

Responsive Design

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Every year, technology geeks like me page through the annual Internet report from Mary Meeker. Previously a Wall Street analyst, Meeker now is a venture capitalist with Kleiner Perkins Caufield & Byers. Each year, the report includes a fascinating number of detailed stats and anecdotal stories that help us understand where our connected world is headed. <u>This year's report</u> is no different.

Among other storylines, the one of greatest interest to me is the growth of the mobile web. She points out that in 2009, according to StatCounter, 0.9% of web traffic was from mobile devices. Today it has grown to 15%. A few slides later, she points out that iPad adoption has been three times faster than the iPhone, and that tablet shipments surpassed desktop and laptop PCs less than 3 years after the creation of the category.

With this in mind, all of us that maintain ministry websites had better be thinking about the experience for mobile visitors to our sites. Do they need to constantly scroll left and right to read our content? Are they overwhelmed by oversized graphics? Do pull-down menus even fit on the screen?

The concept of Responsive Design has emerged to address these issues.

What is Responsive Design?

WhatIs.com defines Responsive Design this way: "Responsive design is an approach to web page creation that makes use of flexible layouts, flexible images and cascading style sheet media queries. The goal of responsive design is to build web pages that detect the visitor's screen size and orientation and change the layout accordingly."

One important aspect of Responsive Design is that the goal is to effectively serve different device types with a single collection of web documents. Instead of redirecting users to different pages based on their device type, Responsive Design uses HTML5 and CSS to adjust how each page is presented to users on different devices. One reality that makes Responsive Design hard to define is that it's not a single thing. It's not a product from a vendor. It's not a single tool or tag or rule. Instead, it's a collection of techniques that, when combined, have the desired effect.

The two most basic elements of responsive design are fluid grids and media queries.

Most websites are built with a CSS grid – for example a twocolumn or three-column layout with a header and a footer. Many of us have built sites with fixedwidth columns and fixed-height headers and footers. That approach works well when we assume that anyone visiting our site has at least an 800x600 or 1024x768 screen. It doesn't work so well on a much smaller mobile device. Fluid grid design uses percentages instead of pixels in CSS rules so that the page layout adapts to the viewport size.

However, even a fluid grid approach will struggle with a threecolumn layout on a tiny screen. Thankfully, CSS3 supports media queries – conditional CSS definitions based on some aspect of the visitor's browser environment. For example, you could replace a 20%/60%/20% three-column layout with a 30%/70% two-column layout (setting display to "none" for the third column content) if the viewport has a width less than 480 pixels.

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What is powerful about Responsive Design?

The two most common alternatives to Responsive Design are: do nothing or design a separate mobile site.

Doing nothing really means not providing an optimal presentation for mobile visitors. That may mean your web design is so basic that it works just as well (or more likely, just as poorly) on a small screen as it does on a big screen. For most sites, doing nothing means that the site will look great on a laptop or desktop, but will be hard to use from a mobile device. This approach may be acceptable if you really don't want anyone to access your site while they're on-the-go. This points to the most important benefit of Responsive Design - it allows your ministry to serve people no matter where they are and no matter what device they are using to access your site.

Creating a separate mobile site is another valid approach. For example, several years ago, I developed m.seek-first.com to make my www.seek-first.com site accessible to folks on mobile devices. That enabled me (and others) to, for example, read the Bible wherever I went using my mobile phone. Of course the benefit of Responsive Design compared to creating a separate mobile site is that you only need to develop and maintain a single site and a single collection of content, and yet you can still serve your target audience wherever they go using whatever device is convenient for them.

What is dangerous about Responsive Design?

Many folks have pointed to technical challenges with Responsive Design – it may slow down your site because it introduces Ministry space scheduling should be easy as:



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additional queries; it may serve large image files (scaled down for presentation) over slow wireless links; it may not adapt well to different use cases in different contexts, etc. But the biggest issue may be the amount of work required to develop, test, and tweak a responsive design. Most ministries have extremely limited development resources. Getting a design that works right for every page and every content element on every device will require a lot of time investment. There may also be aspects of your site that really should be limited to "desktop" use only. Depending on your situation, I recommend carefully considering the merits of Responsive Design versus maintaining a separate mobile site.

Whatever approach is appropriate, let us keep our sight set on the ultimate goal of serving others for the sake of the gospel of Christ:

"For though I am free from all, I have made myself a servant to all, that I might win more of them. To the Jews I became as a Jew, in order to win Jews. To those under the law I became as one under the law (though not being myself under the law) that I might win those under the law. To those outside the law I became as one outside the law (not being outside the law of God but under the law of Christ) that I might win those outside the law. To the weak I became weak, that I might win the weak. I have become all things to all people, that by all means I might save some. I do it all for the sake of the gospel, that I may share with them in its blessings." (1 Corinthians 9:19-23)

It is my hope and prayer that these articles on the power and danger of technology will encourage you in your daily walk with Christ. Whether it is responsive web design, the printing press, radio, television, personal computers, the Internet, the Cloud, smartphones, or augmented reality, new technologies continue to advance our ability to know God and to serve Him, wherever we go.

Russ McGuire is an executive for a Fortune 100 company and the founder/co-founder of three technology start-ups. His latest entrepreneurial venture is CXfriends (<u>http://cxfriends.com</u>), a social network for Christian families which is being built and run by four homeschooled students under Russ' direction.