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Mobile First. Current Trends and Practices in Website Design

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ABSTRACT

Among the prophecies of the past few years in the field of ITC, the word mobile is the order of the day. The Web as we, the generation X, know it, has changed under the pressure of mobile devices. We present concepts and recent trends in website design that have been developed to keep pace with the widespread use of mobile devices, in the context of the evolution of software and infrastructure technologies, Web design, but also of the changes in user behavior reported worldwide that have also manifested on a faculty website. Starting from Google's figures regarding mobile access, we bring forth specific concepts and approaches. This paper aims to be a framework for those who want to reconsider their presence online through websites tailored to these tendencies and to be a starting point for redesigning the website and its related web pages to meet the needs of new generations, all in accordance with the mission of the institution it represents.

1. Introduction

Every website is *work in progress* (Bruno, 2015) (Butler, 2010) (Online Practice, 2015). "The web–the entire web, including every individual website in it" "Once the initial planning, design, development and testing of a website is complete, there's actually plenty more to be done" (Butler, 2010). Constant upgrades must take into account not only reasons related to software security, technological advances in terms of software and infrastructure or web design trends, but also mutations in user behavior, so as to "avoid digital myopia" (Bălan, et al., 2014) (Gournelos, 2015) (Herrington, Reeves, & Oliver, 2005). Clearly, when it comes to the new generations of users, these aspects gain even more in importance. This is the background against which the present paper is set. Its aim is to present concepts and recent trends in website design needed to keep pace with an ever-increasing use of mobile devices for surfing the Internet. The paper continues the research began in another recent study (Margea & Margea, 2017), centered around the concept of Mobile Ready. The present paper aims to provide a framework for those who wish to rethink their online presence through websites which can fully benefit from the online environment as well as from the surge in Internet access on mobile devices (Desruelle & Gielen, 2015) (Smith, 2016). We would like these research to lead to redesigning the website of the Faculty of Economics and Business Administration from Timisoara, Romania, so as to fulfill the needs of the new generations of students, in accordance with the mission of the organization it serves.

Concepts such as Responsive Web Design (RWD), Mobile First (MF), Graceful Degradation (DG), Progressive Enhancement (PE), Progressive Web App (PWA), Journey-Driven Design (JDD), were unimaginable ten to fifteen years ago, when the odyssey of mobile phones was only beginning. Nowadays, mobile phone browsers are used more than desktop browsers, both in terms of access instances and of time spent online – even with respect to native mobile apps (McCollin, 2015).

Using *mobile* apps still is practiced on a large scale without, however, being the main interaction. It is more probable that users would use a browser instead of downloading an app to interact with a brand or to perform a task. Apps such as Angry Birds or Facebook are but two exceptions which prove the rule "[…] that people are more likely to use their mobile browser than to download an app. And the average hours spent on mobile devices has now overtaken desktop use" (McCollin, 2015) (Sterling, 2015).

That said, our approach is based on the following changes of which we are aware and which are also mentioned in the field literature:

- The upward trend of using mobile devices to access information from the Web (Beal, 2015);
- Google Mobile Web initiatives;

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- Trends observed on the FEAA website, in this year (which basically confirm the first mentioned trend) (Margea & Margea, 2017);
- Website mobile optimization tests.

