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Influence of mobile-friendly design to search results on Google search

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Abstract

This article discusses the impact of mobile-friendliness of the web on mobile search results in Google search engine. The article describes the main features of the search algorithm from Google, which brings with it and their impact on the mobile search results. There are also discussed common mistakes which have a direct impact on the low user-friendliness in terms of mobile experience. The article shows three basic options for optimizing websites so that they are able to conform to the requirements phrases in the mobile-friendliness of mobile search in the search engine Google.

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1. Introduction

At present we can see a flood of new facilities capable of providing web browsing. Among the equipment manufacturers a competitive battle rages. Every manufacturer is trying to reduce the costs of development and production, thereby is coming to the reduction of the price of smart phones, scanners, tablets, game consoles and other devices that have the ability to display web pages. Thanks to low prices these devices can afford more and more people.

Since smart phones are becoming more affordable and provide more benefits from better web browsing, the viewing Web pages on these devices escalates. In the past, the Internet was only available on a few phones and even to their only primitive way. Their hardware was very limited and the equipment was able to understand a very

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simplified version of the XML language called Wireless Markup Language (WML). At that time, the mobile network connection is very limited and slow. Screen sizes were small and the input method cumbersome and unwieldy. Currently, smart phones fully capable to connect to wireless networks as well as lead desktops. In recent years, it is possible to notice that the popularity of mobile devices and the mobile Internet is increasingly growing. Proportionately, also reflects the use of mobile devices to search the internet and search engines to increase traffic. Has long been based on the increasing trend is predicted that mobile search will soon outweigh the desktop (Kadlec, 2014).

Google is trying to respond to this trend logically. The company is trying to guess the user experience with a website in a mobile environment (comfort during use) and translate it into a quality evaluation of the site and therefore the search results (Pítra, 2015).

The ever-growing number of Internet users in smartphones and tablets is also known to traffic to the website. Whether it concerns the application or the website, it is almost essential to have a design optimized for mobile devices. The websites that are not optimized for viewing on mobile devices can have low conversion of customers. The low conversion may be due to the reason that cell phones, hence the mobile device primarily used for quick information retrieval. Another reason for the low conversion for non-optimized pages might be the fact that mobile phone users do not want to constantly grow and shrink previews, fill out an order form, or perform other operations that are not easily feasible just on their devices. As an example, browse the categories e-shop or ordering tickets or tickets. These operations can usually leave up to a computer or laptop that given comfort to work with these websites offering (Machač, 2015).

Despite the removal of the fact that less mobile visitors convert to customers, it is important for them to have an optimized website. These customers can for example see the gallery goods offered by merchant on their site and make such a positive awareness of the service provider or goods. In the comfort of their home they may subsequently decide to purchase. They look at the benefits of trade, see variations of goods and begin to think more about the order. However, if potential customers cannot find the shop in the early stage of the purchasing process, reduces the possibility of visitors to reach and it can happen that they eventually will find a competing web with similar services (Machač, 2015).

2. Theoretical resources

2.1. Types of Websites

There are more and more visitors coming to the website from other devices than from desktop computers and laptops. According to measurements NetMonitor early 2013, every fifth user accessed the Web over cellular. At the end of 2014, it has been every other user. In 2015 approached the website using tablet 1 million users (NetMonitor, 2015).

For this trend, it is clear that more and more visitors are accessing the Web from mobile devices. People commonly use mobile phones, tablets or other devices. These devices are constantly increasing and nobody knows what the next few years will bring (Marcotte, 2014).

Currently, there are three basic types of sites – a standard web, mobile web, and responsive web.

2.1.1. Standard web

As a standard web the “ordinary” or “classic” site can be called, which is accessible on all devices (including non-mobile). Despite the absence of its optimization for mobile devices, it is crafted so that it is fully functional and usable on smart phones and tablets. On mobile devices, displays the same version of the Web as a computer or laptop. Unlike responsive site is displayed on all devices in the same way and do not adapt to the width of the screen or display area (Forgáč, 2013).

