Multi-Platform Report

Responsive vs Adaptive Development

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This report will encompass a comparison of two design methodologies, the methodologies up for discussion are Responsive Web Design (RWD) and Adaptive Web Design (AWD), the issue which both of these methodologies try to resolve is how a browser can display a website in order for it to be displayed on multiple platforms (In this case, think of desktop, tablet and mobile (phone) platforms). This is important because end-users access websites from a multitude of devices, if there is no consideration for how the website adapts to these devices browsers widths then the website may prove to be completely defunct on those platforms. Having a website that is not available on a multi-platform basis could possibly even effect users’ opinions of your business or services. Because of this, it is integral to take on one of these design methodologies in order to allow ease of access to all end users regardless of device. These methodologies will be examined under context of development for CITE services of whom the client representative is Stewart Godwin.

RWD is a design methodology that was coined in Ethan Marcotte’s book; Responsive Web Design. RWD aims to provide optimal viewing of a website on any device, its design motifs include simple User Interfaces (UI) that contribute to easy readability and navigation presenting a better User Experience (UX) through minimizing the use of screen-based navigation such as scrolling and panning. When RWD is implemented, it is possible to open a webpage in a desktop browser and scale the width by resizing the browser window. As the webpage width changes, the page will reformat itself to a more appropriate lay-out for the devices display width. On a mobile, or other smaller width devices, this process will happen automatically as information about device width (in pixels) is identified in the network requests. Some advantages to utilizing RWD for Web Development are that it maintains uniformity of its layout. There are several templates available in order to support simple instantiation of RWD and, conversely to AWD, it is often simpler to implement (see the next paragraph for more information regarding this). However, some disadvantages regarding RWD are that due to the nature of it, there is less overall control over how the design is displayed according to the width. Additionally to this, some advertisements may be removed or otherwise obscured (which can effect otherwise sound economic decisions through restricting access to your advertisements) and there will be longer overall load times when trying to access from mobile as compared to desktop, despite the improved performance once the page has loaded. Overall, RWD is still faster than AWD when trying to access a web page and allows better search engine optimization (SEO), meaning that pages will be easier to find due to their not being multiple webpages as is present in AWD.

AWD is a design methodology that was coined by Aaron Gustafson’s book; Adaptive Web Design: Crafting Rich Experiences with Progressive Enhancement. RWD relies on creating a lay-out which responds to the current (or on load-time if on mobile) device width. AWD still serves to meet the same result of RWD, which is to create lay outs which are appropriately displayed on devices of varying widths. However, AWD and RWD achieve this through different methods, whereas RWD creates one page which will react in real time to device width changes, AWD accomplishes multi-platform design through the creation of multiple site layouts of varying device width (For example, a website lay-out will be developed at device widths of 320, 480, 760, 960, 1200 and 1600 pixels), the site will be loaded in the layout closest to the device width which is sent in the network request. Unlike RWD, AWD can not be opened, then scaled appropriately, the page wouldn’t adjust until the device width was sent again with a value that would instantiate a layout change. Due to there being multiple website layouts, AWD will take longer to load overall (particularly if the content is not optimized with a scripting language such as JavaScript) as compared to RWD. Some advantages to utilizing AWD are it allows total control over the GUI of the website, because the sites are made to meet specific width dimensions. Additionally, advertisement can be optimized to target individuals in a range of scenarios based on data collected from access to the website, for example, if you offer marketing to an Apple certified re-seller and your site is primarily accessed by people using Apple devices then that data could be used to support decisions on how to advertise to those individuals given they work inside of Apple’s environment.

Some disadvantages to AWD are that it is highly labour-intensive, this is due to there being a Cascading Style Sheet (CSS) file for each layout meaning these files have to be coded separately in order to ensure that the layout displays the best it can in those dimensions. Additionally, AWD is harder to manage SEO with, given that there are multiple files in the site which will be scanned, possibly being skipped by the search engine in cases where it would otherwise return for a site designed with RWD.

The choice for development for this contracted project (Movie Web Database) from CITE was RWD, this was decided because there was a set number of devices that the project needed to be developed for, which were simply a tablet device, a computer browser and a mobile platform (assumed iPhone or android equivalent) so the implementation of RWD was rather simple as compared to the instantiation of AWD which would have required more coding in order to create the multiple CSS layouts that would be needed. Additionally, RWD is simpler to implement due to the number of templates which are available. RWD will present as a cost-effective and well-paced development for this project, given that a massive re-work doesn’t need to be performed to legacy databases and websites (existing) like in the case of a more established or larger project.