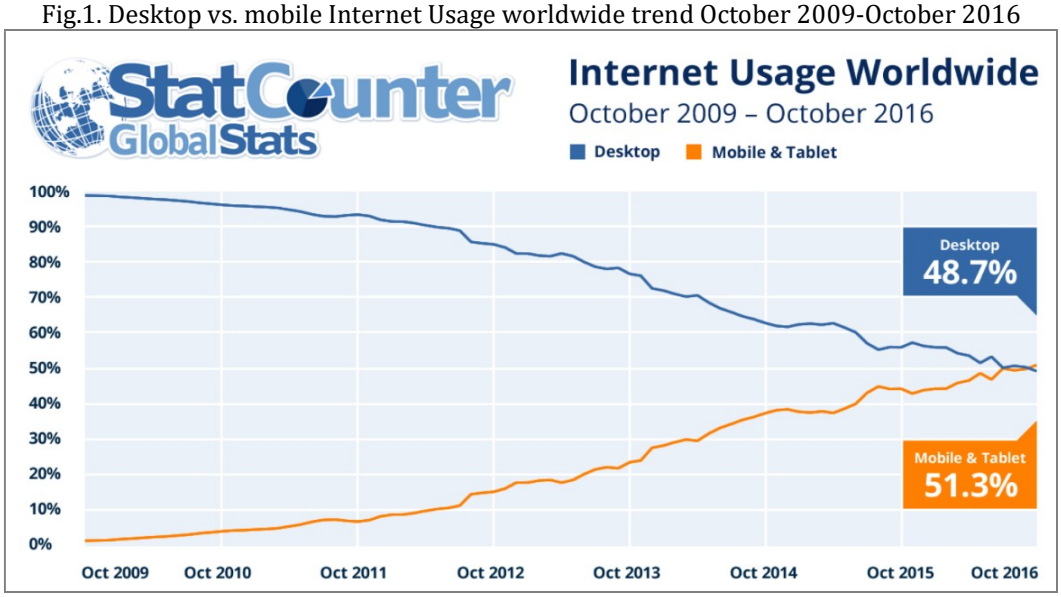
The web has changed many times over the last decade – a process that will most certainly continue (Serianni, 2015). Until some time ago, web designers and developers have worked to create the best desktop sites. This made perfect sense at a time when users focused on desktops, and mobile phones with browsing capabilities and internet access were rare (Graham, 2012). Gradually, device mobility and increasing processing power made users want to be able to perform on their phones all the tasks they could perform on a desktop (Serianni, 2015). "More than ever before the web is something that we carry in our pockets, not something that merely hangs out near our desk or even in our homes" (CMVBlog, 2016) – which was confirmed in 2016, when the number of mobile users exceeded the number of desktop users. This is neither the first nor the second change in the online environment. "The difference now is that users dictate how the web is formed, not companies." (Serianni, 2015) And their opinions will reflect on the website. Seriani (2015) pointed out that, "if your site wasn't created to look the absolute best on all devices, your customers will start to mistrust your business. On a subconscious level, the idea that you are not providing a valuable and common service to them, will cause skepticism on what else you don't value". *Mobile* can no longer be a secondary option, but should become the first instead (*Mobile First design*) (Knutila, 2013a). "Mobile is not a trend, nor is it the future; it is the present" (CMVBlog, 2016). The *mobile web*site is no longer *a second-rate citizen* of the web. (Serianni, 2015)

Mobile devices are used predominantly for online shopping and accessing social networks when users are on the move and in a variety of contexts (Graham, 2012). Most of the growth in digital media consumption is now generated by the use of mobile devices, while desktop computers are taking the second place (Bukuras, 2017). *Cloud computing* has also contributed to the popularity of website access on mobile devices. When on the move, people can easily and quickly access a large amount of cloud data (Graham, 2012).

An important moment in the use of mobile devices for surfing the Internet took place in October 2016, according to data released in November 2016 by StatCounter, an independent web analytics company. StatCounter Global Stats data rely on over 15 billion page views per month, encompassing over 2.5 million websites (Simpson, 2016).

According to StatCounter, in October 2016, for the first time ever, web page access on mobile devices exceeded desktop and laptop access. StatCounter found that 51.3% of the monitored pages were uploaded to mobile devices in October, as opposed to 48.7% on desktop PCs and laptops. In 2010, they represented less than 5% and in 2013 less than 25%. Among mobile devices, smartphones accounted for 46.5% of the traffic, compared to tablets (4.7%) (Titcomb, 2016).

Fig.1. Desktop vs. mobile Internet Usage worldwide trend October 2009-October 2016



Source: Generated by statcounter.com

Monitoring activity on the FEAA website revealed that its users are increasingly using mobile devices, as can be seen from the data we published in our previous paper (Margea & Margea, 2017). Although data from previous years reveal seasonal access of the FEAA website on mobile devices, the data gathered in the first four months of 2017 also confirm the trends registered worldwide, proving that mobile devices are becoming the first option in Romania at least for the younger generation.

