

Elements of Good Interactive Media Design

I. Define Your Project. Define Your Goals.

You need to define your project and its goals so that you can know if you achieve them, and to gauge the success of your project. This may seem obvious, but you need to make as specific statements as possible so that you can assess your project and see how it stands up to your goals.

II. Understand Your Audience.

Who is your audience and what kind of interaction do you want them to have with your project?

Who is your audience?

- Age range, experience, male or female, specific interests, level of education, ethnicity, etc
- Do any of your audience members have disabilities: sight, hearing, movement, etc.?

What experience do you want your audience to have?

- Active or passive, educating, influencing, entertaining, discovering.
- Will the viewer have to answer questions correctly, input data, solve puzzles, kill aliens, jump over things, connect parts, uncover hidden elements to advance?
- Using the voice of your project to involve the viewer?
 - You can influence the user's experience to be more passive or more immersive by using a particular "voice" in your project. A first-person voice can make a user feel more involved. A third-person voice can make the user feel more like an observer.
- Does the viewer have to click, click-and-drag, double-click, draw, speak, make noises into a microphone, type, etc. to interact with the project? Do not assume that a viewer needs to use only the mouse. One of my favorite CD-ROMs is for children, where the child must blow into the microphone, and as they do this, the sails on the ship fill up and the ship sets sail.
- In what setting will the viewer be using this product? How does that affect aspects of the design of your product?
 - At Home - as long as the target platform can handle the project, usually everything is OK.
 - In a Public Area - sound may not be able to be heard over public noise or the sound may be distracting to others such as sound in a library.
 - Using the project on a specific system (a kiosk) or on their own personal computer? How does that affect your production requirements?

Common Human Characteristics:

Your audience has certain common characteristics: know them, understand them, and they may lead to clues about how to motivate and affect the user's intentions to get involved, engrossed, immersed in your project.

- Most people have a unconscious or conscious desire to make sense out of what they experience.
- Most people take in stimuli and the mind tries to make sense of it right away, based on stored and experiential knowledge.
- Most visually-oriented people (from Western countries who read left to right) will look at the center of the page first, then scan from the upper left to the lower right. Then they'll focus on the most "contrasty" area or most active area of a page (this is shifting as the paradigm of information is shifting away from books and written material). Some studies have shown that, after starting in the center, most peoples' eyes move in a spiral starting at the upper-left and moving clockwise around to the middle.
- Most people assume that larger elements are more important.
- Most people assume that elements on top of other elements are supposed to be "done" first.
- Most people look for the "continue arrow" (or equivalent) on the bottom or lower-right area of the screen.
- Most people who work on a computer have a certain amount of hand-eye coordination with a mouse or pencil.

Can you think of some other common human characteristics?

III. The Information Design.

Information Design (and its close cousin, Information Architecture) is about how the contents of the project is organized, grouped, and ordered. It is in this stage that you will make decisions about how many and what kinds of categories your information will fall into, the relative importance of elements (both at a macro and a micro level), and how this organization creates a structure that will feed into your interface design and underlying informational system. The information design can greatly influence how the user perceives your project – formal vs. informal, highly categorized vs. simply categorized, deep vs. shallow, wide vs. narrow, general vs. specific – to name a few qualities.

IV. The Interface Design.

What makes good design?

- Clear design for an intuitive experience
- Understandable structure and flow
- Clear organization of information
- Respect for human factors
- Projection considerations (how easy to make, how large the files are, etc.)

What are some visual techniques of design?

- Grid system for visual organization
- Alignment of elements
- Margins (borders around the elements and the page edges)
- White-space
- Visual hierarchy
- Contrast
- Symmetry
- Asymmetry
- Duplication (repetition)
- Balance

Signs of amateur design:

- Too many fonts
- Hard to read fonts: Olde English, etc. (except for where appropriate for the content)
- Text over repeating image that makes text hard to read
- Lack of order to material
- Lack of alignment on one page or throughout many pages
- Centering of all elements on the page
- Using colors that do not have enough visual contrast
- Lack of consistency of spacing, sizes, etc. on a page, or across pages

What are the elements of an interface design?

- Background Designs
- Windows
- Control Panels, Dialog Boxes, etc.
- Buttons (control buttons and metaphor visual buttons)
- Images
- Text (body text, headlines, section heads, etc.)
- Video (if included in the project)
- Web Site areas
- Sound
- Animation (including Video)
- Color
- The dimensions of the screen or window

What are the elements of a print design?

- Background Designs
- Images, photos, textures, graphics, etc.
- Text (body text, headlines, section heads, etc.)
- Color
- The dimensions of the paper
- The “animation” that occurs as the paper gets opened or scanned by the eye

Why Storyboard your ideas?

