Layout, Composition, Color, and Texture

ASSIGNMENT 1: LAYOUT AND COMPOSITION

Read this assignment, then read pages 1–41 in your textbook.

The Design Process

The first assignment discusses the importance of layout and overall site composition in designing a Web site. Knowing how the information will be presented and organized defines the options available to you as a designer and guides how you and your client come to decide on the Web site's final form. This aspect of design is vitally important to building an effective site and, yet, has very little to do with the technology used to build it.

The main goal of the primary design stage is to create a *design comp,* which is a mock-up of how an entire site will look once it's built. This comp can be a fully illustrated mock-up or a sketch on a notepad, but the purpose is the same regardless of the level of detail: The comp should provide a picture of the site's construction and organization before the work begins. To create an effective design comp, the designer must achieve three key tasks: discovery, exploration, and implementation.

In this context, *discovery* refers to meeting with clients and learning about what they do, what they want, and what their vision is for their sites. This aspect of the process should begin before you actually meet with clients, through researching their companies and businesses, their current sites (if they have sites), and their competitors. The purpose of researching your clients' competitors is to get a sense of what's already working in the field and, more importantly, what isn't. First meetings with clients should be done in person whenever possible. During these first meetings, focus on communicating with clients using clear, jargon-free language to find out what

they want, need, and expect from the prospective site. Listen more than you talk, and prepare a list of questions to elicit the needed information. You'll find a good starter list of questions on page 3 of your text.

After you've completed the discovery phase, you'll move on to *exploration,* during which you'll take the information you gathered in discovery and begin working with it on an experimental basis. This phase could be thought of as brainstorming; the purpose here is to look at all the information not only from a design standpoint, but also from your clients' perspectives. In doing so, you'll develop an overarching organization and flow for the site that makes sense for all involved parties. Finding the organization is part of a larger process called *information architecture.* Using note cards, sticky notes, whiteboards, or sketch paper to arrange and rearrange pieces and mock-ups is a traditional and tested way to handle this aspect of the process.

With *implementation,* you'll create a rough layout of the site based on the previous two steps. At this point, questions of which technology will be used aren't even considered; the point is to develop a general plan for the layout, possibly by developing a preliminary color scheme as a working guide. You'll have plenty of time to work out the fine details, but before that can start, all involved parties must agree on the big picture, which is what the design process seeks to create.

Defining Good Design

What does it mean to say a Web site's design is "good" or "bad"? Usually, Web surfers will come to a value decision on a site's design based on either its *usability* (its efficiency, how well it works, and how the information is made available) or its aesthetics, or a combination of the two. As a designer, your job is to maximize the visual appeal and usability of a site, doing your best not to sacrifice one for the other.

To that end, remember that the whole point of design is communication: getting the information to users in an efficient, pleasing way so they'll return to the site. Users should be drawn to the content, but they also should find the overall design pleasing, be able to move about the site and find information

easily without having to devote too much thought to how to do something, and recognize every page on the site as being part of the site. These aspects can be achieved through a number of methods, including clearly labeled and descriptive navigation menus, a unified color scheme, and a cohesive *theme,* or *look,* to the site as a whole. Two design qualities that designers should strive to meet and that users look for in a Web site experience are consistency and logic.

Web Page Anatomy

If you were to randomly survey Web sites, you would see a dizzying assortment of possibilities. From interactive sites to multimedia presentations to simple static pages, the possibilities for displaying pages are virtually endless, but they all have certain components in common. Not every Web site will have all the following components, but you would be hard-pressed to find a site without at least a few of these:

- **Containing block.** This is basically the defined space within which designers create a page or site. The containing block is usually defined by the `<body>` tag. Containing blocks can be of fixed width or *fluid width,* meaning they expand to fill the browser area.

- **Logo.** Usually a graphic that identifies a company, a *logo* is often contained inside the identity block, along with a unified color scheme and the company's name. Logos are used to create brand identity and raise recognition among users.

- **Navigation.** Visitors can get around the various pages of the site via the *navigation system.* The system may run down the side or across the top of the landing page, but it should always be located near the top of the page, or *above the fold* (the term derives from newspaper publishing), meaning above the point where the user has to scroll down.

- **Content.** Regardless of the design, content is the primary—and often only—reason users visit a particular Web site. Many visitors will spend only a few seconds on a site before clicking away, so the main content block should be the focus of the design.

- **Footer.** Just as the name implies, the *footer* is located at the bottom of the page; it generally has contact information, as well as copyright and legal information. Footers may also have links to other sections of the site and should clearly delineate the end of the page.

