job order and research questions about the project.

Detail shot: In camera work, a detail shot is a close-up shot revealing detail about the focal point.

Dingbats: Forms of type that can be styled like type, dingbats are the ornamental characters in a font, or they may comprise an entire font of nothing but picture glyphs.

Display fonts: Drawn specifically to appear proportionate at larger point sizes, display fonts work well in headlines and signs.

Dissolve: In video and film transitions, the dissolve simply dissolves the frame before cutting to the next one.

Dodging & burning: Dodging and burning refer to techniques that lighten or darken photographs, respectively. Traditionally achieved by decreasing/increasing exposure to prints in the darkroom, these techniques now mostly are accomplished digitally.

Dolly shot: In a dolly shot, the camera is positioned on a dolly that moves or pushes toward the focal point.

Dummy: In print news, a dummy is the set of thumbnail sketches that lay out or paginate what goes on every page of the issue, including ads and stories with visuals.

E

Em dash: Historically the width of a lowercase m, the em dash adds emphasis by replacing punctuation such as commas, colons and parentheses.

En dash: Historically the width of a lowercase n, the en dash is the correct glyph for replacing the "to" with punctuation in expressions such as "2–4 weeks."

EPS: EPS (Encapsulated Postscript) is used for some specific kinds of images. Vector graphics, usually illustrations, are saved in EPS format, as are some photographs that have certain styling applied. EPS format is typically used for logos and, like GIF, supports transparency.

Establishing shot: In camera work, an establishing shot is a full or wide angle shot designed to orient viewers to the overall scene.

F

Fade: In video and film transitions, a fade simply fades the visual frame before cutting to the next one.

File Transfer Protocol: File Transfer Protocol or FTP enables you to upload and share very large files on the Web.

Fill light: Fill light supplements the key light by filling in unwanted shadows for less contrast.

Flexible or fluid Web design: To avoid layouts, thus designs, that "break" across different types, sizes and aspect ratios of screens and browsers, designers build flexibility and fluidity into their designs' CSS by specifying sizes as percentages (100 percent) rather than fixed heights and widths in pixels.

Focal point: Sometimes called the principle of emphasis, the focal point is the visual center of attention in the design or layout because it focuses the eye's attention.

Folio: Usually appearing in the margins of serials and periodicals such as newspapers, magazines and newsletters, the folio identifies the publication, issue and date, as well as page number if hardcopy.

Font: A font is a complete set of characters in a particular size and style of type.

Font family: A font family or typeface contains a series of related fonts, such as Times New Roman, Times Bold and Times Italic.

Foot space or footer: The bottom margin is the foot space or footer.

Four-color process: CMYK is the 4-color or full-color printing process of building any color with just four inks: cyan, magenta, yellow and black.

FTP: FTP or File Transfer Protocol enables you to upload and share very large files on the Web.

Full-color process: CMYK is the 4-color or full-color printing process of building any color with just four inks: cyan, magenta, yellow and black.

Full shot: In framing video and film shots, a full shot reveals an actor head-to-foot. A medium full shot frames the actor from the knees up.

FX: FX is shorthand for special "effects."

G

Gain: Gain is when paper absorbs more ink than expected resulting in muddy type or visuals.

Gestalt theory: In the early 20th century, a group of German psychologists studied the way the human brain interprets and organizes what the eyes see. The results of this research became the Gestalt laws. See: closure, continuity, proximity, similarity.

GIF (vs. JPG): GIF (Graphic Interchange Format) and JPG (Joint Photographic Experts Group) are file formats for saving images destined for the Web or computer screens. Both are low-resolution image formats. A big difference between them is a GIF will support transparency and a JPG will not. Transparency by definition means see-through. In the case of Web graphics, transparency is essentially the ability to make certain color groups invisible. If you've ever tried to put a logo in JPG format on top of a colored background and discovered that your logo has a white box around it, you've encountered lack of transparency. By creating your Web graphic in the correct software application and saving it as a GIF image, you can eliminate the white box.

