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MOBILE MARKETING
AND ITS IMPLEMENTATIONS

ABSTRACT

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Mobile devices have become increasingly important marketing channel in recent years for all kinds of organizations. They allow marketers to bring forward relevant marketing information for the consumers based on location, purchase history, time and technology available. Although not brand new way of marketing, it is considered to be in its bloom right now, and it is expected to continue growing rapidly in near future. Some experts even say, that mobile marketing is just as vital to businesses as Internet marketing, and can soon even surpass – and partly fusion with - it as mobile phones are becoming consumers' main tool of connecting to the Internet. This gives not just an excellent and fascinating base, but also a reason to study modern mobile marketing as a whole, to further gain understanding of what is the state of academic research on it, and what mobile technologies are implemented on this marketing channel. The thesis is based on a literature review conducted by using various academic article databases such as IEEE Explore and Microsoft Academic Search. The research was also enriched with recent literary and online resources. This allowed for more accurate description of the field, its technologies and its relations with traditional marketing channels.

Keywords: mobile marketing, smartphones, mobile marketing technologies, mobile commerce.

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Mobiililaitteet ovat viime vuosina muodostuneet jatkuvasti tärkeämmäksi markkinointikanavaksi kaiken tyyppisille organisaatioille. Ne mahdollistavat relevantin markkinoinnin kohdentamisen asiakkaille heidän sijainnin, ostoshistorian, ajan ja käytettävissä olevan teknologian mukaan. Mobiilimarkkinointia on tehty lähes koko 2000-luvun ajan, mutta sen katsotaan olevan huipussaan nyt, ja sen merkityksen myös odotetaan kasvavan nopeasti lähitulevaisuudessa. Asiantuntijoiden mukaan mobiilimarkkinointi on yrityksille aivan yhtä tärkeää kuin Internet-markkinointi, ja saattaa jopa ohittaa ja osittain fuusioitua sen kanssa, sillä mobiililaitteet ovat muodostumassa kuluttajien pääasialliseksi väyläksi Internettiin. Tämä ei ainoastaan luo erinomaista ja kiinnostavaa pohjaa, vaan myös syyn tutkia modernia mobiilimarkkinointia kokonaisuutena, jotta saataisiin parempaa ymmärrystä sen nykytilasta sekä akateemisen määrittelyn että hyödynnettävien teknologioiden näkökulmista. Tutkielma perustuu kirjallisuuskatsaukseen, johon hyödynnettiin erilaisia akateemisia artikkelitietokantoja, kuten IEEE Explore ja Microsoft Academic Search. Tutkimuksen rikastuttamiseksi on lähteinä käytetty myös muuta alan kirjallisuutta ja ajankohtaisia Internet-lähteitä. Tämä mahdollisti tarkemman kuvauksen luomisen alasta, sen teknologioista, sekä sen suhteesta perinteisempiin markkinointimenetelmiin.

Asiasanat: mobiilimarkkinointi, älypuhelimet, mobiilimarkkinoinnin teknologiat, mobiili kaupankäynti.

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1   INTRODUCTION

Although mobile phones have been commercially available for three decades, none can argue that we use them more now than ever before. In the last ten years the accelerating evolution of mobile devices has introduced us the marvel of smartphones, which has not only revolutionized how we use mobile devices, but they also allowed businesses to communicate directly with customers regardless of location or time barriers (Haghirian, Madlberger & Tanuskova, 2005). Smartphones have become the central device of computing and communicating for the general public (Lane et al., 2010), as they accompany us wherever we go and they can be regarded as the most personal technological equipment we have (Hennig-Thurau et al., 2010). The increasing availability and deployment of mobile technologies thorough industries has provided completely new revenue possibilities for organizations, and mobile commerce (m-commerce) in general has been identified as the key driving factor of next generation computing (Hameed, Shah, Ahsan & Yang, 2010). Therefore mobile marketing is in academic and commercial sense a topic of growing interest and importance (Leppäniemi & Karjaluoto, 2008). In the USA already roughly 90 % of companies treat mobile channels as a high priority for customer outreach (Yankee Group, 2013).

Khan (2013) states that ″the outlook for mobile advertising, marketing and media gets brighter by the year″. This is supported by the fact, that mobile marketing is still in its early stages, and the mobile marketing methods continue to change and evolve as the technology in mobile devices advances (Persaud & Azhar, 2012). Several other reasons were found by Pousttchi and Wiedemann (2006) which have and still contribute to the growth of mobile marketing: high global penetration of mobile devices, adoption of mobile devices with larger screens, and the availability of higher connection speeds. When combined with the ever growing mobile network coverage, mobiles can reach more users than any other marketing media, and via mobiles it can also be done more personally, which therefore makes mobile marketing very important tool for all marketers, as such benefits are not available through any other medium (Albers & Kahl, 2008; Jayawardhena, Kuckertz, Karjaluoto & Kautonen, 2009). In a sum-

mary, five distinct and important key elements can be extracted to describe the benefits of mobile commerce for businesses. Of these five, the first four mentioned are the most commonly found across different studies, but the last one is usually present as well, just not as often highlighted:

> **Ubiquity** is a primary advantage of the mobile medium. It refers to the ability of users to receive information and perform transactions wherever they are and whenever they want. Such ability can be realised due to the fact that a mobile device is portable and is switched on most of the time. Today, people do not leave home without their mobile phones, and usually do not leave them unattended.
> **Personalisation** The mobile phone is highly personal, rarely used by anyone except its owner. It is also equipped with a SIM card that can store personal information and identity. For teenagers, a mobile phone is used as a means of self-expression, as its features, are personalised to reflect the preferences of its user. For adults, the mobile medium becomes more personal when it contains important information, such as contacts and messages.
> **Two-way communication** is another feature that substantiates the potential of mobile devices in marketing. Mobile devices allow for greater two-way communication than any other tool because of their "always on" connectivity and short set up times (e.g., for booting).
> **Localisation** refers to the ability to identify the geographical position of a mobile user by locating the mobile device. This feature is made possible through various location-based technologies, led by GPS. With this technology, marketers are able to target location-specific products or services to potential customers.
> **Industry background**. The current mobile environment offers multiple channels to reach customers, ranging from simple messaging services such as SMS and MMS, to the mobile Internet. (Smutkupt, Krairit & Esichaikul, 2010, pp. 128).