- **White space.** The term *white space,* also known as *whitespace* or *negative space,* refers to any part of a page that doesn't have any text or graphic content. Having white space in your design is a vital part of guiding the page's information, allowing the design to achieve a sense of balance and unity, and avoiding a crowded feel on the page.

These aspects of Web page anatomy aren't the only options, but they're the most common. Having a solid grasp of these concepts is needed to develop an efficient and effective site design.

Grid Theory

Although not generally associated with graphic design and artistic endeavor, *grid theory* is vital to creating aesthetically pleasing graphics and art and, as a result, has become important in Web site design as well. Grid theory—particularly as practiced by the Dutch painter Piet Mondrian, who's widely considered the father of graphic design—uses element alignment and proportion to arrange and compose layouts. One common tool in grid theory is the *golden ratio,* a relationship of proportion that's generally considered aesthetically pleasing. This ratio, often expressed as ϕ, is roughly expressed numerically as 1.62:1.

Since the exact measurement of the golden ratio is a little unwieldy, a simplified version of it, known as the *rule of thirds,* has been developed over the years. Essentially, if you were to bisect a line in accordance with this rule, one section would be twice the size of the other; thus, the smaller section

would be a third of the total. With content blocks, this rule can be expressed in a number of ways, some of which you can view on page 12 of your text.

960 Grid System

Another way to arrange elements on the page is by using the *960 Grid System,* which is mainly a Cascading Style Sheets (CSS) framework that can be adapted. The name derives from the fact that, in trying to develop a width that would work on a display 1,024 pixels wide, developers realized a width of 960 pixels was highly flexible and appealing for use with grids because 960 is divisible by a number of factors (3, 4, 5, 8, 10, 12, 15, and so on). Developers have since created a number of layout foundations using the 960 Grid System, which designers can easily adapt based on their desired compositions.

One thing that designers should keep in mind when working with grids is that, while it might be tempting to arrange the elements in a small number of blocks, the possibilities opened up by the alignment guides of grid systems should be explored and experimented with to find new and intriguing visual combinations. Spanning columns, resizing elements, or having some elements off the grid entirely may yield better results. Therefore, designers should feel free to play around with their elements and not feel constrained by the strict lines and definitions of grids.

Balance

When referring to layouts, *balance* means keeping the visual weight of the elements equal around an axis of observation. Essentially, it means one side of a layout has the same visual impact as the other. Visual balance can be maintained in either a symmetrical or asymmetrical manner. *Symmetrical balance,* also known as *formal balance,* is the more traditional of the two and refers to when the elements of a composition are of the same visual impact on either side of the axis of observation; this can range from precise mirror imaging to similar sizes and shading of elements. An example of symmetrical balance is found on page 15 of your text. Such

balance is often done vertically, as in the text's example, but designers may also use *horizontal symmetry,* in which the balance is maintained in a top/bottom balance rather than left/right. Although less common in Web site design, designers may also use *bilateral symmetry,* in which symmetry is maintained around multiple axes, and *radial symmetry,* in which symmetry is maintained around a central point; these types of symmetry are often used in designing logos and print layouts.

Asymmetrical balance, on the other hand, involves developing balance through elements of differing sizes, placements, or other aspects. The visual balance is maintained around an axis of observation, but the relationships are skewed, which makes such designs more visually interesting. Asymmetrical balance often uses the rule of thirds to achieve its effect, as seen in several examples on pages 16–18. Generally, one element is outsized and balanced along the axis of observation by several smaller elements. Because of its greater visual interest, asymmetrical balance is more often used in Web design.

Unity

Another design principle you should incorporate in your pages and sites is *unity,* which refers to having the disparate elements of your composition work together to effectively and aesthetically present the content. Unity is a vital part of Web presentation; if all elements are visually pleasing but fail to cohere into a workable whole, the design has failed and your clients won't be happy. To achieve this harmonious cohesion, elements must be unified both as elements and as parts of a whole; the entire page must work together as a unit, and all the pages must work together as a site. This aspect of design is often achieved by using proximity and repetition and by avoiding choices that interrupt unity, such as frames.

Proximity helps create unity by creating a focal point that draws the eye, which helps make the elements that are close to each other look like a cohesive unit. For individual pages and CSS rules, creating proximity is often done through setting margins and padding for elements. Proximity can also be set through modifying white space.

Repetition is just what it sounds like: using the same element or elements multiple times to create an overall arrangement of identical or similar design features. This creates visual cohesion between elements and pages of a site. Bulleted lists, background textures, and thumbnail image groupings are common examples of using repetition on Web pages.