Glyph: A glyph is an individual character of a font, whether a letter, numeral, punctuation mark, dingbat or special symbol. Most fonts have 265 glyphs. OpenType fonts have up to 65,000 glyphs.

Golden proportion: The golden proportion, sometimes called the golden ratio or divine proportion, refers to a ratio—1:1.618—that results in a universally appealing aesthetic when applied to shapes such as rectangles.

Graphical user interface or GUI: Web, tablet and smartphone users don't interact with computer code; they interact with graphics, such as buttons and tabs, known as graphical user interfaces or GUI. User-friendly "gooey" designs require savvy interface designers.

Graphics package: In the newsroom, a graphics package reports a story by using multiple types of graphics together.

Grayscale: A graduated range of tones from black to gray to white is called grayscale.

Greek text: Greek text or greeking is dummy copy or type used as a temporary substitute for the actual copy or type.

Grid: A grid is a series of horizontal and vertical lines composing the skeletal template of a design.

Grid module or grid unit: Instead of columns, a grid structure may include squares or rectangles called modules or units.

GUI or graphical user interface: Web, tablet and smartphone users don't interact with computer code; they interact with graphics, such as buttons and tabs, known as graphical user interfaces or GUI. User-friendly "gooey" designs require savvy interface designers.

Gutter: A gutter is the oversized margin between two facing pages. The gutter is designed to accommodate the fold or binding. Some design software applications refer to alleys between grid columns as gutters, too.

H

Hairline rule: A hairline rule is a very thin rule or border—as thin as a strand of hair.

Hairline strokes: The thin lines in characters or glyphs are hairline strokes. The thick lines are stem strokes.

Handheld: Handheld refers to the cameraperson holding the camera as she or he moves through the scene shooting video or film.

Hanging indent: Hanging indents refer to indicators that hang out to the left in the margin, instead of indenting to the right into the paragraph or text. Hanging indents are required for bulleted and numbered lists, as well as for quotation marks on pull quotes.

Hard light or low key: Hard light or low key emphasizes shadows, thus contrast, including shadows on people's faces.

Headspace or header: The top margin is the headspace or header.

Hexadecimal code: A Web-based color specification system, hexadecimal color uses sets of numbers and letters to designate RGB light formulae.

High key or soft light: High key or soft light evens out the shadows to decrease harsh contrasts. It makes people and products look more attractive.

High pixel density: This refers to the technology that allows tiny screens to display densely packed pixels at very small sizes for realistic effect.

Horizon line: The line separating land and sky is the horizon line, which communicates a sense of distance or perspective.

Horsey: Not a compliment in design, horsey means awkwardly large and lacking grace.

HTML: HTML stands for Hypertext Markup Language, the basic code that makes up most Web pages.

Hue: In color, hue answers the "what color?" question.

Hypertext Markup Language: Hypertext Markup Language or HTML is the basic code that makes up most Web pages.

I

Impositioning: Impositioning is the prepress process of getting multiple pages that are designed to print front and back to align properly for correct printing and binding or folding.

Infographic: An infographic delivers information graphically, such as in graphs, charts, maps, figures and diagrams.

Insert or cut-in: In film and video, "cutting in" or "inserting" a close-up shot of something significant in the scene is called a cut-in or insert.

Inset, map: On a map, an inset enlarges a section of the map to reveal more detail.

Inset & offset: Inset refers to the content of a box sitting in away from the box's edges, rule, border or frame. Offset refers to items outside the box sitting off away from the box's edges.

J

JPG (vs. GIF): JPG (Joint Photographic Experts Group) and GIF (Graphic Interchange Format) are file formats for saving images destined for the Web and electronic screens. Both are low-resolution image formats. A big difference between them is that a GIF will support transparency and a JPG will not. Transparency by definition means see-through. In the case of Web graphics, transparency is essentially the ability to make certain color groups invisible. If you've ever tried to put a logo in JPG format on top of a colored background and discovered that your logo has a white box around it, you've encountered lack of transparency. By creating your Web graphic in the correct software application and saving it as a GIF image, you can eliminate the white box.

K

Kerning: Kerning refers to the negative space between two characters or glyphs.