Thorough this thesis the term "mobile devices" is used, so it is important first to define what is meant with it. Generally mobile marketing is associated only with smartphones and feature phones, and that is exactly what also has been done in this thesis. Tablet PCs are sometimes also called mobile devices, but they are not included in this paper for several reasons. First of all, tablets are not subject to exactly same type of marketing methods as mobile phones. Secondly, 82 % of tablet users primarily use them at home (the opposite of how mobile phones are used), and many tablet users have also stated that tablets are replacing the time spent with laptops rather than mobile phones (Müller, Gove & Webb, 2012). Thirdly, advertisers' spending on tablets has become at the expense of computers instead of smartphones (The Search Agency, 2013). Another important fact when thinking about mobile marketing – and location-based mobile marketing in particular – is that 75 % of consumers access smartphones in-store, compared to only 8 % of consumers who use tablets in-store. All these statistics combined support the claim that, at least in marketing perspective, tablets and mobile phones should not be categorized together. (Husson & Ask, 2013.) Other researchers have also come to the similar conclusions, e.g. Karjaluoto (2010) defined the term "mobile device" as a device which travels with its user, can be fitted inside a pocket, and is utilizing mobile media. Kaplan (2012) also points out that "for mobile marketing to make sense, this mobile de-

vice has to be personal; that is, not shared with anyone else." Although tablets are used personally too, they are also often bought e.g. for the whole family to use, whereas mobile phones are considered the most ubiquitous personal items in the world (Jayawardhena etc., 2009).

The goal of this thesis is to examine the mobile marketing phenomenon. Rise of the mobile marketing has also activated the academics to conduct research on the subject, but unfortunately majority of the research done so far does not address mobile marketing in general, but focuses on small, individual aspects of it, without managing to tie them together and to create common ground (Persaud & Azhar, 2012; Varnali & Toker, 2010). Therefore the research questions for this thesis are:

- How is mobile marketing defined in academic as well as in business sense?
- What are the technologies and how are they implemented in modern mobile marketing?

This research has been done by literature review method, analyzing academic studies from the perspective of research questions' presented above. For the acquiring of such research articles, databases and search engines such as IEEE Explore and Microsoft Academic Research has been used. But because mobile marketing is relatively fast evolving field, recent literature and leading websites of the field were used to support and complement some of the older academic research data where needed.

The remainder of this thesis is structured as follows. The next main chapter focuses on the first research question, and the importance of the defining the mobile marketing is quite self-explanatory within this paper. In the chapter several different definitions and point-of-views from academic researches are studied and also loosely categorized by the author to make them more comparable. The aim of the chapter is not to give one right answer on how to define mobile marketing, but to introduce the reader on to what is the status of the current research and the academic atmosphere on mobile marketing, as well as to give foundations for the following chapter. That following chapter describes all the most common technologies associated currently with mobile marketing. Technological capabilities lay the framework for businesses on how to utilize mobile as a marketing tool, and therefore technology itself is the driving factor on the evolution of mobile marketing, and also the reason why some of the older research on the subject has become less relevant (Persaud & Azhar, 2012). The final chapter summarizes the themes of the thesis, and shortly analyzes what are the main issues in mobile marketing both commercially and regarding its research. Because there are still many aspects of mobile marketing that would need further academic research (Haghirian etc., 2005; Hennig-Thurau et al., 2010), suggestions are made in the chapter regarding what would could be considered as relevant study areas in the near future.

2   MOBILE DEVICES AS A MARKETING CHANNEL

Mobile marketing is a broad term and often used quite loosely when talking about mobile commerce or mobile advertising. Terms have been partially superimposed due to the rapid growth and development of electronic commerce (e-commerce), which led to the emerging of m-commerce, and so the terms have not had time to truly establish themselves. Findings of Leppäniemi and Karjaluoto (2008) support this, as according to them the terms mobile marketing, mobile advertising, wireless marketing and wireless advertising have all been used either implicitly or explicitly in academic research to conceptualize marketing communications in mobile media. More than anything, mobile is a channel, through which information can be quickly and effectively shared. It is studied, that consumers generally have positive image about marketing communications which are implemented through a mobile media. (Karjaluoto, 2010.)

One of the most profound study on the subject comes from Varnali and Toker (2010), who conducted a comprehensive literature review about mobile marketing, consisting of 255 journal articles from 82 different journals published between 2000 and 2008, and they were unanimous in their conclusion that there has not been established a commonly accepted classification framework for mobile marketing. Essentially this means that there is no one real and solid answer for the question of what mobile marketing is. The research points out that rapid increase of the proliferation in the mere business potential of mobile marketing actually attracts researchers from various other fields to study the phenomenon, hence the research of the field as whole is highly fragmented and inconsistent. Studies by Han, Cheng and Song (2010) support those of Varnali's and Toker's (2010), stating that often only specific segments are studied, and rarely more than one of them is the covered in one research. Most popular of the said segments are strategy, applications, various views on consumer behavior (such as perceived consumer value, adoption and acceptance, attitudes, role of trust, etc.), legal issues, and public policies. This has led to not having a common conceptualization of the mobile marketing, and therefore it could be said that no explicit definition is yet agreed on it – at least on researchers' perspective. Varnali and Toker (2010) summarize this as "the scope of mobile mar-

keting is still vague". Smutkupt, Krairit and Esichaikul (2010) made very similar findings in their study, noting that most of the academic research, which have tried to present analytical framing to the subject, has often been context-specific, based on single point-of-view, and even developed purposively to reflect the authors' notions, and therefore the results can be considered beigninconclusive, and having a low applicability.

2.1 Defining mobile marketing

As these findings suggest, the lack of common understanding on mobile marketing term-wise has not stopped researchers from proposing many kinds of different definitions for it. For example one of the earliest definitions comes from Ververidis and Polyzos (2002), who defined mobile marketing as "all the activities required to communicate with the customer through the use of mobile devices in order to promote the selling of products or services and the provision of information about these products and services". This is indeed a very plausible definition for it, because not only it is fairly easy to comprehend and apply, it is also not too precise and limiting towards mobile marketing's many dimensions. Another earlier example is given by Dickinger, Haghirian, Murphy and Scharl (2004), who characterize mobile marketing as "the use of interactive wireless media to provide customers with time and location sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders". Three years later Haghirian and Inoue (2007) refined it as "the usage of mobile internet-based media to transmit advertising messages to consumers, irrelevant of time and location, with personalised information with the overall goal to promote goods and services". It has to be noted however, that these definitions are created roughly ten years ago, and a lot has changed in the mobile marketing scene since. This is a real challenge when researching the field, as most of the literature to date about the subject is based on mobile marketing practices using classic mobile phones, or feature phones, which had only very few and simple capabilities (Persaud & Azhar, 2012).

On the other hand, mobile marketing is sometimes strongly affiliated with traditional electronic commerce. Ngai and Gunasekaran (2007) count m-commerce as a subset of e-commerce, where the differentiation comes in the device or channel used: in m-commerce all parties buy, sell and exchange information with mobile devices wirelessly, contrary to e-commerce which focuses on wired computing environment. Haghirian, Madlberger and Tanuskova (2005) have described the relationship between the two similarly, by stating that mobile marketing is basically "e-commerce that is carried out via mobile devices such as mobile phones and involves an emerging set of applications and services people can access from their web-enabled mobile devices".