2.1.2. Mobile web

The mobile version of our website is usually such a version that is optimized for display on mobile devices. This version can be separated from regular (non-optimized) Web sites that are designed for display on a notebook or on a

computer monitor. Web itself can run on a special website. When entering the website on the server detects the type of device on which the website will be displayed and based on the evaluation of the site is displayed in either mobile or desktop version. It is usual that the user can switch between the different versions (usually after power-clicking on the “View the mobile version” or “display the classic version”). In the case of the mobile web version is thus a self-state version of the existing websites that are optimized for mobile devices (Forgáč, 2013).

2.1.3. *Responsive web version*

The responsive version it is such a version of the site that different devices (with different sizes of screen – the screen) shows otherwise, but in a single version and the same content. Web server side does not discriminate on what the device will display the web and all kinds of equipment sends the same data. Web on the device may appear differently based on the size of the display area (Forgáč, 2013).

Responsive site is not tailored to each of the ever-increasing number of web devices, but is seen as different aspects of the same enjoyment. It can be designed so that users are viewing experiences optimized, but also to designs insert technology based on standards that the designs were not only more flexible but also more adaptable with respect to the media, which it renders (Marcotte, 2010).

3. Mobile algorithm Google

Since April 21, 2015 officially extends Google search using the mobile-friendliness of a Web site as part of the assessment in the search results. He walked to the gradual tagging friendly sites on their mobile preference in search results, and vice versa in the less-friendly scrolling down. This algorithm favors mobile search sites that are tailored to mobile phones, whether it's responsive web or mobile version. So the mobile signal ranking (mobile-friendly ranking factor) is therefore added to the set of evaluation factors in the case of mobile search. It is necessary to note that this is only one of many factors and that this factor is not the strongest. Since November 2014 it can be noticed in the mobile search for mobile websites indicate that they are friendly for mobile, which was essentially the first signal that the search updates (Ungr, 2015).

This update also builds and expands mobile update of 2013 when Google first announced that in the future will be mobile site with poor search engine optimization placed in mobile searches in the same order as in desktop search. This means that sites with poor mobile experience will not be placed and evaluated as well as pages that are adapted for mobile devices. The worse will therefore sites optimized for mobile devices, the harder it will be placed in mobile search (Schwartz, 2013). In 2014 Google conducted an experiment where he started to penalize sites that provide poor user experiences on mobile devices, while mobile search. The company had confirmed that it was testing a new search with the support page with a good user experience for mobile devices. These sites began to search results refer to as “mobile-friendly” (mobile friendly). Google had said that seeing these labels as a first step to help users to improve their experience while surfing the Internet on mobile devices (Sullivan, 2014).

3.1. *Areas of influence algorithm*

3.1.1. *“Ten blue links”*

The mobile algorithm will only be affecting the core “ten blue links” – namely the ten organic search results that are not a part of any other section, such as “In the News” etc. That said, teams for the other of those other sections could always incorporate their own mobile friendly signal into their own algorithm.

This means that other components on the page, such as “In the News”, “In-Depth Articles”, Local Pack results and any other extras on the page that are not the 1–10 (although this number can vary sometimes) straight organic search results will not be demoted for not being mobile-friendly. And it also is why Google only shows the “Mobile-friendly” tag on the organic “ten blue links” only.

That said, other teams are responsible for the other components on the page outside of the organically chosen links. They use their own algorithms to determine the results that are shown. So those teams could decide to apply mobile-friendliness to those sections in the future.

“Ten blue links” means that Google News results are not impacted, including results appearing specifically in Google News, as well as those appearing as part of “In the News” in the regular search results. Along with the “ten blue links” thing, “local packs” are not affected by this mobile friendly algorithm at all. However local businesses that are showing up as part of the organic “ten blue links” results will be impacted. And yes, Google My Business could use their own mobile friendly signal, and many local experts feel they are already incorporating some sort of boost to mobile friendly local sites into their mobile results currently. So if you are a local business, even though this specific algorithm doesn’t impact them in the local pack results, making a mobile friendly site should be a priority. (Slegg, 2015).

3.1.2. Search results depending on the type of device

This mobile friendly algorithm will not affect desktop searches in any way, shape or form, despite many people being concerned it would. This is strictly for mobile devices.

This is one thing many webmasters are surprised to learn. Searches done for tablets are not being affected by this algorithm. It is strictly for smart phones. That said, many mobile friendly designs, particularly responsive design, will deliver a great user experience. But this algorithm does not impact search results done on tablets. (Slegg, 2015).