Key: On infographics, such as maps, the key identifies and defines symbols and other reference markers or icons used.

Key light: A key light is the main or key light source in the shot, whether natural or artificial.

L

Lead: The first paragraph of the body copy is called the lead.

Leading: Leading refers to the negative space between lines of type.

Leg: A leg is a column of typeset copy.

Lift-out: Also called a pull quote, a lift-out is a pithy quotation pulled from the body copy and then enlarged and embellished to become both a visual and a teaser.

Ligature: Ligatures are specially designed letter pairs—a single glyph meant to take the place of two traditional letters that may look awkward if typeset side-by-side, such as "fi."

Live area: Live area refers to the area of the page within which material should print safely. Anything outside of the live area may be cropped off. For the video equivalent, see safe area.

Long shot: In framing video and film shots, long shots and extreme long shots get long angles on the scene.

Loop: In video and animation, a loop endlessly repeats by circling the ending back to the beginning to start all over again.

Low key or hard light: Low key or hard light emphasizes shadows, thus contrast, including shadows on people's faces.

M

Matched color: Matched color is a premixed spot color of ink matched to a color swatch.

Mean line: The invisible horizontal line against which the x-height of lowercase glyphs align in a particular font.

Medium shot: In framing video and film shots, a medium shot frames the actor from the hips up. A medium full shot frames the actor from the knees up, and a medium close shot frames the actor from the belt up.

Mobile first: The concept of designing websites for mobile devices first instead of last, mobile first was introduced by Luke Wroblewski in 2011. See also, progressive enhancement.

Modern fonts: Modern fonts have extremely thin serifs, and their stress lies on the vertical, unlike old style's diagonal stress. Choose modern fonts carefully for long copy situations, and avoid them for screen applications.

Modular page design: In modular page design, each story is arranged into a rectangle, and the rectangles are arranged onto rectangular units of the grid of the page. Modular design is popular with print and Web news design.

Montage: The video/film version of the collage, a montage cuts together many images.

Motion Pictures Expert Group or MPEG-4 or MP4: Motion Pictures Expert Group (MPEG-4) is a popular video file format for the Web that works well across platforms and is supported by most Web browsers.

Mousetype: Mousetype means very small type often used in the tags of advertising.

Mug shot: A mug shot is a photographic close-up or headshot, usually of a person.

Music bed or track: A music bed or track is a background soundtrack over which the main video and/or audio are laid.

N

Navigation: In Web design, navigation refers to the system that allows users to move through and among Web pages, including hypertext links and buttons, etc.

Negative or white space: Negative or white space is the empty space in which design is created and by which any design achieves pleasing balance and composition. Negative or white space has visual weight. "White space is not your enemy."

O

Offset & inset: Offset refers to items outside of a box sitting off away from the box's edges. Inset refers to the content of the box sitting in away from the box's edges, rule, border or frame.

Old style figures: Old style figures treat numerals as old style glyphs with ascenders and descenders.

Old style fonts: Old style fonts have serifs, thick stem strokes, thin hairline strokes and a diagonal stress on o-shaped characters. Old style fonts have good readability.

OpenType®: Designed to be functional across both Mac and PC platforms, OpenType fonts may have as many as 65,000 characters each, including ligatures, swash alternates and old style figures.

Optical fonts: Some extended typefaces include optical fonts drawn for viewing at smaller or larger sizes. Caption fonts, for example, include spacing for viewing at smaller font sizes while display fonts would include detail enhancements for viewing at larger sizes.

Optimization: Optimization refers to balancing the resolution, thus appearance, of graphics with their generally large file sizes so that they load quickly but still look good.

Orphan: A typographic orphan refers to a few lonely words stranded at the top of a leg of type.

Over lighting: A key light shining directly from above is over lighting.

P

Pan: A pan or panning indicates a stationary camera that sweeps across the scene. The effect is that of turning your head to look around.

Perspective: In visual arts, such as painting, photography and film, perspective refers to the sense of distance in the scene, whether achieved by where the horizon line sits in the composition, the use of a linear vanishing point, the relative size of objects in the scene or atmospheric use of light and dark values that seem to recede or move forward, respectively.