Storyboarding is a terrific way to get the creative juices flowing. It allows you to think visually in a quick manner. Storyboards in their initial phase can be nothing more than scribbles or sketches. From there you develop your ideas more and more until you develop a presentable storyboard that others can understand.

Design Hints: Things to consider when creating a visual layout

These design principles hold for commercial as well as creative designs. With a purely creative project, you can take more liberties – but be aware when you break the rules, and the impact of doing so. Don't just do it for the sake of it.

Grid System:

- Develop a grid system that sets rules for all of your media elements.
- Make sure all elements (images, type, video, etc.) adhere to the grid system.
- All elements should align to the same location from page to page / section to section (no “jiggles” from page to page). Consider what part of each element will be aligned to the grid line (top, left, right, bottom, center).

Design, Look and Feel, and Style Consistency:

- Develop a visual look-and-feel (style) for your project and keep it consistent.
- Style is made through use of colors, images, shapes, text style, page layout, etc.
- Your goal should be *Stylistic Unity*. Stylistic Unity does not mean Stylistic Stagnancy (you can alter your design from page to page). Flex the grid system so that each page is refreshingly different, yet all the pages look like a family being based on the same structure.
- Develop a system or vocabulary of elements that will help you compose your screens like sentences.
- Have a simple, consistent, clear design, yet know when and how to bend or break the rules.
- Layout screens: Where are the control buttons in each screen? Are they close to each other, grouped, or are they all over the screen? It can be frustrating for a user if they keep having to move around to find the new location of buttons and other controls.

Color:

Color can be a great design element, but can be overwhelming at times. In print, the addition of a color costs more. On a computer screen, there is no extra cost, only the possibility of a larger file size.

- Develop a color scheme for your entire project.
- Use the same colors for logically related and like items.
- Consider using different colors to differentiate between sections.
- Make sure the chosen colors make your text easy to read.
- Your chosen colors for text and background should have great contrast of value between them.

Hierarchy:

Look at your designs to see what elements appear to have greatest visual importance.

- Larger does not always mean more important.
- Brighter does not always mean to draw more attention.
- Bold or italic type does not always mean higher in the hierarchy.
- Sans Serif or Serif type does not specify which should have greater importance.
- An element closer to the top of the page does not mean that you should read it first.
- An element closer to the top of the page does not mean it has greater importance.

Text, Type and Fonts:

- Try to use no more than 3 different font styles, sizes and weights.
- The fewer varieties of type that you use, the greater the sense of consistency and order that your pages will have.
- Currently, if you are using real text on the web (not image), you are limited by what standard fonts most people have on their computer systems (Arial, Times). This might not be an issue in a few months (currently is not really an issue with Flash since Flash can embed the font). With this opening up of text possibilities, please do not go wild and use every possible font.
- The rule of thumb is to use no more than 3 styles of fonts, and if you do, use at least 7 styles. This way people know if it a design decision.
- Be careful not to stretch or condense your type beyond about 20% of normal. There are fonts that are designed as extended or compressed. If you stretch a standard font, you will change the relationship between the thicks and thins of the letter forms. This will likely result in a not-so-attractive font.
- If you are stretching your type for animation purposes, consider showing the type in its correct proportion at some point in the animation.

Font Size:

- Font size will vary from computer to computer. Test your design on multiple computers. If you want to ensure a very specific size, create the type as a graphic.
- Font size and style may vary from Mac to PC (Mac use 72 dpi as a standard, PC's use 96 dpi).
- Font size will vary based on the monitor resolution settings of your viewer.
- Some audiences will require larger font size (kids, seniors).
- Some applications will require larger font size (dim lighting, quick interaction).
- If you increase your font size, check your line length character count to make sure it is still an appropriate amount for your audience.

Letter Spacing and Kerning:

- Letter Spacing is the amount of consistent space between letters within a word.
- Kerning is the visually consistent space between letters. For example, the letter combinations VW, OO, Yi, Yu, IT, and Th all need different visual spacing between the letters to make them look consistent with the rest of the text.
- Capital letters need more attention to kerning.
- Headlines or titles that are created as images should be carefully checked for poor kerning.
- Body text does not usually need kerning.
- It is not possible to kern and letter space type consistently in HTML right now, but that might change in future versions.
- You can letter space and kern your image type (type created as a graphic).
- You can letter space and kern your type in Flash and Director.