This algorithm will affect only searches from mobile phones, not on tablets and desktops (more precisely the devices whose user-agent is referred to as a mobile viewport is not greater than 6.3 inches) (Ungr, 2015).

3.1.3. Languages and countries

This mobile friendly ranking algorithm doesn’t affect just English results, it is affecting all languages of Google Search. When Google made the initial announcement, they also included it on all their non-English Google Webmaster blogs so that all webmasters would be aware (Slegg, 2015).

3.1.4. Brands

Brands will still continue to rank for their brand names, simply because their brand power is so strong. They will be demoted for not being mobile friendly, but you shouldn’t see a competitor showing up for a company’s brand name. That said, if a company is penalized in the index through one of the other Google algorithms, such as Penguin or Panda, it could certainly affect how they are showing up in the search results (Slegg, 2015).

3.1.5. Interstitials

Interstitial advertising is the format used on the website. Interstitial ad will be displayed for a few seconds over the whole screen before uploading sites. This is complemented by the possibility of skipping the ad.

Users generally want to get right to the content and don’t like interstitials, so it’s a good idea to send users to the right content for their device. If you have an intermediate page, make sure you don’t treat Googlebot any differently than you would treat a regular user. If users see something, Google should see it too, otherwise that could be considered to be cloaking.

It’s also a good practice to add a “take me to the desktop site” link at the bottom of your site, in case mobile users want the desktop interface (Google Webmasters, 2015).

3.2. Technical aspects of the algorithm

3.2.1. Way of viewing and evaluating site

Google will show a webpage in the mobile search results as mobile friendly only if that individual page passes the mobile friendly test. It does not assign an entire site the mobile friendly status if a certain percentage of the site is deemed mobile friendly. In other words, the mobile friendly tag is applied on a page by page basis. A page will only get the mobile ranking boost if that particular page is mobile-friendly (Slegg, 2015).

3.2.2. Unblock resources and elements

If the elements are such as CSS and javascript is blocked, the site will not pass Google's mobile friendly test, even if everything else on the site passes. So you do need to allow Googlebot to crawl both CSS & javascript to pass. If it is a third-party resource, it shouldn't be an issue since the webmaster generally does not have control over those resources (Slegg, 2015).

3.2.3. Page speed

Page speed is not included in the mobile friendly ranking algorithm. So if someone will first focus on getting your site mobile friendly and then worry about getting the site speed down, if you are pressed for time.

3.2.4. Responsive raking benefit

While Google recommends responsive design for making websites mobile friendly, they have said multiple times that responsive does not give any kind of extra boost if a site is responsive over other types of mobile sites (dynamic serving and separate URLs) (Slegg, 2015).

3.2.5. Matching M. URLs with Desktop Equivalent

If you have separate URLs for desktop and mobile, ensure that you are correctly matching them for Google so there will not be any potential ranking issues, such as the pages not ranking as well or being hit with the duplicate content filter.

You can match them up either by using a rel="alternate" tag on the desktop URL with a rel="canonical" tag on the equivalent mobile URL, or you can match them up in your sitemap (Slegg, 2015).

3.2.6. Separate Google mobile index

Google is also working on a separate Google mobile only index. It is definitely an intriguing idea, and will definitely have huge implications for SEO where suddenly SEOs will have to consider having two versions of the site so they can optimize on for mobile and one for desktop search (Slegg, 2015).

3.3. SEO and Ranking Issues

3.3.1. Continuous and updates

The new algorithm, unlike the previous two search algorithms (Panda and Penguin) will be regularly updated search results. It also means any changes they make in the future could also be corrected on the fly and ranked accordingly. The continuous updating is also nice for webmasters who are used to the pain of waiting months for algorithm updates, such as with Penguin and Panda. An on-the-fly application of this algorithm is a much nicer deal. So algorithm will be running continuously, so if we do see additional signals added, it is something that we would see reflected in the results immediately (Slegg, 2015).

3.3.2. Links Split Between Mobile & Desktop

While Google recommends that webmasters utilizes responsive web design, as it also perfectly fine for users to implement a m.example.com mobile URL strategy. But this can sometimes result in links being split between two URLs which are essentially the same thing, just one is for desktop while the other is for mobile. Google will combine the two separate URLs for calculating for PageRank & ranking purposes.