As the mobile marketing has become more interesting research topic in recent years (Varnali & Toker, 2010), new definitions have begun to arise in hastier pace. Huang and Symonds (2009) identified mobile marketing as a "process

of delivering messages from business to consumers using permission-based and interactive communication services over mobile communication media". Shankar and Balasubramanian (2009) gave mobile marketing a much more general description - "two-way or multi-way communication and promotion of an offer between a firm and its customers using a mobile medium, device or technology" - which again emphasizes same three things as most other definitions do too: mobile technology, interactive network, and relationship between customer and business. Kaplan (2012) simplified the definition even more by stating that mobile marketing is just "any marketing activity conducted through a ubiquitous network to which consumers are constantly connected using personal mobile device". He also noted, that while personalization is major advantage for mobile marketing, not all marketing needs to be done on a one-to-one basis.

Analyzing these definitions it can be identified that there are two distinct schools on the matter. Some researchers define mobile marketing with highly specific, possibly business-centric ways, which often does lead to a focused research, but as a side effect can rule out some of the other dimensions or variables of mobile marketing. Other researchers prefer the opposite and define mobile marketing quite broadly, which enables various types of studies to be conducted under the topic, but it can contribute to the fragmentation and inconsistency of the academic research in the field. A great example of the latter category can be found in the researches by Smutkupt, Krairit and Esichaikul (2010) and Karjaluoto (2010), who provide practically identical definitions by stating that mobile marketing is "the use of the mobile medium as a means of marketing communications". Smutkupt, Krairit and Esichaikul (2010) do however narrow this down later in their study by naming few very similar aspects of interest as some of the previously mentioned definitions do: "the major advantage of mobile marketing lies in its potential to enhance communications by providing customized/personalized, timely and location- specific information without restriction of time and place". According to Karjaluoto (2010), despite all of the proposed definitions, still no one can say what mobile marketing really means in the end, at least term-wise.

Taking all this in to account, mobile marketing business follow the official definition, which comes from the umbrella organization of the industry, the Mobile Marketing Association (2009): "mobile marketing is a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through and with any mobile device or network". They have further explained the two-part taxonomy of this definitions as follows:

> 1. The "set of practices" includes "activities, institutions, processes, industry players, standards, advertising and media, direct response, promotions, relationship management, CRM, customer services, loyalty, social marketing, and all the many faces and facets of marketing."
> 2. To "engage" means to "start relationships, acquire, generate activity, stimulate social interaction with organization and community members, [and] be present at time of consumers expressed need." Furthermore, engagement can be initiated by the consumer ("Pull") or by the marketer ("Push"). (Mobile Marketing Association, 2009)

One important thing to note right away is that despite the naming, telemarketing – or telesales - is not considered to be mobile marketing. Kotler and Armstrong (2012) agree with this concept and say that "today marketing must be understood not in the old sense of making a sale – "telling and selling" – but in a new sense of satisfying customer needs." When comparing these customer needs between different marketing methods, it is obvious to spot the main difference which mobile marketing brings along: the customer's need is not necessarily bound to a place or time; it is spontaneous and has to be satisfied fast if company is going to convert the need in to a sale. Mobile phones give buyers the power to search for products and services in the exact time of need, which means they react to companies marketing when they are ready to buy. This crucial difference makes the interaction between a company and a potential customer last only minutes or even seconds, which obviously is in totally different category than the timespan of other, more conservative marketing methods. (Scott, 2012.) Despite the differences, most of the usual marketing nuances are still present. Studying interactive mobile services does require theories and knowledge about consumer behavior, psychology and adoption – just like with any other marketing channel (Scharl, Dickinger & Murphy, 2005). But then again one has to take in to account that for example the consumer attitudes, which reflect to other things such as adoption rates, change relatively fast with new technological possibilities and trends emerging in the mobile field.

2.2   Push- and pull-marketing

This technology dependency is exactly what gives modern mobile marketing its unique twist, and it could be said that mobile marketing's definitions are more shaped by the technologies involved, rather than by marketing aims. By studying these technology types and how marketers use them, Dickinger, Haghirian, Murphy and Scharl (2004) discovered that mobile marketing – like most marketing channels - can be divided in to two separate categories: push and pull. However, push and pull communication strategies in mobile marketing differ slightly from general mass marketing methods (Leppäniemi & Karjaluoto, 2008). Push marketing is the more traditional way of the two, where content is "pushed" by or on behalf of advertisers to consumers and into their mobile devices, unrequested by the end-user. Pull marketing covers the rest of the mobile marketing methods, where the consumer willingly "pulls" marketing information or other brand related content to him-/herself by engaging with some preset "trigger media" via mobile device. (Scharl etc., 2005; Leppäniemi & Karjaluoto, 2008.)

According to research by Pousttchi and Wiedemann (2006), it does not matter which of the two types of marketing communication a business chooses to use, because consumers are unlikely to accept any type of mobile marketing if they do not perceive benefit in receiving the advertisements. Therefore the basis of mobile marketing campaign has to be the intention to offer something

of value to consumers. By analyzing multiple mobile marketing case studies, Pousttchi and Wiedemann (2006) created a mobile marketing framework (Table 1), in which is listed in X*Y matrix are the standard types of mobile marketing (X) and standard objectives of mobile marketing (Y). The framework describes the common mobile marketing campaign styles, which represent both push and pull variations. Even though some of the technologies mentioned in the framework have changed (e.g. traditional ringtones are not used nor valued in to the same extent anymore), in overall the framework can still be considered valid today. The main takeaway about the campaign styles themselves is the fact that they intent to provide the added value consumers need, in forms of information, entertainment, raffles or monetary incentives.

TABLE 1 Mobile marketing framework (Pousttchi & Wiedemann, 2006)

	Information standard type	Entertainment standard type	Raffle standard type	Coupon standard type
Building brand awareness	Provision of a push SMS with information about the product	Provision of a trailer for a new film	Raffle advertised by a multiplicity of different media types	Provision of a coupon via push SMS to customers who opt-in for such services at a mobile marketing company
Changing brand image	Provision of a SMS invitation for a special event to enhance young image	Provision of a mobile game to gain innovative image	Placing image through the prize of the raffle	Provision of a coupon for a promotional gift that place desired image
Sales promotion	Provision of an information services in an on-pack campaign	Provision of a ringtone during an on-pack campaign	Provision of a raffle during an on-pack campaign	Provision of a coupon for a trial package
Enhancing brand loyalty	Provision of a mobile newsletter including actual product information	Provision of a mobile game for existing customers	Provision of a raffle for existing customers	Provision of a mobile discount ticket book
Building customer database	Personalized information on condition of registration	Provision of a logo and a ring tone on condition of registration	Request for registration after the raffle	Provision of a coupon on condition of registration
Mobile word-of-mouth	Provision of high relevant information with adding "send to a friend"	Provision of a ringtone in return of mobile word-of-mouth	Participation in the raffle requires participation of other people	Receiving a discount requires passing message on other people