Fig. 2. Desktop and mobile access on feaa.uvt.ro. October 2011 to December 2016. Monthly distribution

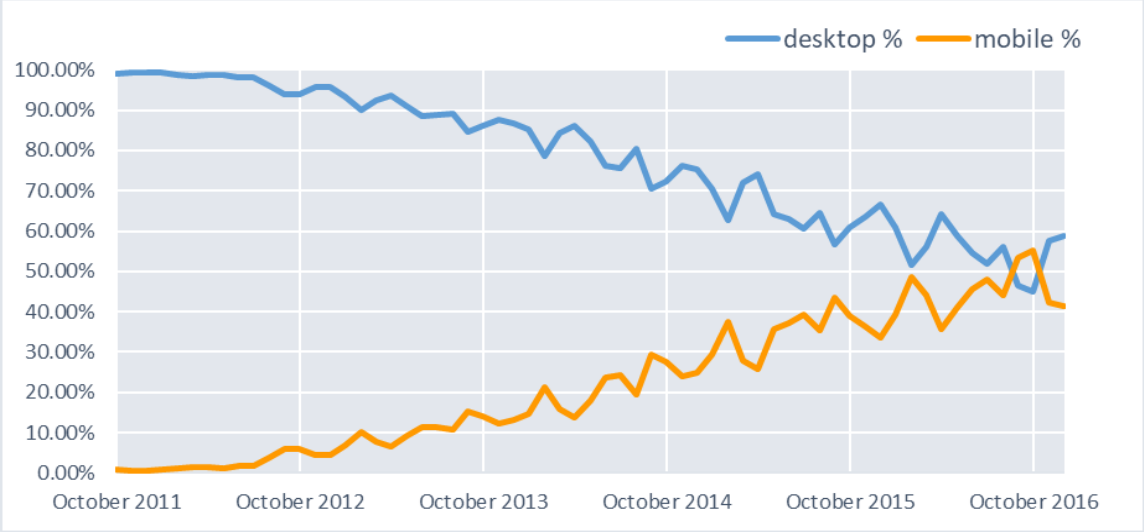
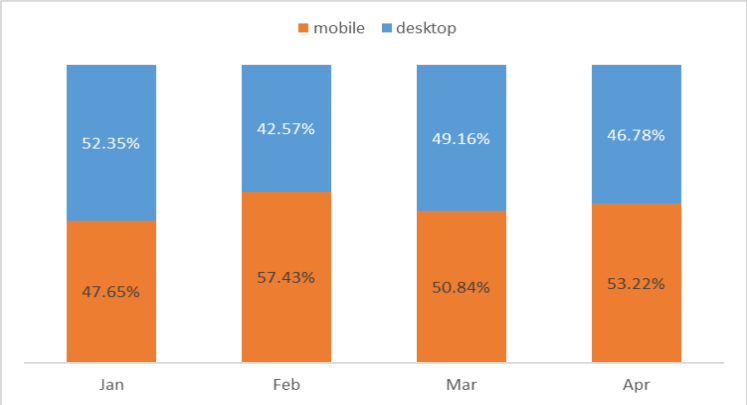


Fig.3 Desktop and mobile access on feaa.uvt.ro. Monthly distribution January -April 2017



Google reacted quickly to this evolution in the online environment by making mobile a priority since April 2015, with the launch of the *Mobile-friendly algorithm update*, its new mobile ranking system (nicknamed "Mobilegeddon"). It penalizes, in search results on mobile devices, those sites that do not work properly on these mobile devices. The next major step towards mobile was made in November 2016, when Google announced the creation of a "*mobile first index*" that prioritizes mobile-optimized websites rather than desktop versions. Thus, a well-designed mobile site has now become a priority, not a luxury (O'Dowd, 2017).

Lately, Google has begun to attach more importance to site performance on mobile devices. This is evidenced by the unsatisfactory scores obtained by the FEAA website and most of the current websites in the Test My Site (https://testmysite.thinkwithgoogle.com) test at Think with Google. In the context of the new performance criteria recommended by Google, the FEAA site scores 57 (poor) out of 100 for Mobile speed and 62 (poor) for Desktop speed, even though Mobile friendliness gets 99 (good).