The way to think about it is that if there are two URLs representing the same piece of content (say, desktop and mobile), Google try to think of those two URLs as a single document in ranking, so links to either URL will count as a link to the combined document. So if the mobile version has 2 links and the desktop version has 3 links, we have a document with 5 links. When a user searches, we'll rank that document as having 5 links, and then choose the correct URL to represent that document in search results based on whatever device the user is using (Slegg, 2015).

3.3.3. Hiding content for mobile users

Many webmasters want to hide content on a mobile page for many reasons, to make a page look cleaner, to not bombard a visitor with masses of text, or simply to make it easier for a visitor to find what they are looking for with the ability to click on which part they'd like more information on.

Many SEO experts recommend hiding the content on the site since it is not suitable for search engines. The question arises whether there is any impact on the hidden content for mobile users. According to the developers of the Google site will be penalized with hidden content, if the hidden content will be properly implemented. As long as the content is hiding on the mobile-friendly version of the site is the same content on the desktop site – and that content is visible on desktop – it won't hurt SEO for the page (Slegg, 2015).

Hidden content can be discounted in ranking, but if the content is visible on the desktop version of your site, we can crawl it and use the information for ranking your mobile site as well since we can share indexing signals between the desktop and mobile versions. (Google Webmasters, 2015).

So as long as is ensuring the hidden content on mobile is visible on the desktop version, you should be good to go. And if it is done through two different URLs, remember to cross reference them appropriately so Google knows they are the same.

4. Methodology and Data

Based on the growing trend of Internet access via mobile devices, the Google search engine responds to the need for better experience of web browsing by running the search algorithm for these devices. Methodology of This article is based on the current state of the research questions and study the principles upon which operates mobile search algorithm from Google. By producing documentation to mobile search engine then find out the most common mistakes that contain Web sites and make them penalized in mobile search results. In the last stage, identify opportunities to optimize the site so as to meet the requirements of the mobile friendly.

5. Results

When we summarize previous information, it is evident that the current web pages must be applicable to more devices than ever. Each device offers its own combination of restriction and capable of displaying the web. It is necessary to be developed separate sites that are friendly to the devices in the future and will accept their flexibility.

This study and subsequent results will be reflected in the dissertation thesis in creating the methodology of development the responsive web applications. Its main goal is to propose a methodology that helps ensure quality web development and be able to prevent a number of frequently repeated problems.

5.1. Common mistakes

Google Search aims to deliver the most relevant – and useful – information to people seeking answers. For that reason, we want to ensure a meaningful “after-click” experience that helps people use information relevant to their task.

Because global web traffic from mobile devices is on the rise, and recent studies show that mobile visitors are more likely to revisit mobile-friendly sites, mobile usability is now relevant for optimal search results. This means that search results for mobile users should lead to content that is usable (Google, 2016).

5.1.1. Unplayable content

Some types of videos or content are not playable on mobile devices, such as license-constrained media or experiences that require Flash or other players that are not broadly supported on mobile devices. Unplayable content, when featured on a page of any website can be very frustrating for users.

Instead of using a proprietary video player or putting content in unsupported formats, it is recommended using HTML5 standard tags to include videos or animations

For animated content rendered using Flash or other multimedia players, consider using HTML5 animations that work across all web browsers. Google Web Designer makes it easy to create these animations in HTML5.

5.1.2. Absence of viewport configuration

Because visitors to your site use a variety of devices with varying screen sizes – from large desktop monitors, to tablets and small smartphones – the pages should specify a viewport using the meta viewport tag. This tag tells browsers how to adjust the page's dimension and scaling to suit the device.

5.1.3. Fixed-width viewport

This report shows those pages with a viewport set to a fixed width. Some web developers define the viewport to a fixed pixel size in order to adjust a non-responsive page to suit common mobile screen sizes. To fix this error, adopt a responsive design for the site's pages, and set the viewport to match the device's width and scale accordingly.

5.1.4. Content not sized to viewport

This report indicates pages where horizontal scrolling is necessary to see words and images on the page. This happens when pages use absolute values in CSS declarations, or use images designed to look best at a specific browser width (such as 980px). To fix this error, make sure the pages use relative width and position values for CSS elements, and make sure images can scale as well.