Push-marketing, although still used, is considered to be not as effective as pull-marketing. Push-marketing's greatest issue is the fact, that consumer's perception of interference has a negative effect on consumer's attitude to mobile marketing (Zhang & Li, 2012). Pull-marketing gains advantage by utilizing the richer customer data, so the organizations can provide more personalized and relevant marketing, which is beneficial for both parties (Kautonen, Karjaluoto, Jayawardhena, Kuckertz, 2007). Often pull-marketing is therefore called permission-based mobile marketing, referring to the fact that consumer must agree and give permission to receive information from a company, as well as provide personal data for them in exchange (Hennig-Thurau et al., 2010). This enables businesses to improve offerings and services individually, thus building stronger relationships with customers, and creating mutual benefit (Haghirian & Inoue, 2007). Heinonen and Strandvik (2007) argued, that permission is not an automatic guarantee that the consumer pays attention: it is only a way to open up a communication channel and to have some indication of the consumer's potential areas of interest. It has also been studied that the more experience consumers have with mobile marketing, the less influence the perceived control will have on permission (Jayawardhena etc., 2009). Permission-based marketing is becoming increasingly popular, as consumers tend to trust big brands with established media presence enough to let them take advantage of personal data, such as demographic and location information. In fact regarding the trust, brands' media presence weighs more than the consumers' own experiences. (Han, Cheng & Song, 2010; Kautonen etc., 2007). According to Haghirian, Madlberger and Tanuskova (2005), the higher the perceived credibility of mobile advertiser is, the higher the perceived advertising value is for the consumer.

Mobile technology's rapid development pace has indeed created many new marketing channels and methods in recent years. Consumers on all demographics are engaging increasingly in multi-channel mobile marketing campaigns (Persaud & Azhar, 2012), and mobile devices are increasingly more present in multimedia marketing, either as a supporting or activating media (Karjaluoto, 2010). Haghirian, Madlberger and Tanuskova (2005) came to conclusion that "mobile technologies have the potential to create new markets, alter the competitive landscape of business, and change existing societal and market structures". These digital media have vastly improved marketers possibilities to reach potential customers via content and context personalization like never seen before (Heinonen & Strandvik, 2007). The next chapter is dedicated for giving an easily approachable information about all the common technologies of mobile marketing which are used currently.

3 IMPLEMENTED TECHNOLOGIES

More than in any other marketing channel, technology plays a massive role in mobile marketing. If you examine TV as a marketing delivery method, there are not exactly too much of variation on how the consumer receives the marketing information. When it comes to mobile devices, the device itself is not the key factor in the marketing, but the way certain technologies within the device are harnessed to work as precise marketing tools. Sheryl Sandberg, COO of Facebook, has already stated that mobile is more important marketing medium than TV. (Tode, 2013b.) Pousttchi and Wiedemann (2006) summarized this unique aspect of mobile marketing with the following statement: "the groundbreaking characteristics of mobile communication techniques (ubiquity, context-sensitivity, identifying functions and command and control functions) allow potentials for marketing managers not realizable by the use of other media types". It is likely, that modern smartphones, which have increasing amounts of technology and sensors embedded, will revolutionize a large number of existing business sectors and hence significantly impact our everyday lives (Lane et al., 2010). In marketing alone, these technologies have provided various new advertising methods, and enabled companies to reach their consumers with increased frequency and impact (Zabadi, Shura & Elsayed, 2012).

But the sheer amount of possibilities provided by different mobile technologies - which essentially is the reason why mobile is considered so important for marketers – causes also the most notable issue in the field: it is argued that the best way to deliver mobile marketing information to consumers has yet to be determined. (Tode, 2013b.) In addition to the devices' technology, mobile media success factors also include transmission process, product fit, and media cost (Dickinger etc., 2004). Marketers have to gain more knowledge about mobile technology, especially regarding which different aspects of usability are important to customers and why, and also how usual e-commerce related services can be adapted to wireless environment (Haghirian etc., 2005). Special care needs to be put in the selection of the advertising technique in order to gain attention of the target demographic groups (Zabadi etc., 2012). Studies have shown, that early adopters in mobile technologies and services have im-

pact on acceptance of mobile marketing as they can act as opinion leaders, and therefore marketers should approach and serve their needs first (Han etc., 2010). The purpose of this chapter is to provide basic knowledge of those mobile marketing technologies which are currently in widespread use, and not necessarily to compare them with each other, but to review their strengths and weaknesses, and describe how they can be used. Straight up comparing would not obviously work, as different technologies are used for very different ways with different purposes, so analyzing them individually is more beneficial way to construct this paper in academic point of view.

It should be noted that there are some implementation methods which are not present in this thesis, most notably email marketing, display advertising and paid searches. Those methods are excluded them from this paper, because they are basically the same as standard online marketing methods for PCs, meaning the mobile aspect in them is relatively small. For example, email marketing's mobile differentiation is usually limited to the form factor of the email, or in other words how well the particular email's context is displayed on smaller screen accustomed with mobile devices. The other technologies presented here are built around mobile devices or have other significant link to them, which separates them from those less meaningful mentioned above.

This chapter has been divided into several subchapters, which each represents one mobile marketing technology or a group of similar technologies. These subchapters begin with the general introduction to the said technology and describes how it is used in mobile marketing sense. Then if sufficient data has been available, also the consumers' attitudes and perceived value of these technologies are briefly covered. In the end of each subchapter a real life marketing campaign case is introduced, as other researchers - such as Pousttchi and Wiedemann (2006), Karjaluoto (2010) - have discovered it to be great way to give the reader a more concrete grasp of the possibilities in given technology.

3.1 SMS and MMS

SMS, an acronym from Short Message Service, is by far the oldest and most common of the mobile technologies introduced in this thesis. Originally the technical specifications were laid out as early as in 1980's, but it was not until 1992 when the first text message was sent. One year later the first short message service center was constructed, and the world's first commercial text message was sent in Sweden. (Nilsson, 2012.) Therefore text messaging represents the first and most basic form of leveraging the mobile channel in consumer relationships (Dickinger etc., 2004), and so it is also likely the most thoroughly studied mobile marketing technology.

Now more than two decades later, general atmosphere considers SMS as a retiring technology, but it is still in widespread marketing use. According to Kats (2013a), the SMS is one of the best and most popular mobile marketing channels for building mobile databases and driving consumer engagement. She

also mentions that brands which are just beginning mobile marketing efforts are likely to start with SMS advertising, as it is the most cost effective way to go. SMS campaigns are also considered to generate higher response rates than Internet advertising or their "traditional counterpart", direct mail (Dickinger etc., 2004; Watson, McCarthy & Rowley, 2013). According to Smutkupt, Krairit and Esichaikul (2010), research conducted by Doyle (2001) identified that besides the low cost, the key features behind SMS marketing's success are also the ease of use, message forwarding ability, and its unobtrusive nature. Huang and Symonds (2009) found also couple of key technological aspects shared by both SMS and MMS, which make them plausible marketing channels: firstly, messages have long lifetime since they are stored by default to receiver's phone's memory, and secondly, the messaging systems are based on digital communications, and hence are easily recognizable by computers, enabling full automation of the process.

