

RESPONSIVE WEB DESIGN

The Future of Web

A Whitepaper by
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Abstract

With the mobile devices becoming more affordable day by day and the internet speeds raging to new heights, the browsing of web on these devices is increasing like never before. But with so many new devices flooding the market each day, it has become difficult for the web developers to stick to traditional web designing and development approaches.

Providing a consistent layout across devices, with emphasis on the usability and user experience, is the need of the hour. Responsive Web Design is the approach which has emerged as a saviour for the web developers and that is what this whitepaper focuses on.

Introduction

Developing for mobile devices is what every client is looking out these days. But when it comes to development, the major challenge is which mobile device? Reason behind this question is the rapid development in the mobile industry with hundreds of mobile devices being launched every day. With so many mobile devices around, there is a big challenge to tackle with different screen resolution sizes, orientations and browsers.

Responsive Web Design is the approach followed by the web designers and developers to create web layouts that respond to user's behaviour and environment for optimal viewing experience based on the screen size and platform. Such an approach focuses on providing the best user experience, depending on the amount of space available so that the readability is best and user is presented with what might be important or best to show in that environment.

So for a good Responsive Web Design one needs a mix of good user experience and creativity, with a little bit of intelligence.

Why Responsive?

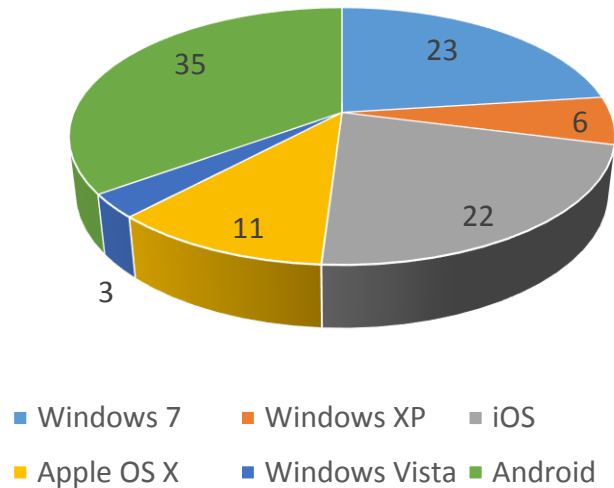
“Day by day, the number of devices, platforms and browsers that need to work with your site grows. Responsive web design represents a fundamental shift in how we’ll build websites for the decade to come.”

- Jeffrey Veen

Creating a Responsive design doesn't just means to create a website which will adapt to the screen size, it means much more. One needs to figure out what might be the target audience of my website and who has the probability of visiting it when and on which device? Once the answers to all these questions are through, one will get enough data to create a website which not just adapts to any device size, but makes it usable on that device.

A recent study has shown that more than 286 million tablets are forecast to be shipped in 2018. Also, by 2017, over a third of the world's population is projected to own a smartphone, making it almost 2.86 billion smartphones in the world. Another major change that has taken place in the last decade is that the PC sales have reduced to a huge extent. A major reason for this shift is evidently the advancements in the mobile and tablet market.

Operating Systems Trends in June 2017



The figure above shows the Operating systems used for browsing the web in the past 5 years. As it was predicted, Mobile phones have surpassed the desktops in terms of browsing the internet. And this is a figure which has been increasing gradually. So the mobile market is an area which has to be kept in mind while creating the website since today 0% of the internet users own a smartphone.

Elements of a Responsive Web Design

The advancements in Web Technology have provided the developers with enough tools to create responsive websites. The basic elements of any such design are:

Fluid Grids

Creating a fluid layout is the first step to Responsive Web Design. In contrast to the traditional liquid layouts, fluid layouts work in proportions and the page elements size their widths relative to other elements.

Instead of using pixels or points as the measurement units in the design, we need to use relative element sizing units like percentages and Em.

Media Queries

Media Queries were introduced back in the days when CSS 2.1 came into existence. At that time it was used in the form of HTML tags and had limited attributes.

With the evolution of CSS3 came the CSS Media Queries. These helped the designers with more

flexibility in terms of physical characteristics of the devices. Media Queries are a good CSS based client side techniques for managing different CSS properties for different screen sizes and orientations.

Flexible Images and Media

With the content blocks being in percentages, the images and other media content also needs to be in percentages so as to best fit in the available space, while maintaining the aspect ratio. There are multiple ways available to implement this but a proper approach is necessary so as to reduce loading times on mobile devices, which are usually on lower internet speeds.

Working on a responsive web design can be further be made simpler by use of certain frameworks. These frameworks provide a pre-built set of CSS classes and required JS libraries to make the development process fast.

Responsive Web Design - The Pros and Cons

Working on a responsive web design just for the sake of making things work across multiple platforms is not enough. A correct decision making is required before going for this. Some of the pros and cons associated with this are:

Pros

- **Time Saving-** Though the approach might take more time than that involved in developing a usual website, this does save time when the same website needs to be targeted to multiple platforms.
- **Cost Effective-** Responsive Web Design is definitely cost effective as with this, there is no need to work on a separate version for mobile or tablet devices.
- **Target Multiple Platforms-** This helps in targeting multiple platforms like: Mobile, Tablet and Desktop at the same time. Also, with no stop being there on the new platforms, this approach is one of the best and prepared for future.
- **Easy Integration-** A responsive web design can easily be implemented into an existing website or with any server-side language.

Cons

- **Simple Alternatives-** There can be a simple alternative of creating a separate mobile version targeted specifically to mobile devices. This process could be time consuming and cost effective at the same time.
- **Speed & Loading Times-** Speed of the web page and the loading times can sometime be more as some content can be loaded and not shown to the user for a device with smaller resolution.

Responsive Web Development at SoftProdigy

SoftProdigy has already aligned itself with the concept and practices of responsive web development. We have been serving our clients with responsive web apps and portals for more than 3 years now.

With each new project coming in, we make sure that cross-platform development is kept as an essential part of the solution delivered. Depending on the client requirements, project type and target users, we provide end to end consulting to our clients and suggest them with the best approach to make their web presence felt across multiple technology platforms.

We have gained expertise in developing responsive web design using core CSS solutions as well as frameworks like: Twitter Bootstrap, Zurb Foundation and Skeleton. At the same time we have aligned ourselves with the advancements in HTML5 to take the best out of the modern web.

About the Author

Rahul Joshi

Rahul Joshi is a Lead Business System Analyst with more than 8 years of experience in the IT industry. Started his career as a Software Engineer, he has worked extensively on front-end development technologies like: Flash and Flex. After moving into business analysis, he has been supporting clients from varied industry domains with technical consulting, focusing on areas like: Mobile Development, Rich Internet Applications and Gaming.

About SoftProdigy

Founded in 2006, SoftProdigy is an award-winning organization with expertise in the areas of Web & Mobile Technologies and Consulting services. Over the last few years, the organization has made a reputation for building quality solutions for its clients that helped them get more out of their business. SoftProdigy's customers range from start-ups to Enterprises like: ING, Aviva, Vodafone and Bajaj. The company has worked with entrepreneurs as well as established corporate houses across the globe to put their ideas into inception and take it to the market. It employs over 150 technology and management professionals who work closely with each other. With a consistent growth track record that has surpassed the industry trends year on year since the company's inception, what sets it apart is the philosophy of pursuing, quoted as "measured success".

For further details contact us at sales@softprodigy.com.

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