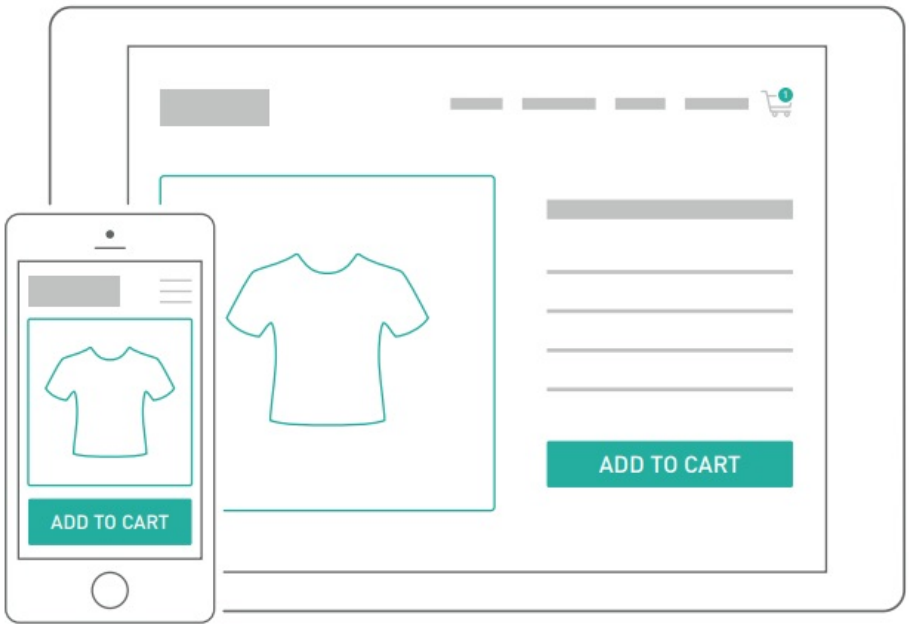
DeviceAtlas

8 MYTHS ABOUT MOBILE OPTIMIZATION

EXPLORE THE MOST COMMON MISCONCEPTIONS AROUND BUILDING MOBILE FRIENDLY SITES



Introduction

Did you use Google today? What about Amazon, Twitter or Netflix?

If so, you have benefitted from device detection technology.

Far from being outdated, device detection is more important than ever as the web is becoming increasingly global and is consumed on a wide range of devices.

These days, it's truly a world-wide web. Some web users are using powerful desktop PCs with big screens and high speed fibre connections; others are using mobile devices with unreliable 3G, data connections or airport WiFi. To think that the same web experience will work well for both is delusional, not to mention bad for business.

Device detection helps smooth out these bumps in the user experience by helping to tailor the experience to the user. Tailoring the user experience means happier users and wider market reach. In this guide we will help you understand why the top web brands are all using device detection to deliver world-class experiences on the web.

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Myth #1

You need a separate mobile URL, unless you use responsive design.

Some people may think there are only two options for a mobile-optimized site: you either go responsive, or build a mobile site with a different URL. This opinion assumes that the mobile site must be a very basic, useless version of the desktop site making mobile users tap the 'switch to desktop' button as soon as they can find it. This view is not true.

There are many non-RWD, mobile-friendly websites that utilize device detection without changing the URL. This technique is known as dynamic serving, Adaptive Delivery, or Adaptive Web Design (AWD). These websites send different HTML/CSS to users on different devices but the URL never changes and the experience is seamless making some visitors think this is Responsive Web Design (RWD).

But these sites are not responsive. Some notable examples include Google, Amazon, Baidu, Yahoo, Live, and many more.

Google is a great example of a site that serves device-optimized experience without changing the URL.
You may not even notice that there are completely different Google experiences on different devices.

Myth #2

Server-side device detection makes your site slower than RWD.

Device detection, used by all adaptive sites, means that a preliminary step, a device lookup, is required before anything is sent to the user device. Some people may think this makes AWD sites slower than RWD which don't require any extra steps. This is a common myth.

A device lookup can take as little as a few millionths of a second so there is no impact on the time a page takes to load. Top-performing device detection solutions are capable of making millions of detections every second and therefore it's hard to imagine that a well-built adaptive site would be slower than a responsive site. If not done right, RWD can make sites extremely sluggish. This is due to the fact that all content is sent to all devices regardless of their hardware capabilities, connectivity level, available features, etc.

Websites using device detection can be really fast and optimized for mobile. To see device detection in action, check out these sites on your phone:

- alibaba.com
- amazon.com
- booking.com
- expedia.com
- tripadvisor.com

See more examples at our blog.

Myth #3

Google will penalize you for building a separate mobile site.

The idea that simply using RWD on your website will 'automagically' improve your search rankings more than AWD is nonsense. Responsive is not a remedy for all mobile SEO ills and you definitely won't get penalized for not going responsive.

According to Google's guidelines for web developers, there are three methods for building mobile optimized content: Responsive Web Design, Dynamic Serving, and Separate URLs.

Separate URLs and dynamic serving may cause the issue of duplicate content that harms SEO but this certainly won't happen if you make sure that all your desktop pages have 1:1 mobile equivalents. To prevent duplication you need to signal the relationship between mobile and desktop versions by including 'rel=canonical' links on mobile pages and 'rel=alternate' links on desktop pages.

Google's #mobilegeddon instantly drew everyone's attention to mobile SEO. Starting from April 21, 2015, mobile-friendliness officially became an SEO ranking factor.

Myth #4

Adaptive design is the "old fashioned" way to do things. And it's going away.