Bearing in mind that SMS marketing is the most widespread and longest used mobile marketing method, it does not come as a total surprise that studies have indicated consumers having strong negative attitudes toward it. Watson, McCarthy and Rowley (2013) remind though, that these studies are mainly conducted during pre-smartphone era, and consumers' acceptance to mobile marketing has evolved since. It can be challenging to create brand awareness with SMS advertisements, if targeted consumers have established negative attitudes toward the mobile media. Although SMS messages grab consumer's attention effectively, content of the message itself does not automatically attract consumer's interest at all. Most critical value-affecting factors of SMS marketing are found to be the credibility and authenticity of the sender, time of receiving the message, entertainment, and relevancy of the content. (Zabadi etc., 2012; Zhang & Li, 2012.) SMS marketing is usually push-marketing in which marketers send thousands of messages at the same time to large audiences using numbers which they usually get from their own customer databases, or buy from a third-party. This takes the control away from the consumers, which is not wise in the long run, as it is studied that the more control the marketers allow the end users to have, the more likely those same users will deepen their involvement with mobile marketing (Persaud & Azhar, 2012).

Multimedia Message Service – MMS – is richer in content, but not as popular marketing tool as the basic SMS. However consumers do react more positively to MMS than SMS marketing (Heinonen & Strandvik, 2007). MMS can include images, text, audio, animations and video, and it is also not limited to 160 character limit like SMS. Like for regular consumers, MMSs are more expensive than SMSs also for service provider themselves – not by much, but enough to make a difference in mobile marketing campaigns reaching to thousands of people at the same time. Negative preconceptions are likely to form for MMS from the consumers' experiences with SMS marketing, and therefore marketers need to emphasize the uniqueness and entertainment of the message for it to truly differentiate from SMS mass marketing (Zabadi etc., 2012). Another downside is that not even today all mobile phones support MMS: in 2012

only 85% of United States' 250 million people could send and receive them, which means that 37.5 million Americans were out of MMS campaigns' reach. So if a marketer doesn't have the ability to segment these users, it takes a notable risk choosing a MMS method to go. (Hopkins & Turner, 2012.)

Starbucks, for one, realized this issue, and countered it with a clever solution. They started their multi-level marketing campaign by sending a SMS trivia for their opted-in customers. After answering, they received another text message encouraging them to subscribe for Starbucks' "summer alerts". If end-user gave permission to it, then service provider's back-end could identify whether or not the customer's phone was able to receive MMS. If the phone was capable, then two days later Starbucks sent an MMS, an 11-second video, promoting one of their products. Message also had links to that particular product's dedicated Twitter and Instagram accounts. Links did not only add the third layer to the campaign, but they also made it possible for Starbucks to track click-through-rates for their social media pages and measure engagement from consumers' uploaded images to this services. (Tode, 2013c.)

3.2 2D-codes

The original barcode design originating from 1950's – of which one variation is still used e.g. in grocery stores – is considered to be one-dimensional code, because it contains data only in horizontal direction. 2D-code is an umbrella term for all "two-dimensional" codes, because they have data presented in horizontal and vertical directions, making them not only much more versatile, but also able to contain many times more data (Walsh, 2009). Hopkins and Turner (2012) define 2D-code as a "mobile barcode that allows smartphone camera to act as a scanner".

Usually when talking about 2D-codes in mobile marketing, only one particular technology is meant: the QR code (Figure 1). Other, newer types of 2D-code exist too, such as Microsoft Tag, EZ Code, DataMatrix and UPC/EAN, but they are not nearly as widespread in use (Hopkins & Turner, 2012). QR codes, or Quick Response codes, were introduced back in 1994 by a subsidiary of Toyota called Denso Wave, as a way to track car parts in vehicle manufacturing. The usage of the codes now varies from commercial tracking to entertainment as well as product marketing and in-store labeling. QR codes have started to attract marketers' interest only just in recent years, as smartphones have begun to feature QR code readers. They are considered to be popular in Japan, but the acceptance rate is still relatively low in the rest of the world: for example in 2011 only 6.2 % of United States' mobile audience had scanned such code on their devices (Hirakawa & Iijima, 2009; Shin, Jung & Chang, 2012). The growth of usage rate is likely, as research has shown that consumers value the ease of use and the benefits they receive from QR code campaigns, and perceive continued use positively (Watson etc., 2013).

FIGURE 1 Sample QR code for https://www.jyu.fi

2D-code's ability to store characters does not mean, that when scanned with mobile device's camera, they would only be capable of outputting text, numbers, SMSs or email messages. Advanced features like vCalendars and vCards are also supported. These two are standardized technologies of which the formal is used to share contact information (as a sort of a digital business card) and the latter to exchange calendar entries – both commonly supported in any modern mobile phone (IMC, 2013). But from mobile marketing aspect, the real potential of 2D-codes lies in its ability to contain and launch a hyperlink. Thus it can not only open a website, but also do a great number of other things, including play a video, download a mobile application or give map directions. (Hopkins & Turner, 2012.) Ability to launch hyperlinks has also paved the way for social media integration on QR code advertisements. According to Rennie (2013), social media has to be part of any QR code campaign, and if a marketer dismisses this fact, then they will not reach their true target audience and lose their chance to make that campaign go viral. The importance of social media in mobile marketing is covered more thoroughly in chapter 3.4 of this thesis

In summary, QR codes are the gateway for traditional, or "analog", marketing medium through which consumers can interact with digital assets (Rennie, 2013). QR codes can be "printed" virtually anywhere – all they need is high enough contrast ratio to be readable – and most of them are accessed in the street or at home, as two most scanned media are magazines and outdoor adverts or posters (Watson etc., 2013). For marketers, QR codes are a cheap way to give depth to advertising and possibly boost its reach. Also consumers may feel more deeply connected to the brand due to the nature of high-tech interaction (Shin etc., 2012).

Textbook example of the diversity of mobile marketing and QR code usage is the Gilette's "Keep it smooth shaven" multichannel campaign during January 28 to February 13, 2013, which was basically a digital poll for women on a dedicated campaign website, asking them do they prefer to kiss a clean-shaved or a stubbly face. QR codes were present in large magazine ads, and social media advertising was used as well. 34 % of the campaign's traffic came through mobile devices. (Johnson, 2013b.) However, Taco Bell and ESPN did what they called a "QR code-only campaign" in 2012 during USA's college football championship, where football fans could scan a QR code from Taco Bell's product boxes and which would then enable them to watch exclusive

mobile videos from ESPN. The campaign generated over 225,000 scans, which proves that when properly designed, QR codes can be a valuable marketing tool by themselves too. (Kats, 2013b.) Shin, Jung and Chang (2012) reminded, that key to successful QR code marketing is not that different from any other marketing campaign: marketers must firstly understand what consumers want, and secondly also understand the motives why consumers adopt certain technologies while ignoring others.

