Techniques of designing web

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Abstract- **Web design is defined as "the art and process of creating a single Web page or entire Web sites and may involve both the aesthetics and the mechanics of a Web site's operation although primarily it focuses on the look and feel of the Web site - the design elements." (2010). Web Design. Retrieved January 19, 2010, from http://desktoppub.about.com/cs/basic/g/webdesign.htm. There are many different programs in existence to aid us in designing websites, but we also have the option to create every bit of a webpage from scratch. Mac computers are taking the PC computers down while they take on the world of web and graphic design.**

I. INTRODUCTION

A website is a presentation of content that is delivered to a reader or user via the World Wide Web. This content is stored in electronic files that exist on the server. The World Wide Web is only accessible if you are using a Web browser program. A few examples of these kinds of programs would be Internet Explorer, Firefox, and Safari. A website may include many interactive features that will appeal to the viewers. A website can include any elements such as text, certain formatted images, and almost any type of form. These can be placed on a webpage almost effortlessly if you are educated enough to know exactly what you are doing. The process will be different depending on what program you are using to design your webpage.

II. EVOLUTION OF WEB DESIGN

In 1996, Microsoft released its first competitive browser, which was complete with its own features and tags. It was also the first browser to support style sheets, which at the time was seen as an obscure authoring technique.[5] The HTML markup for tables was originally intended for displaying tabular data. However designers quickly realized the potential of using HTML tables for creating the complex, multi-column layouts that were otherwise not possible. At this time, as design and good aesthetics seemed to take precedence over good mark-up structure, and little attention was paid to semantics and web accessibility. HTML sites were limited in their design options, even more so with earlier versions of HTML. To create complex designs, many web designers had to use complicated table structures or even use blank spacer .GIF images to stop empty table cells from collapsing.[6] CSS was introduced in December 1996 by the W3C to support presentation and layout. This allowed HTML code to be semantic rather than both semantic and presentational, and improved web accessibility, see tableless web design.

In 1996, Flash (originally known as FutureSplash) was developed. At the time, the Flash content development tool was relatively simple compared to now, using basic layout and drawing tools, a limited precursor to ActionScript, and a timeline, but it enabled web designers to go beyond the point of HTML, animated GIFs and JavaScript. However, because Flash required a plug-in, many web developers avoided using it for fear of limiting their market share due to lack of compatibility. Instead, designers reverted to gif animations (if they didn't forego using motion graphicsaltogether) and JavaScript for widgets. But the benefits of Flash made it popular enough among specific target markets to eventually work its way to the vast majority of browsers, and powerful enough to be used to develop entire sites.[6]

III. WHAT IS DESIGN RESEARCH

Design research describes any number of *investigative* techniques used to add context and insight to the design process. Although this article discusses research in the context of contemporary UX/Interaction Design for websites, Design Research has been practiced for decades (since the 1960s) in the architectural, industrial, and academic communities. For a deeper look into this industry, check out publications like Design Research Quarterly, or consider attending the Design Research Conference.

Design Research techniques can be incorporated before, during, or after the design solution is established. If done before or during the design

phase, these techniques are collectively known as user research; if after, they're known as user testing. User research attempts to answer questions like "*who* will use this design?" and "how does this concept work in the context of our users' workflow," whereas user testing seeks to answer: "how*effective* is this design?"

IV.   USE OF PIXELS IN WEB DESIGN

The pixel has been used for Web design and layout for some time now and has traditionally referred to a single point on the user's screen capable of displaying a red-blue-green dot. Pixel-based Web design has been the de facto way of doing Web layout, for declaring the dimensions of individual elements of a Web page as well as for typography. This is primarily because most sites employ images in their headers, navigation and other page UI elements and pick a site layout with a fixed pixel width in which their images look great.

However, the recent emergence of high-pixel-density screens and retina displays has added another layer of meaning to this term. In contemporary Web design, a pixel (that is, the hardware pixel we just discussed) is no longer the single smallest point that can be rendered by a screen.

Visit a Web site on your iPhone4, and its 640 x 960 px hardware screen will tell your browser that it has 320 x 480 px. This is probably for the best, since you don't want a 640-px wide column of text fitted into a screen merely 2 inches wide. But what the iPhone screen and other high-density devices highlight is that we're not developing for the hardware pixel anymore.

The W3C defines a *reference pixel* as the visual angle of 1 px on a device with 96 ppi density at an arm's length distance from the reader. Complicated definitions aside, all this means is that when you design for modern-day, high-quality screens, your media queries will respond to reference pixels, also referred to as *CSS pixels*. The number of CSS pixels is often going to be less than the number of hardware pixels, which is a good thing! (Beware: hardware pixels are what most device-manufacturers use to advertise their high-quality phones, slates and retina displays—they'll lead your CSS astray.)

This ratio of hardware pixels to CSS pixels is called *device pixel ratio*. A higher device pixel ratio just means that each CSS pixel is being rendered by more hardware pixels, which makes your text and layout look sharper.

V.   PURPOSE

As previously mentioned, Design Research is conducted to add context to the design process.

It's also used to combat the natural tendency to design for ourselves (or our stakeholders) rather than designing for our target audience. Don Norman, cognitive psychologist and author of The Design of Everyday Things, explains: "We tend to project our own rationalisations and beliefs onto the actions and beliefs of others." Without design research we tend towards a self–serving, uninformed design process.

VI.   ANALYSIS

The design team is ultimately responsible for analysis of user research. Analysis turns the data collected during research into actionable information. Prominent analysis techniques include (the creation of): personas, mental models, storyboards, nomenclature etc. Although the techniques described here will guide you in *conducting research*, the presentation and discussion of that data is more important.

VII.   CONCLUSION

This paper discusses a framework for design research support system and describe its procedures. It then discusses implementing tech on web data extraction and analysis. A sourceforge web design case is presented as an example of how to apply this framework.

This work is an exploratory study of web retrivel of data on web data. We try to evaluate the data extraction process and data software which can be used tp discover knowledge in the web design. The actual discoveries are still in progress. We are expecting to discover interesting patterns fron the design.

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