5.1.5. Small font size

This report identifies pages where the font size for the page is too small to be legible and would require mobile visitors to “pinch to zoom” in order to read. After specifying a viewport for your web pages, set your font sizes to scale properly within the viewport.

5.1.6. Touch elements too close

This report shows the URLs for sites where touch elements, such as buttons and navigational links, are so close to each other that a mobile user cannot easily tap a desired element with their finger without also tapping a neighboring element. To fix these errors, make sure to correctly size and space buttons and navigational links to be suitable for your mobile visitors.

5.1.7. Interstitial usage

Some websites have begun advertising their mobile apps by opening an interstitial popup when users browse their site on a mobile device. This is a bad user experience since screen space on a mobile device is limited; in most cases, an interstitial obscures the page content, and often it can be difficult to dismiss. If you want to promote a mobile app on your website, consider using iOS Smart Banners, Chrome Native App Banners, or App Indexing to show an install button for your app directly in Google search results.

5.2. Options optimization

Unless the content of Web sites optimized for mobile phones, it is appropriate to make the adjustments to reflect changes in mobile search that come with the search algorithm from Google delivers. Even on the excellent technical performance, which is not sufficiently optimized for mobile devices, you can notice the effect of lowering position in search results on mobile devices, which applies the algorithm.

To remedy this situation, there are three basic options that mobile search algorithm Google is considered as user friendly to mobile devices. Using one of them can be avoided penalizing mobile search (Google Developers, 2015).

5.2.1. Responsive design

Responsive web design is a setup where the server always sends the same HTML code to all devices and CSS is used to alter the rendering of the page on the device. Google's algorithms should be able to automatically detect this setup if all Googlebot user agents are allowed to crawl the page and its assets (CSS, JavaScript, and images).

5.2.1.1. Using meta name="viewport"

The meta viewport tag gives the browser instructions on how to adjust the dimensions and scaling of the page to the width of the device. When the meta viewport element is absent, mobile browsers default to rendering the page at a desktop screen width (usually about 980px, though this varies across devices). Mobile browsers then try to make the content look better by increasing font sizes and either scaling the content to fit the screen or showing only the part of the content that fits within the screen.

For users, this means that font sizes may have an inconsistent appearance, and users may have to double-tap or pinch-to-zoom in order to be able to see and interact with the content. For Google, we might not judge a page as mobile-friendly because it requires this kind (or type) of interaction on a mobile device.

5.2.2. Dynamic serving

Dynamic serving is a setup where the server responds with different HTML (and CSS) on the same URL depending on the user agent requesting the page.

As it is not immediately apparent in this setup that the site alters the HTML for mobile user agents (the mobile content is "hidden" when crawled with a desktop user agent), we recommend that the server send a hint to request that Googlebot for smartphones also crawl the page, and thus discover the mobile content. This hint is implemented using the Vary HTTP header.

5.2.2.1. The Vary HTTP header

The Vary HTTP header has two important and useful implications:

- It signals to caching servers used in ISPs and elsewhere that they should consider the user agent when deciding whether to serve the page from cache or not. Without the Vary HTTP header, a cache may mistakenly serve mobile users the cache of the desktop HTML page or vice versa.
- It helps Googlebot discover your mobile-optimized content faster, as a valid Vary HTTP header is one of the signals we may use to crawl URLs that serve mobile-optimized content.

The Vary header tells the browser that the contents of the response will vary depending on the user agent that requests the page. If your server already uses the Vary HTTP header, you can add "User-Agent" to the list that's already served.

5.2.2.2. Correctly detecting user-agents

Detecting user-agents (sometimes called user-agent "sniffing") is generally an error-prone technique. There are many reasons why, but three kinds of failures are common:

1. User-agent detection depends on having a list of user-agent strings (or substrings) to match against. Such lists need constant maintenance and updating and will not match new user-agents. In reality, many such lists are not maintained appropriately and are stale, giving your users a bad experience.
2. When matching user-agents, it's common to mismatch, sometimes detecting a desktop user-agent as a mobile one or detecting a mobile user-agent as a desktop. Likewise, a common mistake for sites is to inadvertently treat tablet devices as smartphones. If you are detecting the user-agent of browsers accessing your site, be sure the detection looks for smartphone-specific strings (such as checking for both the words "Android" and "Mobile") as opposed to generic mobile strings (checking for just "Android"). Learn more in our blog post.
3. Be very careful of cloaking when detecting user-agents. When detecting the user-agent, the site is detecting the device class or type by looking for the device name in the user-agent string; it should not be looking

specifically for Googlebot. All Googlebot user-agents identify themselves as specific mobile devices, and you should treat these Googlebot user-agents exactly like you would treat these devices. For example, Googlebot for smartphones identifies itself as an iPhone and you should serve it the same response an iPhone user would get (redirect, optimized content, etc).