Pixel density: This refers to the number of pixels a viewport is able to display. See also, high pixel density.

Plug-in: A plug-in is code that gives a browser or website additonal functionality, For example, when a website automatically displays the most recent posts from a separate blog, a plug-in is at work.

PNG (portable network graphics): PNG is a file format for Web-destined graphics that must accommodate gradients and transparency, such as in drop shadows.

Pointer box: On a map or diagram, a pointer box literally is a box that points to some detail while offering additional information inside the box.

POV: POV is the abbreviation for point of view referring to the perspective of the camera lens, thus the audience.

Primary colors: The primary colors on the traditional color wheel are red, blue and yellow, which when variously combined produce every other color on the color wheel. Differing from the traditional color wheel, the RGB color wheel has different primary colors: red, green, blue.

Prime marks: Prime marks are the correct straight glyphs used to indicate feet and inches, as opposed to curly or smart quote glyphs used to punctuate quotations. See also curly quotes and smart quotes.

Progressive enhancement: Part of the mobile first school of thought in website design, progressive enhancement is the process of coding in website features and design elements that become available as the site is viewed on larger screens with more capable browsers. See also, mobile first.

Prototyping: In Web design, prototyping software is used in the planning process. It allows the designer to create a functional mockup of a whole website or parts of a website. Prototypes demonstrate a site's interactive components to a client.

Proximity: The Gestalt law of proximity predicts that the eye will perceive items physically grouped together as belonging to the same group.

Pull-down menu: In electronic environments such as Web pages, a pull-down menu provides a form of navigation that remains hidden unless a user accesses it with the cursor/mouse.

Pull quote: Also called a lift-out quote, a pull quote is a pithy quotation pulled from the body copy and then enlarged and embellished to become both a visual and a teaser.

Push: In video and film, push shots push into the scene. In a zoom, a stationary camera pushes into the scene by using the lens to zoom in on the focal point. In a dolly shot, the camera itself, positioned on a dolly, moves or pushes toward the focal point.

R

Rack-focus: In film and video, a rack-focus uses a stationary camera to shift a scene's focal point simply by refocusing from one object to another.

Radial balance: Radial balance refers to circular designs in which the fulcrum lies at the center.

Reference points: On a map, reference points are landmarks, either natural or built, that orient the viewer.

Registration: Registration refers to aligning material across color plates in commercial printing.

Rendered type: Rendered type is a character, a word or a string of words filled with an image or otherwise transformed using photo-editing software.

Resolution: Image resolution refers to the detail or crispness of an image and is measured in units per inch. Ink on paper requires images in specific *dots per inch (dpi)*. High-end printing requires 300 dpi, and newsprint requires 200 dpi. For screens, graphics are measured in *pixels per inch (ppi)*. Web graphics are prepared at 72 dpi.

Responsive Web design: Responsive websites are coded to resize and rearrange their layouts to fit the size of the current viewport.

Reversing: A reverse literally reverses figure color with fill/field/background color. Reversed type refers to light type on a dark background, such as white type on a black field.

RGB: Standing for red, green and blue, RGB is the color wheel system for achieving color in electronic and digital screen environments by mixing red, green and blue light.

RGBA: The next generation of Web color specification, RGBA adds "A" to "RGB." "A" stands for alpha channel, which controls color transparency in the RGBA Web color system.

Rights-managed image: For a rights-managed image, you pay more to make sure other folks in your market don't use the same image, too. For a cheaper alternative, see royalty-free image.

Rough: A rough is a rough layout only slightly more detailed than a thumbnail sketch.

Royalty-free image: Royalty-free images are inexpensive stock images with no guarantees your competitor won't use them, too. For guarantees, see rights-managed image.

Rule: A rule is a graphic line, such as a border or a frame.

Rule of thirds: The rule of thirds says that dividing a layout or composition into thirds makes for a more interesting visual composition. The rule of thirds suggests that the four gridline intersections on a 3 × 3 grid offer the best locations to position a focal point in an asymmetrical layout.