Although QR codes are not a new innovation, it can be argued that their usage in mobile marketing covers fairly short amount of their history. A Burson-Marsteller study (2010) reveals that only 22 % of corporations on Fortune 50 –list, which contains top 50 U.S. corporations as ranked by their gross revenue, have used QR codes in their marketing. This assumption of QR code's late blooming was also noted by Tode (2013a): "When it comes to mobile software and technology, 2012 could easily be labeled the year of the QR code, with numerous marketers adding the 2D codes to their packaging, using them to create virtual storefronts and placing them in print ads." The adoption rates of QR codes follow on some extent the market share of smartphones, because feature phones, or low-end phones, do not have the 2D-code scanning capabilities of smartphones. Now that smartphones have outshipped feature phones worldwide for the first time (IDC, 2013), it is likely that the importance, adoption and acceptance rates of 2D-codes is about to rise even more (Shin etc., 2012).

3.3   Location-based marketing

Perhaps the most iconic technological tool of modern mobile marketing and the very thing which many think radically changed the way businesses see mobile users, location-based marketing has firmly consolidated its position in the marketing field. David Meerman Scott, the author of "The New Rules of Marketing and PR", even wrote that "adding GPS (Global Positioning System) capability to mobiles has transformed a once mundane voice-only mobile phone into a targeted weapon focused on proximate surroundings". (Hopkins & Turner, 2012.) In other words, GPS enabled mobile devices allow the consumers to quickly find product or service regardless of the familiarity of their surroundings, and it also makes possible for businesses to provide the said consumers with information that is not just more valid to them, but also more accurate and time-sensitive than ever before (Huang & Symonds, 2009). Pura (2005) says that this ability to pinpoint the customer's location at a certain time is indeed one of the most promising features of m-commerce. But location-based mobile marketing actually is a lot more than just taking advantage of the GPS on smartphones: it includes location-based social media services, Near Field Communications (NFC), Bluetooth and geo-fencing. These so called geo-precise mobile marketing efforts did more than double from 2012 to 2013 (Johnson, 2013c).

Location-based services (LBS) are the driving force of location-based marketing, and often mistakenly considered to be its only implementation method.

LBS can be defined as services, which utilize the mobile device's user's current geographic position to provide personalized services (Lehrer, Constantiou & Hess, 2010). They offer detailed information about "offline" consumer in a way that was available earlier only to online companies, such as exact time when a customer entered an outlet and what comments were made during the visit (Kaplan, 2012). It is studied that mobile users' perceived value for the dynamic LBS is high, and although usually these services are free (assuming that user has a mobile subscription with data plan) users are willing to pay for them. This is mainly because these types of services give relevant information for user on the move and do it more conveniently than other means, e. g. browsing the Internet. (Lehrer etc., 2010.) Relevant information alone is not enough though, consumers require it to be easily attainable whenever and wherever they need it, and it has to be provided through user-friendly interface to keep consumer loyal to the service (Ververidis & Polyzos, 2002). Despite its proven benefits, commercialization of LBS has been surprisingly slow due to the low awareness of the services and lack of interesting content (Pura, 2005). LBS have also been used only for a relatively short time in mobile marketing, and hence the research about it is still scarce and often limited to studies of adoption rates and driving factors (Lehrer etc., 2010). Therefore companies have only begun to grasp the economic potential of LBS, as they still need the said research data on e.g. what services offer most significant value to consumers and what affects the customer loyalty to them (Hennig-Thurau et al., 2010; Pura, 2005).

These services are often mobile applications which take advantage of the previously mentioned GPS. Actually LBSs are themselves a prime example of how social media, applications, GPS and smartphones are tied together by mobile marketing. In survey by Millward Brown Digital (2013) 80% of respondents indicated that downloading a company's app to their mobile device also meant they would be open to receiving location-based push notifications from that same company. In United States and Europe the most popular LBS is an application called Foursquare. It allows users to "check-in" at their specific location, and share this information with their friends. Marketers can in turn provide special discounts or coupons for anyone who checks-in at their retail location. (Hopkins & Turner, 2012.) For example during back-to-school season in 2013, several businesses launched Foursquare-powered campaigns in the U.S.A. JCPenney offered a free personalization kit for customers who check-in if they purchased new backpack or sneakers. Adidas had a $15 money back –campaign for all customers, who spent over $75 and checked-in, and Utrecht Art Supplies offered 20 % discount to everyone who had checked-in at their store three times in two weeks. (Tode, 2013d.) The real benefit of Foursquare-like LBS for the companies is the ease of obtaining various statistics about their customers, such as number of check-ins, gender and age – all individually or grouped demographically. This information combined with modern data-mining techniques gives any common retail store very sophisticated tools to become more efficient in their business. (Kaplan, 2012.)

NFC technology enables devices to establish a one-way or two-way, close range connection very rapidly, in which data can be transferred wirelessly (McHugh & Yarmey, 2012). Despite the fact that NFC technology was introduced in back 2004, its adoption has taken noticeably longer than expected (Kranz, Murmann & Michahelles, 2013). In mobile field the NFC is usually affiliated with mobile payment, because NFC-enabled smartphones are suitable and highly convenient for acting like a combined store loyalty card and credit card while paying at a store register (GSMArena, 2013; Kranz etc., 2013). As a way to link physical materials to digital information, NFC has also started to gain some attention amongst marketers. In a simplest of ways it could be just used exactly like a QR-code, providing data to anyone who reads a NFC tag. But because NFC's versatility, users can also engage in interactive exchange with said tag. For example TNT used a windows display advertisement with NFC tag to promote a certain crime-solving TV show. The display presented a crime scene, and the NFC tags provided clues for anyone to solve the presented case. Any users could then also receive reminders for show times and download custom wallpapers for their phones. (McHugh & Yarmey, 2012.)

Bluetooth is also a niche technology in location-based marketing, as it has largely been replaced during recent years by GPS and LBS. It could be argued that one of the main reasons for this is the poor accuracy and range of Bluetooth-positioning: the technology can only extend to 10 meters, and with single Bluetooth-sensor only the approximate distance between it and the consumer's device can be measured. Consumer also has to have the Bluetooth-function on – which is a notoriously battery hogging feature – and the device set up so that it allows connection inquiries. It takes approximately 10 seconds to connect and with some older Symbian OS devices there even were a 50 % chance that the device would timeout and not finish connecting. (Aalto, Göthlin, Korhonen & Ojala, 2004.)