5.2.3. *Mobile website*

Mobile Web sites are characterized by the fact that it runs on a similar, but different URL. In this case, the desktop and mobile versions of different addresses. This is usually a desktop version shaped like `www.example.com` and equivalent mobile version of the form “`m.example.com`”. Googlebot does not favor any particular format of the URL when all accessible to all user agents Googlebot (Google Developers, 2015).

6. Discussion and Conclusions

Not surprisingly, the use of mobile devices to browse the internet has become a major trend. The statistics are clear – in 2014 browsing the mobile device has been higher than normal browsing on desktop computers. It depends of course on the mission site, respectively on services or products it sells. Other numbers will have a website focusing on the target group 'teenagers' compared to any site craftsman whose target group are large companies. It can not be said, however, that such a responsive web design need. The trend of use of mobile devices continues to grow, and sooner or later will affect all sites. Investment, the creation of responsive sites entered today may come back several times in the following years. Unadapted sites other hand, will eventually lose visitors and potential customers.

The fact that Google prefers responsive design before special mobile version is more than logical, and it's not just that, in the case of the two versions must handle twice as many pages. Users have the facilities with a large number of different resolutions and speed of Internet connection. Theoretically, therefore, one of the mobile versions is not enough, they would need millions of them. Well-made responsive design ensures that all users of these pages display correctly, but mainly they will be well used. If the site for mobile visitors is not yet ready, rather I suggest to follow the path responsive design and a special mobile version venturing.

Testing tool from Google is certainly a good place to start optimizing. Website testing on only one mobile phone is definitely not enough. I know from experience that if the operator has been testing its Web site only on your phone, “busy” webmaster occasionally optimized just for this one phone. Preparation responsive design is a complex matter and the site must also work on a resolution that is actually not even used. It is never known in advance where customers begin to view the page. Whether they watch or giant home cinema? The functionality of the site at different resolutions can also try opening the page in a desktop browser, and resizing the window to check the behavior of the page. Pages should always be read, no elements should overlap and the site should the sides of the “overflow” outside the browser window.

Because Google has been pushing responsive design as a way to handle mobile traffic, some people wondered if the only solution was to use responsive. Also Because It Could give a boost rankings. Refer to: Gary Illyés from Google says they recommended it because it worked well for Google, so they believed the solution that would work for almost everyone. That said, webmasters do not have a use for mobile responsive, mobile site and other choices work just as well. He reiterated That Responsive design does not have a ranking benefit.

Google is also working on a separate search index for a mobile device, which after deployment resulted in the complete separation of the search results from the desktop version. It is questionable whether they should web designers to focus on user friendliness for both desktop and mobile devices in the form of responsive design or form two separate sites in the form of desktop and mobile versions. Although Google recommends for creating Web sites friendly to mobile devices using responsive design, in terms of SEO would not be the optimal choice.

Is considering whether to create a mobile and desktop version, each optimized for a given search index. It is of course a matter for debate whether the criteria for assessing the Google Mobile friendliness objectively correct and that are universally applicable across the board. Personally, I was a bit afraid that it might fall from the search results elderly, contain very valuable sites where they just do not have the energy or the owners time to the mobile version of the work (or would not pay off). It will be embarrassing if such sites are difficult to trace because

of their value for the user to change anything, and a lesser degree of friendliness in mobile web use is not necessarily balanced advent of high-tech, but the content of flat sites. Mobile search algorithm may disadvantage and thus quality sites.

6.1. Recommendation

As an optimal choice for the formation of sites that are friendly to the mobile device, the responsive design appears to be the best. One of the reasons is also the recommendations from Google, which provides a separate search for mobile devices to 6.3 inches.