S

Safe area: Safe area refers to the area of the screen within which material is visible. In video, title safe area refers to the area onscreen within which text and graphics will safely appear without cropping of content. Action safe area is a slightly larger area onscreen within which action appears without cropping of content.

Sans serif fonts: Sans serif (French for "without serif") fonts have no serifs, and their strokes have uniform thickness. They are the most readable fonts for screen applications.

Saturation: Saturation refers to the amount or intensity of a hue.

Scale: Scale refers to relative size and proportion.

Scale, map: The scale on a map establishes the reduced proportions of distance, i.e., an inch equals a mile, etc.

Script fonts: Script fonts resemble cursive handwriting. They can be quite elegant in decorative situations, but they are not a good choice for readability.

Search engine optimization (SEO): Search engine optimization or SEO refers to making your website search-engine friendly to rank well in user Web searches.

Secondary colors: Mixing any two primary colors produces the secondary complement of the third primary color.

SEO, or search engine optimization: SEO or search engine optimization refers to making your website search-engine friendly to rank well in user Web searches.

Serif: Serifs are those little feet or flags at the tips of glyphs.

SFX: SFX is shorthand for "sound effects."

Sidebar: Simply a separate block of type with a solid background, a stroked outline or an ample border of negative space, a sidebar provides content related to its adjacent copy.

Side lighting: Side lighting casts long shadows and increases the sense of three-dimensional space, as opposed to the flattening effect of soft light.

Similarity: The Gestalt law of similarity predicts that people will group items with similar properties such as shape, size or color.

Site asset: Site assets include all the items and materials used to populate a website, including copy, logos, photos, video, audio, external Web links and code snippets from other online sources.

Site map: In Web design, a site map literally maps out the site to show the links between and flow among pages in the form of something that resembles either a family tree or a flowchart.

Slab serif fonts: Slab serif fonts are similar to old style fonts, but the serifs on slab serif fonts start thick and stay thick. Invented for display advertising, slab serif fonts are excellent for headlines and signage.

Small caps: Small caps capitalize the entire word, although the initial cap is slightly larger than the rest of the letters, which are slightly smaller than a regular capitalized glyph.

Smart quotes: Smart quotes are the correct "curly" punctuation marks for quotations. See also curly quotes and prime marks.

Soft light or high key: Soft light or high key evens out the shadows to decrease harsh contrasts. It makes people and products look more attractive.

Source line: The source line identifies the origin or source of data. In an infographic, the source line usually appears on the lower left under the infographic.

Split screen: A split screen divides the screen into two different images.

Spot color in design: Not to be confused with spot color ink in printing, spot color in design refers to designing with a few well-chosen spots or splashes of color to highlight items such as a focal point or to draw the eye around the layout.

Spot color printing: Instead of building color using the 4-color CMYK printing process, spot color printing uses premixed ink colors chosen from a swatch book. See also matched color.

Spread: Two facing pages part of the same design are called a spread, such as one magazine story spreading across the gutter in two facing pages or a two-page advertisement spanning the gutter.

Steadicam: A steadicam is a kind of harness the cameraperson wears to hold the camera steady as she or he shoots hand-held video or film.

Stem strokes: The thick lines in characters or glyphs are stem strokes. The thin lines are hairline strokes.

Storyboard: A storyboard lays out the moving-picture or animated stories of planned film, video and electronic media in the form of scenes or shots arranged on a grid.

Stroked type: Stroked type or stroking is when the type characters or glyphs are outlined.

Super: A super is any on-screen type or graphic superimposed over another image.

SVG (scalable vector graphics): Scalable vector graphics are a file format for the Web. They are an excellent format for charts and graphs.

Swash alternates: Swash alternates are decorative alternatives to traditional italic letterforms.

Symmetrical balance: With symmetrical balance, if you bisect the design, each side will be a mirror image of the other in terms of visual weight.

T

Tags: Tags refer to all the information typically found at the bottom of an advertisement, such as the logo, themeline or slogan, URL, physical address and map, phone number and sometimes, unfortunately, disclaimer and legalese.

Tertiary colors: Tertiary colors result from combining a primary and a secondary color.