Text Amount Per Page:

- Be aware of the amount of text you have on a single page. It should not be too little or too much (is there too much text on this page, for example?). People do not like to read a lot of text on screen.
- The line length should not be over 70 characters per line without greater leading (vertical spacing) between lines.
- Aim for shorter line lengths on a computer screen. It is harder to read text on a screen and any reduction of this difficulty is a plus.
- For certain audiences, consider having a reduced line length (approx. 30-50 characters a line).

Contrast, Flow and Motion:

Track the viewer's eye:

- Where does it go to first on your page?
- Where does it move to second?
- Does the eye go to the center of the page?
- Does the eye go to the area with the most contrast?
- Squint and see which area has the most contrast on your page.
- Does the eye scan the page left to right, top to bottom, right to left?

The Grid System:

A grid is a 2-D guide for a page layout system. It is also set of standards and guides that must be adhered to when organizing materials.

Grid Systems help designers by:

- Providing a consistent format, underlying structure and look to the project.
- Keeping a consistent format that will help returning users or readers understand the layout and navigate around your project more easily.
- Providing standards for how to handle elements such as headlines, type, page numbers, margins, and images, helping create a cohesive design.
- Saving time because one has a limited number of options to place elements within the guides.
- Setting standards that dictate type size, style, and color.

For Example:

To see use of a grid system, look at the newspapers. Every day they have different content, but the grid is always the same. If every day The New York Times were based on a different grid system – 2-column one day, 3-column the next, 5-column on Fridays, it would not feel like the same newspaper each day.

V. The Interactivity Design.

Interactivity Design goes beyond just the visual appearance of your project. It encompasses the ways in which the user will interact with and control the project. If Interface Design is the “look”, then Interactivity Design is the “feel”. The kinds of interaction controls and their feel greatly influence the user’s experience, and whether they find the piece successful or not. Interactivity is what separates digital media from print, film and video – exploit it in ways that are appropriate to your project.

Basic Interactivity Guidelines:

- The more interactivity in a project, the greater the expense to create it.
- The more interactivity, the more engaged your viewer gets—unless they are lost.
- The more interactivity, the greater chance of the viewer getting lost. Have options, but not too many. A user generally needs some structure. For example, if we could walk through walls, it might be hard for us to know where we are in an unfamiliar house.
- Too many choices can confuse your user. Design an implied set of paths for the user to take.
- The less interactivity, the greater chance a viewer will get bored or frustrated.
- Communicate the depth of your project:
 - A book has a size and people relate the size to the quantity and depth of the book. A CD-ROM or website has no visual clues as to the extent of its content. How can you convey this information to the viewer? Sometimes an index or site map works, but can you think of better ways?
- Using metaphors:
 - How can you allow the user to be able to sit down and use your interface by relating it to everyday actions they know? A book turns pages to proceed, a folder opens to reach material inside, a person chooses clothing each day from their drawers or closet, etc.
 - Make sure that your metaphor is appropriate for your content.
 - Make sure that your metaphor does not short-change or minimize a subject unfairly (for example, a golf ball being smaller than a basketball).
- Ease of Navigation around the project:
 - Minimize number of clicks to get information – after a user tries a few clicks to get to a section, they’ll get tired and frustrated, and lose interest.
 - Redundancy is not usually a good thing.
 - Cross-referencing of material may be a nice way to develop your project, but if the user can go to the same area through multiple paths, and does not understand the system, they may feel frustrated that they keep getting to the same section no matter which way they go.
 - Make sure the levels of information understood by the viewer – as a viewer gets deeper and deeper into a section, they should understand this. They should be able to jump back to the top menu in one click, but also understand how far “down” the structure they are.
 - A good interface design gives the user some area of flexibility. If users are “stuck on a railroad track,” they will get frustrated.
 - A good interface design gives the user feedback when they make a choice.
 - Keep your interactivity consistent from page to page / section to section.
 - Keep media controls consistent from section to section : video, text scrolling, sound, links, etc.
- A good interface design does not call great attention to itself. It reinforces the material and content of the project, allows the user ease of accessing information, etc.
- Do not have audio on a page with text that has nothing to do with the audio.

VI. Usability Testing.

It's always a good idea to do some testing, even for small-scale projects. Aside from making sure your project works as designed (functional testing), usability testing can provide insight into the effectiveness of your design.

Things to Consider in Usability Testing:

- Do uncoached observation of a new user using your project.
- You can test a full blown software project or do a paper test. Surprising things happen. You get very important information this way. If you do early testing, you can modify your design before you build it.
- It is sometimes best to make assumptions of the main course a viewer will take, make these the defaults, and let the user click to make other choices. For example, when you click on a video, it should start playing; not appear and wait for you to click on play... or should it?