These changes in the digital environment have begun to be acknowledged by more and more companies. As a result, they have begun to design websites primarily for mobile access (Graham, 2012) and to improve UX for mobile users. We are thus witnessing a paradigm shift in website user experience. Instead of being served desktop versions of websites, with some adjustments, mobile users see websites specifically created for mobile devices (Graham, 2012). This "philosophy" that helps prioritize content to deliver positive, device-agnostic experiences for mobile users, is the foundation of Mobile First (MF) (Mesibov & Levin, 2017)

2. Mobile First concepts and notions

2.1. Mobile as a device

The Mobile First concept that we will refer to throughout this paper is related to the concept of *mobile devices* but does not refer to the entire range of mobile devices, given the richness of the term *mobility*. These devices have numerous features (Viswanathan, 2017), but the ones that, in our opinion, are the best suited for our approach, are restricted to those contained in the following "definition": "devices that a lady can carry in her handbag or a gentleman can carry in his pocket" (Keegan, 2005, p. 33) (Gikas & Grant, 2013, p. 19). Thus, we exclude laptops, netbooks, laptops, tablet PCs and wearables such as

the Apple Watch, even though they are basically mobile devices, according to the meanings given to this term (Beal, 2015) (Viswanathan, 2017).

2.2. The mobile end user

It is clear that the number of end users of ICT technologies is increasing steadily, so classifying them would be useful to our approach. Although we could classify users very simplistically, based on screen size for instance, we think it would be more appropriate to divide them according to what devices they use and how they switch from using one device to another, as follows:

- some of them are mobile device users only,
- some have a dual pattern of usage as they switch between devices during ongoing tasks (Margea & Margea, 2017): usually they initiate a mobile operation, then refine and complete the tasks on a desktop or laptop
- others migrate from desktop to mobile
- (a very small part) have remained loyal exclusively to the desktop.

These categorizations have become possible not only due to hardware developments towards miniaturization, with more facilities that allow for more user mobility, but also due to *cloud computing* (Graham, 2012). Thus, the number of people accessing web content on devices has increased and continues to grow, as shown before.

2.3. Concepts and approaches discussed

Around Mobile First - the central concept of this paper, the study of field literature has revealed many related terms such as Graceful Degradation, Progressive Enhancement, Journey-Driven Design, and Progressive Web App.

These terms refer to web design and development approaches that have emerged in response to mobile website optimization attempts, made in particular to create better web experience by delivering a single site to a unique URL, irrespective of the device and/or screen size (Knutila, 2013b). It is impossible to offer a universally valid recipe, but the resources studied have highlighted many positive aspects and opportunities as to where the Web is headed.

As with any new tendency, this one has its pros and cons. Thus, within just least than a year, there has been a shift from [Mobile First] "Is the Only Design Worth Your Investment" (Smith, 2016) to "Mobile-First Is Just Not Good Enough" (Mesibov & Levin, 2017).

2.4. Mobile First

The term MF has been popularized since 2009, when Luke Wroblewski published the eponymous book (Knutila, 2013c). Through this book, Wroblewski gave support and a name to the "Progressive Enhancement" school of thought (which will be mentioned in this paper) (Wrolebsky, 2011). In 2012, Karen McGrane, author of "Content Strategy for Mobile" (Mesibov & Levin, 2017) rallied as well to this good practice introduced by Wroblewski. Wroblewski and McGrane reached the conclusion that, when faced with constraints imposed by small screens, web design helps us prioritize content and focus on key functions and priorities. Ultimately, the end user enjoys better experience (Mesibov & Levin, 2017) and less crowded screen content, even on desktops (Knutila, 2013c). Moreover, mobile device versatility allows for more opportunities for engaging experiences (Mesibov & Levin, 2017). At first, MF was considered merely the practice of making webpages look well and work well for mobile users (i.e. on small screens) (Adams, 2015), as a first step when designing and developing a website. MF emerged in response to the habit of web designers and their customers to first approach the desktop side of any project, leaving the mobile side as a secondary goal to be achieved later. Even after the emergence of responsive design, most developers start with the "full-size" version of the site and only then move to its mobile version (CMVBlog, 2016).

Why should we no longer begin by designing websites for big screens first? Because our experience of the Internet has changed dramatically in recent years, and users are turning to mobile devices and want to be able to access the Web and websites wherever they are and whenever they need (Jain, 2014). MF implies reversing the workflow: start with the mobile aspects and then work on an extended desktop version (CMVBlog, 2016).

From another point of view, MF "brings" mobile devices forward, both as strategy and as implementation. MF is a strategy and a new way of designing and writing code, requiring a new approach to planning, UX design and web development. MF has become a very popular trend in UX design and web developer communities (Graham, 2012).

Knutila (2013c) stated that MF is generally considered to be the best step in preparing for the myriad of mobile devices coming our way, to say nothing of the time and cost of future changes in design.