The type of advertising where marketing material such as promotion coupons are pushed into nearby consumer's device is called LBA, location-based advertising, but frankly it is not that different from LBS, and usually the latter is term is used to describe both. The latest advancement of this mobile marketing sub-field comes as usual due to advance in other, supporting mobile technologies. Nokia has informed that their HERE map applications now have along 45 different countries a total of 49 000 floor-by-floor indoor maps, of which 56 % are of shopping malls and 15 % of grocery and department stores (Fraser, 2013). This type of evolution in new location data directly benefits marketers, as it is studied that 51 % of consumers would be more likely to enter a store and buy a product if they were given location-based coupons on their mobile device (PR Newswire, 2013). The same study also reports that if consumer received a coupon while already inside the store, 63 % of them indicated that they were more likely to buy something.

3.4   Social media and mobile-optimized web

Social media is unquestionable the most hyped phenomenon of the 2010's in many senses. It is also present in mobile marketing, but not so much as a standalone category, but instead as a supporting element to many other types of mobile marketing campaigns, e.g. scanning a 2D-code on your mobile device could lead you to a social media service in which the actual change of marketing information exchange happens. Kaplan (2012) identifies social mobile media as a "group of mobile marketing applications that allow the creation and exchange of user-generated content". While social media marketing is a whole another topic, it is still preferable to dedicate some research of this thesis for the subject, because the sheer volumes and ways of mobile engagement it provides. Social mobile media is said to allow businesses to distribute marketing messages that are relevant only for specific locations (very closely related to LBS) and/or time periods (Kaplan, 2012). In 2012, the annual growth of social media in mobile marketing was 430 %, and total of 24 % of marketers combined social media with their mobile campaigns. These numbers accompany the fact that roughly two thirds of consumers access the most popular social media services primarily through their smartphones. (Abramson, 2013.) Persaud and Azhar (2012) note that mobile marketing has a very high potential of going viral, mainly because it is very likely and easy for consumers to share information about offers or products within their social networks.

Although social media is rather multi-layered and complex media to comprehend, still when talking about it many thinks only of Facebook. It has massive 680 million users regularly connecting in to it through mobile devices, and it also offers very sophisticated targeting tools for any marketing campaign. Advised advertisement reach is actually 0,5-1 million users, which is a number only a few other methods can match. (Fiksu, 2013.) Interesting aspect on this is the fact that most consumers are aware how valuable their personal information is for marketers, but still especially younger generations do not regard privacy as an issue and they do not feel compelled to hide their data (Orsini, 2013). However, Persaud and Azhar (2012) remind that "while consumers adopt mobile phones to enhance their private and social lives, marketers see mobile devices as a marketing channels", and because these two perspectives on the matter differentiate so much, mobile marketers have to absolutely ensure that their mobile marketing strategies are not too intrusive – regardless whether or not a particular consumer feels protective about their privacy and personal data. This is especially relevant in pull-marketing, where one of the main challenges for businesses is to understand what are the motives for a consumer to willingly give a permission for marketing, that is, how do the consumers perceive the tradeoff of privacy against the potential value of businesses' services (Hennig-Thurau et al., 2010). Based on similar findings, Haghirian, Madlberger and Tanuskova (2005) proposed the following hypothesis on the matter: "the higher

the subjective privacy (personal information shared) is worth to the consumer, the lower the perceived advertising value of mobile advertising messages".

Previously mentioned location-based services and Facebook are not the only social media services associated with mobile marketing. Generally every popular online service which has any social media-like features has a mobile application or at least a mobile-optimized webpage. Latter is likely the most essential supporting component for any mobile marketing campaign, not just for the ones with social media integration. According to a recent study, roughly 80 % of world's population have gained access to mobile Internet in less than two decades, and during the year 2013 mobile access will overtake fixed-line access as a consumers' primary way of using the Internet (Dean, Louison, Shoji, Sowmyanaryan & Subramarian, 2013). Today's consumer prefers to access information about product and/or service online, rather than call or visit directly a store in person, and browsing non-optimized website on mobile device is too frustrating for mobile consumers to bear (Hopkins & Turner, 2012). Latter is common sense despite the fact that we have begun to see mobile phones with increasingly larger screen sizes. Mobile users just obviously cannot have the same user experience as PC users on the same website, and in fact mobile users tend to use websites differently than desktop PC users. Mobile end-users seek fast access to context or location relevant content, and their expectations toward mobile-optimized webpages are increasing dramatically (Watson etc., 2013). As a minimum requirement, even though businesses would not use mobile marketing, they still should have their own websites mobile compatible. (Karjaluoto, 2010.) Great example of mobile optimized website's attractiveness is L'Oreal's Redken brand's page, which acquired 519 % more mobile traffic in a year after launching a mobile optimized version of their web services, and it was not even a part of any larger mobile campaign (Kats, 2013c).

3.5   Dedicated applications

The rise of the smartphones has also led every mobile device manufacturer to develop their own platforms for developers to publish and sell applications to massive user bases across the globe (Lane et al, 2010). These applications are one key factor which makes mobile devices so personal and identifiable for their users. Businesses have not ignored this phenomenon, as they are developing innovative, domain-specific m-commerce applications, resulting in value-added solutions for consumers and new revenue opportunities for businesses themselves. These m-commerce applications can be broadly divided in four main categories: communication, information, entertainment and commerce. (Hameed, etc. 2010.)

World's top three smartphone operating systems - Android, iOS and Windows Phone – have more than 1 600 000 applications available in total, which combined to the wide range of different devices with varying capabilities makes it difficult for marketers to know for which platforms to develop content

for (Forgue & Hazaël-Massieux 2012; Johnson, 2013a). Therefore it is very challenging to achieve the critical mass of users (Lane et al, 2010). But when a customer does install the company's application, it can be seen as a strong sing of trust and an indicator of willingness to enter a so called commercial relationship (Kaplan, 2012). Although first the application needs to be spotted among the ranks of hundreds of thousands of applications and downloaded by the consumer, and it also has to be considerably relevant for the end-user's needs, as the consumer's perception of the said usefulness has a positive effect on the consumer's attitude to mobile marketing in general (Zhang & Li, 2012). Hopkins and Turner (2012) concluded that the key for successful marketing application is customer value: if the application is not compelling, useful and easy to adapt, it will quickly be forgotten or totally ignored. This uncertainty of the channel's effectiveness is what led Orsini (2013) to criticize mobile marketing through dedicated applications: "in a world where 60 percent of all apps built have never been downloaded and 40 percent of apps downloaded are abandoned after just four uses, most clients and their agencies do not have a clear business objective for why they created a mobile app."

Nevertheless the usage rate of applications in mobile marketing is bound to grow. In the U.S., the average number of applications per smartphone rose 28 percent between 2011 and 2012, to a total number of 41, and with that trend the amount of time spent on applications increased as well (Nielsen, 2012). According to Kats (2013e) "now we're going to see a lot more campaigns being delivered through on-device messaging, such as local and app-originated pushes that are triggered by users' app actions, in-app alerts that also are triggered by app actions but appear while the app is in use, and rich content such as gamified promotions." International restaurant chain Domino's Pizza has tackled the device diversity by launching mobile applications for all three previously mentioned mobile operating systems as well as for Kindle Fire, in order to reach as many customers as possible. With their mobile application the user cannot just access the full menu and order a pizza, but also track an order, find nearest Domino's restaurant, and browse coupons and offers. According to the company, in U.S.A. alone digital ordering now makes up more than third of their orders. (Kats, 2013d.)