Thumbnail sketch: Thumbnail sketches or thumbnails are tiny thumbnail-sized layout sketches that you can draw—and reject—quickly.

Thumb space: Sometimes margins are called thumb space because, if you were holding a hardcopy, margins leave enough negative space at the edges of the layout to accommodate your thumb without covering any visual material.

TIF: Choose TIF (Tagged Image Format) file formats to save images for print or video purposes (as opposed to GIF or JPG for Web purposes). TIF images are larger in file size, but the TIF format does not lose data.

Tilt: In film and video, a tilt shot is a vertical up-and-down pan of the camera. See also, pan.

Track or music bed: A track or music bed is the background soundtrack over which the main video and/or audio are laid.

Tracking shot: In a tracking shot for film or video, a stationary camera tracks along with a moving focal point.

Tracking, type: Tracking refers to the negative space across a string of characters, such as a word, sentence or paragraph.

Transitional fonts: Transitional fonts evolved from old style fonts and have serifs, thick stem strokes and thin hairline strokes. But transitional fonts may have a less pronounced diagonal stress or no diagonal stress at all. Transitional fonts have good readability.

Trapped space: A puddle of landlocked negative space with no apparent layout function in the design is called trapped space.

Triads, color: Color triads are colors on the 12-point color wheel that form any triangle 4 hours apart. Triads make pleasing color palettes.

Trim size: In commercial printing, trim size refers to the finished size of the page after the printer has trimmed away the excess paper.

Truck: In video and film, a truck refers to the camera trucking sideways across the scene. This is usually accomplished with a camera on a dolly. The effect is like rubbernecking from a moving car.

Tweened animation: In tweened animation, the artist illustrates only key changes in motion or shape. Then the software application automatically generates animation to fill "between" the artist's illustrated frames.

Typeface: A typeface or font family contains a series of related fonts, such as Times New Roman, Times Bold and Times Italic.

U

Under lighting: A key light shining directly from below.

V

Value: Value refers to the lightness or darkness of a hue.

Vanishing point: In linear perspective, the vanishing point is where two lines converge in the distance.

Vector image: Vector images use geometry and math to produce and preserve the proportions and quality of line-art illustrations as digital files. They can be scaled up or down infinitely without loss of image quality.

Visual hierarchy: As a tactic for visually communicating a hierarchy of visual items in terms of visual importance, visual hierarchy conventions include making important information large and putting it at the top of the composition. In multiple screen and page designs, as well as in designs with multiple items on the same screen or page, it's important to establish a hierarchy of fonts and point sizes, in addition to placing important items at the top of the screen or page.

VO, voiceover: A VO or voiceover is a disembodied voice speaking over video or audio.

W

Web safe palette: The idea of the Web safe color palette was to provide designers a way of getting consistent color. As a project, the Web safe palette mostly has failed because of constant advances in hardware and monitors, not to mention the garish color choices of the palette.

What you see is what you get: "What you see is what you get" or WYSIWYG is a type of Web page design software that doesn't require users to know how to write code.

White or negative space: White or negative space is the empty space in which design is created and by which any design achieves pleasing balance and composition. White or negative space has visual weight. "White space is not your enemy."

Widget: Widgets are the visible user-friendly expression of the existence of a plug-in. Not all plug-ins have widgets, but all widgets require plug-ins as their invisible engines.

Widow: A typographic widow refers to a few lonely words stranded at the bottom of a leg of type. A hyphenated word ending the last line of a leg counts as a widow, too.

Wipe: In video and film, a wipe transitions between screens with the effect of wiping the picture from the screen.

Wireframe: In Web design, a wireframe is the equivalent of a thumbnail sketch. Wireframes show the functional areas of the planned website.

WYSIWYG: WYSIWYG stands for "what you see is what you get," a type of Web page design software that doesn't require users to know how to write code.

X

X-height: In a given typeface, x-height refers to the height of a lowercase "x" relative to the length of ascenders and descenders.

Z

Zoom: In a zoom, a stationary camera pushes into the scene by using the lens to zoom in on the focal point.

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