Sexton (2016) and Bukuras (2017) believe that MF is not just a mentality or a trend, but a fundamental part of designing things for a multi-screen world, creating incredible experiences for users regardless of what device they use.

MF is still among the best practices when creating a responsive site that has to react to user behavior and viewing environment, as well as to screen size, platform, and device orientation (Bukuras, 2017).

There are big differences between desktop and mobile. Sexton (2016) said that the first thing to do in the MF approach is to forget there is a desktop environment. Functionality, space, use, and resources should be planned entirely for small screens and for hardware and software resources available on mobile devices.

The traditional user's desktop-Web experience is designed for keyboard and mouse interaction, and a digital strategy for such a UX takes into account the context, behavior, audience, targeted behavior, and technological medium.

The typical assumption is that users are stationary and view the browser content on a large screen (Graham, 2012). A UX mobile strategy takes into account all these factors, but the relative importance of changing these factors depends on the user's context. In addition, mobile devices introduce new ways of interaction, such as touch and gestures.

When website design aims to display a website on mobile devices instead of desktops, this leads to a slightly different approach to how content is handled / managed. MF is about the content before anything else: "it is the content that should guide our entire design process. We cannot think about the layout first, because it changes from device to device" (Philipp, 2013) (Janoušek, 2013). Hover menus, sliders, Flash animations have no place here; instead, the focus is on the most rational way of displaying the content (Philipp, 2013).

Often, a website does not really need fancy graphics, fading forms, the latest CSS3 features, etc. to create a refined user experience (Jain, 2014). If a more impressive look is needed, such elements can be added on desktop and tablet versions. From a conceptual point of view, the initial version must be minimalist (Philipp, 2013).

Bartos (The Mobile First Design Checklist, 2016) considers that one of the most important prerequisites for MF to work is to reduce the load time. Apart from screen size, Sexton (2016) as well considers that website load speed is likely the most important and manageable challenge for the mobile project. The web page needs to load quickly and properly in the mobile environment.

MF challenges have changed lately (Philipp, 2013). For example, limited processing power (Smith, 2016) does not seem to be an impediment now that new generations of smartphones and phablets have come to have comparable or even higher processing power when compared to a regular desktop (Knutila, 2013c).

And with the powerful capabilities of modern desktop browsers on mobile devices, it is now possible to offer a progressive, gradually improved experience for a wide range of browsers. Thus, HTML and CSS are not selectively delivered to the user through browser-based detection, but are rather requested by the client (Archer, 2016), so no one is left behind. Beginning to design websites with desktops in mind is now a thing of the past, which results in a pretty rapid website obsolescence (Jain, 2014).

MF does not mean designing content for *mobile only*, or building or launching a mobile version of a site or of an app before the desktop version is released. A MF approach can also be used for *email newsletter design*, mobile applications, *infographic design* and more. (Bukuras, 2017)

Currently, it is assumed that each project should be MF. Under these circumstances, when budgetary and time constraints arise, they often result in MF becoming mobile only, even if initially this was nobody's intention (Mesibov & Levin, 2017).

3. Technical solutions for mobile websites

In order to have a clearer picture of the MF concept, one must mention the *three technological solutions* that website owners and developers have at their disposal to build *mobile friendly* sites. These are recognized by Google and implemented on its most important websites (Google Developers, 2016), (Saeteraas, 2015): **Responsive web design (RWD), Dynamic serving (Adaptive Delivery) și Separate URLs** (**mDot sites**).

3.1. Responsive web design

Responsive web design (RWD) is a *client-side* approach, which delivers the same HTML code at the same URL, regardless of the devices that users use for browsing. The content, however, is displayed differently, according to the screen size of the device. This is the approach approved of and recommended by Google.

Responsive web design is a term coined in 2010 by Ethan Marcotte, which became standard at the end of 2012 (Knutila, 2013b), (Philipp, 2013). Google offers a straightforward explanation: "Sites that serve all devices on the same set of URLs, with each URL serving the same HTML to all devices and using just CSS to change how the page is rendered on the device." The layout is determined client-side, while the display resolution is determined on the user's browser.

Responsive is the term used to describe the ability of a website to adapt to devices with various screen sizes. Layout, fonts, image size, etc. change or resize depending on the size of the browser window. The principle allows for good readability and usability on desktops, tablets and smartphones, without the need for different site variants for each device. RD works with CSS media queries, which check the size of the browser and adjusts the layout and style accordingly. RD is more primitive - some objects are hidden or are simplified for mobile users but remain there (Philipp, 2013).