Responsive design also brings additional benefits:

- Makes it easier for users to share and link to your content with a single URL.
- Helps Google's algorithms accurately assign indexing properties to the page rather than needing to signal the existence of corresponding desktop/mobile pages.
- Requires less engineering time to maintain multiple pages for the same content.
- Reduces the possibility of the common mistakes that affect mobile sites.
- Requires no redirection for users to have a device-optimized view, which reduces load time. Also, user agent-based redirection is error-prone and can degrade your site's user experience (see Pitfalls when detecting user agents' section for details).
- Saves resources when Googlebot crawls your site. For responsive web design pages, a single Googlebot user agent only needs to crawl your page once, rather than crawling multiple times with different Googlebot user agents to retrieve all versions of the content. This improvement in crawling efficiency can indirectly help Google index more of your site's content and keep it appropriately fresh.

References

- Forgáč, J. (2013). *Mobilní nebo responzivní web?* [online]. Available at: <http://www.artweby.cz/blog/mobilni-stranky-nebo-responzivni-web>. [Accessed: 2015, December 28].
- Google. (2016). *Mobile usability*. [online]. Available at: <https://support.google.com/webmasters/answer/6101188?hl=en>. [Accessed: 2016, January 4].
- Google Developers. (2015). *Dynamic serving*. [online]. Available at: <https://developers.google.com/webmasters/mobile-sites/mobile-seo/dynamic-serving>. [Accessed: 2016, January 2].
- Google Webmasters. (2015). *Q&A session for mobile-friendly ranking change*. [online]. Available at: <https://plus.google.com/events/cgrhsak37eulru740mgiudrhidk>. [Accessed: 2016, January 2].
- Kadlec, T. (2014). *Responzivní design profesionálně*. Brno: Zoner Press, 246 p. ISBN 978-80-7413-280-3.
- Marcotte, E. (2014). *Responsive Web Design*. New York: A Book Apart, 153 p. ISBN 978-1-9375571-8-8.
- Marcotte, E. (2011). *Toffee-Nosed*. [online]. Available at: <http://unstoppablerobotninja.com/entry/toffee-nosed/>. [Accessed: 2015, December 28].
- Machač, M. (2015). *Google upřednostňuje mobilní weby v SERP. Je váš web připraven?* [online]. Available at: <https://www.interval.cz/clanky/google-uprednostnuje-mobilni-weby-v-serp/>. [Accessed: 2016, January 9].
- NetMonitor. (2015). *Již milion uživatelů v ČR navštěvuje internet z tabletů*. [online]. Available at: <http://www.netmonitor.cz/tz-jiz-milion-uzivatelu-v-cr-navstevuje-internet-z-tabletu>. [Accessed: 2016, January 9].
- NetMonitor. (2014). <http://www.netmonitor.cz/tz-jiz-4-miliony-uzivatelu-navstevuji-internet-z-mobilnich-zarizeni> [online]. Available at: <http://www.netmonitor.cz/tz-polovina-vsech-uzivatelu-navstevuje-internet-z-mobilnich-zarizeni>. [Accessed: 2016, January 9].
- Pitra, L. (2015). *Google a mobilní přívětivost webu*. [online]. Available at: <http://www.lukaspitra.cz/google-a-mobilni-privetivost-webu/>. [Accessed: 2015, December 28].
- Slegg, J. (2015). *Google: Google's Mobile Friendly Algo: Everything You Need to Know*. [online]. Available at: <http://www.thesempost.com/googles-mobile-friendly-algo-guide/>. [Accessed: 2015, December 30].
- Slegg, J. (2015). *Google: Google's Mobile Friendly Algo Will Only Affect the "Ten Blue Links" & Not In the News, In-Depth Etc*. [online]. Available at: <http://www.thesempost.com/googles-mobile-friendly-algo-ten-blue-links/>. [Accessed: 2015, December 30].
- Sullivan, D. (2014). *Google Is Experimenting With Special Ranking For Mobile-Friendly Sites*. [online]. Available at: <http://searchengineland.com/google-special-ranking-mobile-friendly-sites-208957>. [Accessed: 2015, December 28].
- Unger, P. (2015). *Mobilní weby mají ode dneška přednost v mobilním vyhledávání*. [online]. Available at: <http://blog.bloxter.cz/mobilni-weby-maji-ode-nynejska-prednost-v-mobilnim-vyhledavani/>. [Accessed: 2015, December 28].