Emphasis

Sometimes, one feature on a proposed layout will have a greater degree of importance than others and will therefore need to draw the eye of prospective visitors. This is an example of *emphasis,* a concept which is related to unity, but more specific to individual elements. Another term for emphasis is *dominance.* In creating a layout that requires an element to be emphasized, you can use several techniques to create the needed *focal point,* or element that naturally draws the viewers' attention. These techniques include the following:

- *Placement.* As a general rule, the exact center of a com-position is the first place most viewers will look, which makes it a prime location for placing elements to be emphasized. For various reasons, this isn't always prac-tical in Web design, so the top-left corner is also a good location for many visitors. However, depending on the audience, the top-left corner may not be feasible; native Hebrew and Arabic readers, for example, read from right to left, so the top-right corner would be more effective for these readers.

- *Continuance.* Also known as *flow, continuance* makes use of the idea that the eye will continue to follow a direction of movement once started until something more dominant is seen. This is why most text and Web pages are aligned on the left margin; this creates a vertical line that the eye naturally follows. In Web design, elements are often aligned to grid lines to create a natural direc-tion of flow.

- *Isolation.* The flip side of repetition is *isolation;* an element that stands alone in an area of white space automatically draws the eye and creates a focal point.

- ***Contrast.*** The most commonly used method of creating emphasis is *contrast;* it's defined as juxtaposing two or more dissimilar elements, and uses the perceived difference between the elements to draw the eye. Contrast can be achieved through differences in size, color, placement, or any other visually perceptible difference. Contrast is frequently used when a designer wishes to draw the visitor's eye to a *call to action,* which is an action the designer wants the user to take, such as to click a button or fill out a form.

- ***Proportion.*** A technique that can be thought of as a special case of contrast is *proportion;* it uses differences in the scale of objects to draw the eye. A prime example of proportion is on page 24 of your text, in which the designer has placed an object in a picture in such a way as to make the object appear much larger than it would in a normal view, thus drawing the eye. This difference is the key and works regardless of whether the object is much larger or smaller in relation to another element. As with the other techniques you've just learned, proportion is more than just a handy way to draw the eye; it can be used to suggest an order of reading information on the page. Look at the example on page 25 to see how emphasis can be used in this way.

Bread-and-butter Layouts

Although the concepts discussed up to this point are helpful in understanding design from a conceptual standpoint, there's nothing quite as effective as seeing these ideas put into practice. For a number of reasons—for example, browser technology, limitations, and common goals of Web sites—the numerous possibilities of Web design often boil down to a few tried-and-true layout choices. These choices have a number of advantages—these layouts appear over and over again all over the Web because they work—but they have some disadvantages as well, and designers must understand these negative aspects as well.

Left-column Navigation

The *left-column navigation* layout is one of the most traditional Web layout designs; it divides the layout below the header into a narrow left column and a wide right column. While the navigation system doesn't have to be in the left column, the left-column navigation layout is the most popular system in use and will likely remain the most popular system for the foreseeable future. This is a safe choice for a designer, but the same familiarity and time-tested appeal that make it a safe choice also makes it, well, boring. Since many sites use this layout, it can appear uninteresting and visually dull.

Right-column Navigation

Although not as heavily used as left-column, another popular layout system is the *right-column navigation system*. It's basically the same as left-column, except the smaller column is on the right. News sites and social networks frequently use this system. You don't need to use a secondary column; however, because many visitors are looking for specific content when they view a site, using columns to separate the main content from lesser-value links and content is one simple way to assist visitors. Keep in mind that ease of use of the site and its organization should be your guiding principle.

Three-column Navigation

If you're looking for a hybrid approach and have a good deal of secondary content and navigation to index on the page, a *three-column approach* may be ideal. In this layout, the page is set up with a wide center column and secondary columns to either side. However, using this type of layout increases the risk of overcrowding the visual space, so make sure you effectively use white space to keep to a minimum the "busy" aspects of the page or pages.

Finding Inspiration

Because you can achieve your goal of an effective layout in a number of ways, don't restrict your work to the three most common layout types. See page 28 in your text for a list of Web resources to see how other designers approach Web page layout, or simply surf the Web for interesting sites that catch your eye.