3.2. Dynamic serving

Also known as **Adaptive Delivery (AD), Dynamic serving** is a *server-side* approach that uses the same URL regardless of the device, but dynamically generates different versions of HTML code by detecting the User Agent of the browser.

Adaptive web design is credited to Aaron Gustafson (Knutila, 2013b) and provides the ability to pre-define the layout of popular screen sizes. The layout is determined server-side – layout-related decisions are made on the web server, not by the client (the user's device) or the browser. The server detects factors such as the device and the operating system, and then sends the appropriate version of the site.

3.3. Separate URLs (mDot sites)

Separate URLs (also known as **mDot sites**) is a *server-side* approach that provides a different code for each device and a separate web address for the mobile version (m.domain.com) - subdomain or path starting with m, mob*, iPhone, iPad or touch. This configuration detects the user's device, then redirects to the corresponding page using *HTTP redirects*.

For businesses that do not have a mobile site yet, mDot sites can be a quick fix although not one recommended by Google. RWD and AD still represent the main trends for building mobile-friendly sites, as they eliminate the need for an alternative mobile version of the site.

As a result, there is still much talk about **Responsive** and **Adaptive** (Knutila, 2013b), as the ideas and goals behind the two are basically the same. Both approaches aim to create better web experience by delivering a site on a unique URL for different devices and screens. The basic distinction is where decisions regarding the appearance of a site are made: the client (for the Responsive version) or the server (for the Adaptive version).

4. Approaches to Designing Mobile Websites

For Web designers, changes in the screen size of navigation devices has always been problematic, but the problem became more acute in 2007 when the iPhone appeared and mobile web use began increasing sharply (Archer, 2016) (McCollin, 2015).

As a result, several website design and development approaches have emerged and developed over the years, as there was a constant need to respond to new usage requirements and to the diversity of mobile devices.

In what follows, we will present some of these approaches, whose emergence has been driven by the evolution of mobile devices, web technologies in general, and changes in user behavior.

4.1. Graceful Degradation (GD)

GD is defined as the ability of a device, of a system or of a network to maintain limited functionality even when part of it is not working anymore. "The purpose of GD is to prevent catastrophic failure" (Rouse, 2007).

At the beginning of Mobile Web, the main problem was that mobile screens were too small and their processing power was limited. In terms of web development, the main difference between desktop and mobile experience was that mobile browsers were very "basic" and did not support many of the key development features (Jain, 2014). All this led to the adoption of a GD approach.

In web design, the GD *methodology* is a guiding principle aimed at making web pages accessible to various browsers, by starting with a fully featured version of the website that is subsequently stripped of unwanted layers of features so as to work on less capable browsers. (Etienne, 2015)

Basically, GD implies designing for the largest or most powerful devices, and then gradually removing features based on constraints imposed by smaller or less powerful devices. (Archer, 2016).

The GD concept suggests creating a perfect experience (usually for the desktop), then considering older browsers and less common devices, ensuring functionality on them, to the detriment of design (Mesibov & Levin, 2017). It starts with designing a nice desktop site, then "stripping" it clean of whatever is superfluous, the purpose being to create an acceptable version for mobile devices (Archer, 2016).

GD is the popular "Desktop First Design" approach from when the desktop was predominant (Knutila, 2013a). It emerged from the desire to solve the differences between the unequal browser capabilities. GD expects users to upgrade their browsers when the "degraded" version no longer suits

their needs. This, in the case of mobile devices – for which browsers are often an integral part of the operating system – was no longer a viable option (Desruelle & Gielen, 2015).

This stage had to be overcome somehow and this happened as the device universe continued to expand dramatically over time. Designers and developers have turned to other MF approaches (Knutila, 2013a) (Archer, 2016).

The first competitive approach to design was Progressive Enhancement.