Nope. If anything, the opposite is true. While RWD is getting more attention, adaptive is in many cases superior in terms of maximizing profits from the rapid growth of mobile traffic.

We analyzed how some of the most visited websites are addressing mobile users today. All major online brands favour Adaptive Web Design using a knowledge of the device to allow them to provide mobile visitors with an optimized UX and high performance on any device or connection. This includes the likes of Google, Facebook, Twitter, Baidu, QQ, Amazon, Taobao, Wikipedia, Live.com and many more.

Adaptive design is especially effective for m-commerce sites because it makes it easier to optimize the purchase process on mobile, maximizing conversions from users on smaller screens and slower connections.

- Google - Dynamic serving
- Facebook - Separate URLs
- Baidu - Dynamic serving
- Yahoo - Dynamic serving
- Amazon - Dynamic serving
- Twitter - Separate URLs
- Taobao - Separate URLs

None of the large players use RWD. More examples here.

Myth #5

It's impossible to identify mobile devices because User Agents are unreliable.

To be completely fair, the second part of this statement is partially true. This needs a brief explanation on how device detection works.

Device detection works by examining HTTP headers, especially User Agent (UA) strings, which contain information on the visiting device. UAs are defined in the HTTP standard which says that they include multiple 'product tokens'. The tokens are typically listed by significance, however this is up to the software maker. Given that UA rules are superficial, web developers and device manufacturers can conceal some information or even build nonsensical UAs.

However, this doesn't mean that there is no way to accurately detect devices to build adaptive websites. The best way to overcome problems with User Agent strings is to apply a reputable device detection service that is sophisticated enough to deal with UA masquerading techniques.

A UA string for Safari on an iPhone XR:

```
Mozilla/5.0 (iPhone; CPU iPhone OS 12_0 like Mac OS X) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/12.0 Mobile/15E148 Safari/604.1
```

Myth #6

Device detection is like browser sniffing and browser sniffing is bad.

You might have heard the term 'browser sniffing'. This outdated technique has quite a bad reputation in the web development world. Device detection is often considered (incorrectly) a different name for 'browser sniffing'.

In the mid 1990s Netscape Navigator 2 (Mozilla) was the dominant browser offering more than competing IE 3. Instead of adjusting sites to IE's limitations, web developers often blocked users via a keyword-based technique called 'browser sniffing.' In response to this, browser makers learned to outsmart the 'sniffing' technique by including as many browser names and other keywords in UAs as possible.

Adaptive design does not have much to do with old-school browser sniffing except for the fact that it's also based on analyzing User Agent strings. Its aim is not to block certain kinds of browsers but to improve UX, website loading times and page weight, and, as a result, expand market reach.

UA masquerading started in mid-1990s. Here are two UAs of early, competing browsers:

Netscape Navigator 2: Mozilla/Version [Language] (Platform; Encryption)
Internet Explorer 3: Mozilla/2.0 (compatible; MSIE Version; Operating System)

Myth #7

You can only choose between responsive and adaptive.

If you're looking for an alternative approach, we have good news. Responsive and adaptive are not mutually exclusive options.

Some top-performing websites apply a hybrid approach taking the best of both worlds which makes it possible to build blazingly fast, lightweight websites optimized for all devices. The technique is called REsponsive web design with Server-Side components (RESS).

In a nutshell, you can use RESS to optimize some carefully selected, crucial parts of the website that may degrade the experience on mobile devices. The most common examples are heavy images and videos.

All other elements that don't need optimization can stay the same for all visitors. Read our paper on RESS to learn more: Lightening Your Responsive Website Design With RESS.

RESS can be applied to any aspect of the website that may create a bottleneck or degrade the experience on mobile devices:

- Heavy images, videos, scripts
- Slow ordering and payment process, browsing products, search engine
- Unoptimized menus

Myth #8

Content adaptation is against the 'One Web' principle.

There seems to be a perception that Adaptive Design, based on serving device-optimized experiences, is against the 'One Web' principle. And this is also a common myth.

Coined by the World Wide Web Consortium (W3C), the 'One Web' concept encourages web designers to take into consideration all devices that visitors may use to access websites.

However, bear in mind that the "One Web" concept "does not mean that exactly the same information is available in exactly the same representation across all devices. The context of mobile use, device capability variations, bandwidth issues and mobile network capabilities all affect the representation." (w3.org)

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This means that Adaptive Design and device detection are essential for the 'One Web' concept to actually improve UX on all web-capable devices.

Content tailoring is built into the HTTP standard:

> "The User-Agent request-field contains information about the user agent originating the request. This is for (...) automated recognition of user agents for the sake of tailoring responses to avoid particular user agent limitations."

RFC 1945, T. Berners-Lee

Conclusion

Detecting user devices to offer device-specific online experiences is a well-established technique, much more than RWD. And perhaps this is why there are so many myths around mobile optimization that can influence business decisions on how to address mobile visitors.

Many people working in the online space don't seem to notice when device detection is being used. You might have come across misleading statements, such as that "you should never build a separate mobile site" or that "last time I checked, there's only one Google." With all the buzz around RWD, it's easy to overlook the fact that the largest players extensively use Adaptive Delivery and device detection, instead of 'classic' RWD.

While both AWD and RWD can be used to build mobile-friendly sites, the bottom line is that the website's performance and UX matter most. Developers have a bunch of tools in their toolbox to achieve this—limiting yourself to just some of them (e.g. RWD) doesn't make any sense. You should use whatever tools help you to deliver a good experience and device detection is decisively one of these tools.