Another way you can find inspiration for present and future projects is to create and maintain is *morgue file,* which is essentially a folder or set of files that you can use for inspiration and guidance on how to approach a design problem. These files don't have to be digital—in fact, many morgue files are clipped from magazines. Creating a morgue file helps you with current projects and can serve as a future resource for similar projects. Use screenshots, Web photos, or clip art to start your morgue file, and be mindful of eye-catching images or graphics as you research your project. To learn how to create screenshots natively in Windows or OS X, see the instructions on page 29 of your text.

While the standard layouts you've just learned about make up the majority of sites now available on the Web, some interesting trends are now appearing in new and revamped sites that can offer new ideas and insights to designers. For sites that wish to have the important information absorbed all at once without navigating to different pages, a *navigationless magazine style,* in which the information is presented in article form all at once, may be the way to go. Using *expansive footers,* in which the extra navigational features and information are placed at the bottom of the page, is another recent trend that, as of 2012, isn't slowing down. Even using *bare-bones minimalist layouts,* in which the design features only the most important elements and nothing else, is gathering steam as a design statement. The minimalist movement isn't new, but since the rise of Web 2.0 technologies and social networks, such site designs have become more popular.

Resizing: Fixed, Fluid, or Responsive Layouts

As a designer, one of the important preliminary questions you must answer concerns the *containing block,* which is basically the area within which the Web page is created. This containing block is defined visually by the browser window and, as such, is controlled by the browser itself. If the browser is resized, how will this affect the containing block? The answer to that question will depend on whether you use a fixed, fluid, or responsive layout.

A *fixed-width layout,* often used with the 960 Grid System, is given a specific width in the coding for the page, usually within the `<body>` tag and centered with `margin: 0 auto` in the code. If the browser is resized on a fixed-width layout, the header bar will be short for the side margin or margins, or you may need to scroll horizontally to see the entire page. These designs are easier to build and maintain.

A *fluid-width layout,* on the other hand, is coded with percentage-based widths, so when the browser is resized, the appearance of the page adjusts to take the resizing into account. This layout style requires more planning, because some resizing choices will have effects that the designer may not want. Some layouts combine fixed- and fluid-width layouts to maximize the amount of horizontal content that's viewable. Fluid-width layouts generally rely on the `min-width` and `max-width` properties in CSS to avoid resizing issues. The advantages and disadvantages of both types are illustrated in the table on page 34 of your text.

Responsive layouts use a different type of methodology to resize pages depending on the platform being used. Although still new, the rise of mobile Internet technology makes responsive layouts a powerful new tool for Web surfing on mobile platforms. While the technology and various aspects of this layout type are beyond the scope of this course, follow the link on page 34 in the footer of the page to read an in-depth article on responsive layouts.

Screen Resolution

Unlike questions about layout, issues with screen-resolution have long since been resolved. From the early days of Web design, sites were designed and built for a screen resolution of 800 × 600 pixels. This process is referred to as *optimizing.* For most modern designs, the general assumption is that monitors will display a minimum of 1024 × 768; however, as the graph on page 36 of your text shows, resolutions are often set higher. This aim at 1024 × 768 is one of the primary reasons for the popularity of the 960 Grid System, since it slots so well into screens of that size. Although the majority of monitors now are capable of far higher resolutions, 1024 × 768 is likely to be the standard for quite some time because it's a convenient resolution for most consumers and because designs for higher resolutions cause issues with line length and readability.

Focusing on screen resolution for desktops and laptops, however, ignores a growing segment of the Web user population: mobile-browsing platforms. As more people turn to smartphones, iPads, and tablet PCs, designers must take into account layouts optimized for these platforms. Fortunately, these questions have more to do with the tools that are used than the principles of design; good design principles still hold true, regardless of whether you're designing for a high-definition monitor or a small smartphone screen.

Self-Check 1

At the end of each section of *Introduction to Web Development,* you'll be asked to pause and check your understanding of what you've just read by completing a "Self-Check" exercise. Answering these questions will help you review what you've studied so far. Please complete *Self-Check 1* now.

1. What is a *design comp?*

   _____

2. *True or False?* The point of the implementation stage is to determine which technology will be used.

3. Where should the navigation system always be located?

   _____

4. What is the most popular navigation system that's in use today?

   _____

5. *True or False?* A fluid-width layout is often used with the 960 Grid System.

Check your answers with those on page 51.

ASSIGNMENT 2: COLOR

Read this assignment, then read pages 43–79 in your textbook.

The Psychology of Color

Color is extremely important in Web design. Regardless of whether a monitor is a flat-panel display of a laptop or a large LCD display for a desktop, most of today's monitors have a *color depth* (the ability to display) of more than 16 million colors, and the ways in which these colors can be