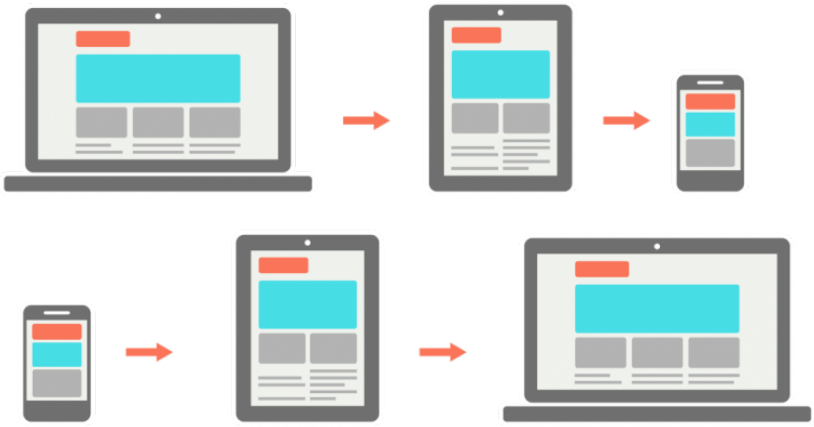
4.2. Progressive Enhancement (PE)

PE first appeared as a reaction to Graceful Degradation (Knutila, 2013a). The term "Progressive Enhancements" was popularized by Steven Champeon and Nick Finck in their presentation at the SXSW in 2003, "Inclusive Web Design for the Future with Progressive Enhancement". (Archer, 2016)

Progressive enhancement and graceful degradation share the same goals when focusing on the same problems. Graceful degradation is the opposite of progressive enhancement and even though they contain ambiguity, they are autonomous principles in web design. (Etienne, 2015)

PE differs from Graceful Degradation in that GD goes from complexity to simplicity, while PE follows the same path, but in the opposite direction. As an approach, PE is believed to be better than GD because it has the potential to cover a wider spectrum of potential issues. PE is the whitelist to GD's blacklist. (Dwyer, 2009)

Fig. 4. Graceful Degradation vs Progressive Enhancement



Source: Adapted from http://www.tisa-software.com/news/blog/141-mobile-first-responsive-design

PE begins with less capable browsers and then builds an experience from there. The PE's core strategy is to design for "the lowest common denominator" (Archer, 2016), then to add additional optional features, based on the capabilities of the devices to be used. In other words, PE suggests tackling small devices (mobile) first and then improving the design as the device or browser gets bigger (Etienne, 2015) (Mesibov & Levin, 2017).

Compromising is possible and desirable (Archer, 2016), but such a compromise should not be to the detriment of the user; instead, in should focus on the user's native capabilities in choosing the device:
"PE uses web technologies in a layered fashion that allows everyone to access the basic content and functionality of a web page, using any browser or Internet connection, while also providing an enhanced version of the page to those with more advanced browser software or greater bandwidth." (Knutila, 2013a)

„PE is a powerful methodology that allows web developers to concentrate on building the best possible websites while balancing the issues inherent in those websites being accessed by multiple unknown user-agents. PE is the principle of starting with a rock-solid foundation and then adding enhancements to it if you know certain visiting user-agents can handle the improved experience". (Dwyer, 2009). Subsequently, the PE was "attacked" and even declared "dead" (Knutila, 2013a). The argument brought against it was that technology had reached a point where PE was no longer needed.

4.3. Journey-driven design (JDD)

Currently, the hardware and software constraints that led to GD and PE are no longer valid. Mobile devices and mobile browsers have evolved, so GD and PE should not be the primary strategy on mobile devices (Jain, 2014). These approaches have evolved as a means of managing the enormous differences between what different browsers support. These days, mobile devices have the CPUs and GPUs on par with desktops, the real limitations being *screen space* and *download bandwidths*.

It has been concluded that a design based on GP and/or PE is not specific enough for the users' needs (Mesibov & Levin, 2017). A true user-centered design has to start with the journeys that users make and the streams they follow to reach their goals. In other words, a new concept has made its entry: Journey-Driven Design (JDD).

„A journey-driven website design takes into account who is using the website and how they are using it to most effectively map out the way information will be displayed. The difference with a journey-driven website is that the design gives visitors the best of what the company has to offer at their point in the buyer journey". (New York Ave, 2017)

The new user-centric idea promoted by JDD consists in planning screen content by, first of all, identifying the objective and the sequence of actions happening step by step. For this, it is better to understand how site visitors accomplish their goal. An example (New York Ave, 2017) suggests addressing direct questions to visitors about their purpose at different stages of an online purchase. Thus, in JDD there is greater interdisciplinarity and an absolute need for closer collaboration between the designer and the strategist who maps the ecosystem and the user's journey, after which JDD continues like any other UX project.