So it is possible to achieve good return of investment, or ROI, and engage consumers ever more with a properly designed mobile application, but as Hopkins and Turner (2012) put it, a business does not necessarily need an application in order to start mobile marketing, and in fact many businesses even choose not to make one, because generally it is a rather risky and resource hogging investment for reasons mentioned here before. However companies can benefit from the increasingly growing mobile application market without creating the said application, but by just posting advertisements inside other applications. Nielsen's (2010) study found out that in on average 63 % of men and 56 % of women sometimes or always respond to mobile advertisements, and that roughly 25 % of all applicants have clicked on an advertisement within an application.

4   CONCLUSIONS

The everyday technology we use has not just mobilized, but merged into a single device we carry with us at all times: the mobile phone. Because of this we are now almost dependable of one, highly personal gadget, which has defined the way we communicate with each other. It has become a new and an important channel on how consumers gather and exchange information about products, and how they obtain and consume those (Hennig-Thurau et al., 2010), and this has also created a huge marketing opportunity - which all businesses have begun to seize. Kaplan (2012) noted, that as mobile phones are outnumbering PCs, they are becoming the only communication channel that has truly global reach across countries and demographic groups. Mobile technology will continue to provide increasingly significant ways of broadening organizations' revenue streams and enhancing competitive positioning in their markets. It enables the development of new kind of innovative solutions, which create value for end-users in a cost-efficient way. (Hameed, etc. 2010.) As this thesis has suggested, no other media has reached such marketing potential in such a short time than mobile devices. Smutkupt, Krairit and Esichaikul (2010) concluded that in both consumers' and business' point-of-view mobile marketing will make a major impact on all key parts of the marketing mix. But although the impact of mobile marketing for future marketing communication activities has gained some recognition, still some deficiencies remain in understanding of this topic (Leppäniemi & Karjaluoto, 2008).

It is important to note, that while mobile marketing is quite hyped phenomenon at the moment, researchers and businesses agree that it has not yet reached its full potential. For higher consumer adaptation rate, mobile marketing needs to become more widely available and its benefits more measurable (Persaud & Azhar, 2012). Because as a marketing channel mobile is relatively young, so is the academic research about it. Most of the research on the subject is from pre-smartphone era, and hence have already become less relevant, because mobile marketing landscape changes very rapidly with the introduction of most new technological features on mobile phones (Watson etc., 2013). Combining these two factors, one could say that studies in the mobile marketing

field are still limited, highly fragmented and lacking the common ground need-ed to accurately depict the field as a whole (Varnali & Toker, 2010). Even in fu-ture when the comprehensive basis for academic research on mobile marketing has been established, it will still be challenged by the mentioned technological aspects, which very much re-define mobile marketing in almost year-to-year cycles:

> Numerous factors are converging to give mobile the capabilities, scale, and reach achieved by few other technological advances. These include devices with compu-ting power and memory that come close to rivaling desktop PCs; increasingly ubiq-uitous network coverage characterized by high-speed data connections and low net-work latency; ever-improving battery technology; the ability to apply "context"—location and social networks—to generate value; the proliferation of sensors in de-vices—for example, multiple cameras, GPS, and motion and temperature sensors; and all manner of wireless connectivity, including Wi-Fi, LTE, Bluetooth, and Near Field Communications. (Dean etc., 2013, pp. 5).

According to Khan (2013), businesses' excellence in mobile field is becoming a perquisite for maintaining customer loyalty, and having just mobile-optimized website is not enough anymore; mobile experience that starts on a smartphone has to end up in-store or on a call. Leppäniemi and Karjaluoto (2008) argue, that one of the key benefits of mobile marketing is the ability of view and evaluate the effectiveness of a campaign very quickly and in a short time scale, and like most of all digital marketing methods, via multiple different measurable met-rics, such as delivery measures, open rates, click though rates, and purchase tracking. However, in this lies also one of the greatest issues of mobile market-ing so far: most of the businesses might track one or two aspects on their mobile marketing campaign, but do not know how to convert those metrics into one that indicates whether or not they are generating a positive ROI (Hopkins & Turner, 2012). Understanding this data is essential for businesses to calculate the campaign's potential gains against the costs of data maintenance (Dickinger etc., 2004), and also in order to make accurate decisions about subsequent cam-paign content and targeting (Leppäniemi & Karjaluoto, 2008). On general level, Haghirian and Inoue (2007) have found out that the most important factors in mobile marketing communications - besides the content itself - are its credibility, understandability, balance between entertainment and information, and also the source of the message has to be known to the consumer.

Many companies carrying out mobile marketing are still lacking experi-ence (Zhang & Li, 2012). They act now similarly with mobile marketing as with Internet marketing when it was in the same state: the large majority do not have mobile strategy and do not know how and what to measure, but keep increas-ing the overall investment on mobile space (Kontagent, 2013). However, this is mainly because companies are seeking better value for their marketing invest-ments, and as traditional mass marketing has become less effective, the targeted one-to-one marketing channels - such as mobile media – have become increas-ingly important. Companies may even generate negative response from the consumers, as studies implicate that consumers are willing to participate in

mobile marketing, but without proper mobile marketing strategies, the companies fail to deliver the expected user experience. On general level, Haghirian and Inoue (2007) have found out that the most important factors in mobile marketing communications - besides the content itself - are its credibility, understandability, balance between entertainment and information, and also the source of the message has to be known to the consumer. In some companies, the mobile marketing is done at ad hoc basis, so therefore it can be only loosely tied or completely separated from the rest of the company's marketing communications strategy. (Leppäniemi & Karjaluoto, 2008.) Other, still persisting mobile marketing challenges for companies include the complexity of mobile ecosystem, fragmented channels, confusion over targeting, and insufficient customer data for creating an effective campaigns (Hameed etc., 2010; Yankee Group, 2013).

In the light of studies this thesis reviews, it is fair to say that the field requires not just more academic research, but also more focused effort from the commercial side. It is essential to lay proper foundations for the field, because as mobile marketing matures and becomes more and more remarkable and impossible to ignore, it will push businesses to start issuing more resources to developing multichannel marketing strategies which have mobile at the core (Kats, 2013e). Interesting future research topics would for example revolve around the previously suggested, mobile marketing measurability from business side, or perhaps measuring the success and penetration rates of different mobile marketing technologies. It also seems though that it is challenging – although not impossible - to make research in the field that stays relevant for longer periods of time. Nevertheless, as mobile channel has morphed into an ultimate marketing vehicle (Varnali & Toker, 2010), it is expected that the interest toward it in the academic side grows too, which is absolutely welcomed, as mobile marketing seems to become the most game-changing marketing method yet to emerged.

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