In the traditional UX design, different content strategies used to follow different methods of objective identification for any given screen. What makes JJD more effective than the other approaches is the holistic perspective on the process. Finally, JDD appears to be a more natural approach for the user (Mesibov & Levin, 2017).

4.4. Progressive Web Apps (PWA)

The latest Mobile Web concept is *app-like user experience*. In the case of a well-designed PWA, the user "forgets" that he has accessed the application from the browser because it takes on the look and some functions of a native mobile application: "Progressive Web App can be seen as an evolving hybrid of regular web pages (or websites) and a mobile application." (Bartos, 2016).

Overall, PWA cover a series of technologies, design concepts, and Web APIs that work together to provide an app-like experience on the mobile web. PWA bring features specific to native apps and thus enrich the mobile browser experience while relying on standards-based technologies and running in a secure container accessible to anyone on the web. (Lynch, 2016)

Google referred to PWA as "A new way to deliver amazing user experiences on the web." PWA are user experiences that deliver the full spectrum of web features, while being reliable and fast. This new standard of quality earns Progressive Web Apps a place on the user's home screen. Progressive Web Apps combine the best that the Web and the applications have to offer, without the need to be installed separately (https://developers.google.com/web/progressive-web-apps/).

Google has already proven that it can greatly influence the way we think and act on the mobile web. In February 2015, the company acquired exclusive rights over ".app", the top-level web domain (TLD) for $25 million, the highest price ever paid for a TLD. If we put this Google acquisition into the mobile web equation, everything seems to point to the fact that RWD's domination is coming to an end (Borodescu, 2015, 2016). The Mobile Web is already evolving beyond *responsiveness* into something new and exciting where everything is an app instead of a site, where user interactions are more important than simple page views, and ultimately where all apps are linked together in a "Web of apps" (Borodescu, State of the Mobile Web – 4 Out of 10 Sites Are Oblivious To Google's New Mobile Ranking Signal, 2015).

5. Conclusions

The Web, as we know it, is about to undergo a radical change under the pressure of mobile devices. "According to the latest Forrester studies, the great challenge of 2017 would be the interoperability of digital platforms and mobile applications to improve customer experience" (Ion, 2016). The widespread use of mobile devices with advanced navigation features and the generalization of Internet connections impose new standards in terms of site performance and usability, not only on mobile but also on classical desktops. Websites designed and built in a "classic" manner, even if functioning reasonably on mobile devices, are far from what the current users – always on the move, engaged in multiple activities and switching between a wide range of gadgets even while performing individual tasks – are expecting. Current users expect a higher level of website performance and the integration of features specific to their mobile devices. The site for which we have performed a mobile traffic analysis is that of our faculty, FEAA Timisoara. We have found that the upward trend described in our previous study, "Considerations for the Mobile Web. Paradigm Shift" (Margea & Margea, 2017) is validated globally. A first step towards adapting to the mobile trend was taken three years ago by implementing RWD. However, the mobile trend has increased and has become multifaceted to such an extent that the sites' adaptive capabilities need to be reconsidered, especially in the light of the performance (speed) tests presented in the paper.

Building or transforming a website to meet the MF trend requirements is a difficult task that must consider the technological aspects and constraints as well as the user's behavior, context of use, together

with the organizational objectives and strategies. The ubiquitous RWD is no longer a viable solution in terms of performance and usability, without the use of AD elements and without a GD and/or JDD approach that brings the mobile version in the forefront. We have brought forth all these terms to identify the alternatives currently at our disposal to adapt the FEAA Timisoara website to current and foreseeable requirements.

Designing a website from its mobile version creates several constraints that require focusing on key objectives, with reduced screen space as perhaps the most restrictive aspect from this point of view. Essentially, MF forces us to focus more and more on the published content, which will in turn result in a faster, concise and relevant mobile experience. The essence of the web is, now more than ever, given by User Experience seen as a holistic experience, reaching beyond the mere design or code. The web is not about us. It's not even about HTML, CSS, JavaScript or other tools we use. It's about connecting people (Jain, 2014). Mobile device, mobile user, mobile first, mobile only ... it's clear that Mobilegeddon does not end, it is just beginning (Ion, 2016) (Meunier, 2015).

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