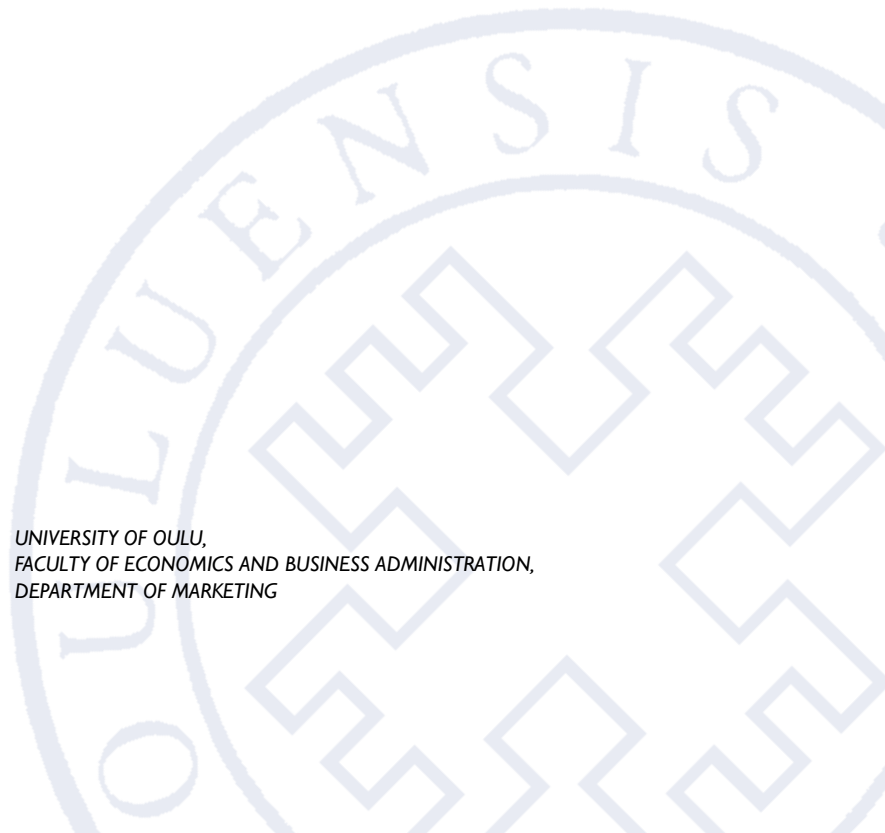*ACTA*

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OECONOMICA

Jaakko Sinisalo

MOBILE CUSTOMER RELATIONSHIP MANAGEMENT

A COMMUNICATION PERSPECTIVE

UNIVERSITY OF OULU,
FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION,
DEPARTMENT OF MARKETING

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MOBILE CUSTOMER RELATIONSHIP MANAGEMENT
A communication perspective

Academic dissertation to be presented with the assent of the Faculty of Economics and Business Administration of the University of Oulu for public defence in Arina-sali (Auditorium TA105), Linnanmaa, on 20 December 2010, at 12 noon

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Abstract

This study examines communication through the mobile medium in customer relationship management (hereafter mCRM). Although the academic research on mCRM is gradually evolving, there is still a lack of empirical research on this topical issue. Therefore, the purpose of this study is to begin to fill this gap by enhancing the theoretical and practical understanding of mCRM.

The empirical part of the study is conducted as a qualitative case study. Seven Finnish companies utilizing the mobile medium as a communication channel in CRM were selected for the empirical analysis. Interviews, observations and personal experiences gained within those companies form the main sources of data.

The main theoretical contributions of the present study to existing academic literature are as follows. First, the study proposes the conceptualization of the focal phenomenon of the study, mCRM, and further elicits the salient characteristics of it. Second, following the conceptualization, the study focuses on communication as the core of the interaction between the company and the customer via the mobile medium. Accordingly, the study sheds light on the key elements of the communication process within mCRM and its various phases. Third, the study founds a theoretical framework for mCRM; identifying the customer relationship management, mobile commerce and communication literature streams that define mCRM theoretically. Fourth, the study elaborates on the specific role of the mobile medium as a channel within CRM and highlights the ways in which it differs from all other channels within the multichannel CRM environment.

Although mCRM communication has an inherent potential to benefit both company and customer, it has been utilized quite cautiously to date. This is rather surprising given that, compared to other channels, the mobile medium has an exceptional ability to reach people. In addition, greater utilization of the mobile medium could save time and money. This is because many face-to-face encounters could easily be replaced by communication through the mobile medium. The study offers guidelines on aspects ranging from the initiation of mCRM to actual communication through mCRM. Hopefully, the findings of this study will encourage managers, regardless of industry, to consider whether their company could provide added-value of any kind through the use of the mobile medium to benefit their customer relationships.

Acknowledgements

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I dare to say that many of my colleagues have become my friends. I hope the parties involved are aware of it. Thanks for being there!

I have been privileged to participate in two research projects called PEAR and FUMMAS. I would like to thank all my co-researchers and companies involved in these projects that have given me the opportunity to make this work happen. I am also very grateful for the financial support received for this dissertation from the Foundation for Economic Education, the Marcus Wallenberg Economic Foundation, the Jenny and Antti Wihuri Foundation and the TeliaSonera Finland Research and Education Foundation.

I would like to conclude my acknowledgements by expressing my sincere gratefulness to my beloved friends and family without whom I would have never reached this point in my life. First I would like to thank all my friends for being beside me and giving me constant, and occasionally undeserved, support throughout my whole life. Especially, I would like to thank Hannu, Jiska, Juha, Kalle, Kimmo, Larkio, Mari, Merja and Pasi. I hope you will always be friends of mine.

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encouraging example for me in this dissertation process. I would also like to express my sincere gratitude to Sirkka and Esko. I am also very grateful to Outi for being such a good mom to the brightest light of my life. I am very fortunate to have such a sweet child o'mine in my life, Konsta, who gives me endless strength to plough through the strongest barriers in my life.

I haven't mentioned everyone important to me by name but I trust that you all know how much you mean to me. Thank you all. I love you!

Oulu, 18.11.2010   Jaakko Sinisalo

List of original papers

The thesis is based on the introductory chapters and the following papers:

I   Sinisalo J, Salo J, Karjaluoto H & Leppäniemi M (2007) Mobile Customer Relationship Management – Underlying Issues and Challenges. Business Process Management Journal 13(6): 771–787
II   Sinisalo J, Salo J, Leppäniemi M, Karjaluoto H & Zhao X (2005) Building Customer Database for Mobile Customer Relationship Management. Proceedings of 4th International Conference on Information and Management Sciences, Kumning, China
III Sinisalo J & Karjaluoto H (2007) Mobile Customer Relationship Management – A Communication Perspective. International Journal of Electronic Customer Relationship Management 1(3): 242–257
IV   Sinisalo J (2011) The Role of the Mobile Medium within Multichannel CRM communication. International Journal of Electronic Customer Relationship Management. In press.

Contents

1　Introduction

1.1　Background

During the past two decades the marketing paradigm has shifted from transactional marketing to marketing approaches focusing on building and retaining relationships with customers (e.g. Dwyer *et al.* 1987, Grönroos 1991, Sheth & Parvatiyar 1995). Along with this paradigm shift, customer relationship management (CRM) has gained widespread popularity in the fields of many disciplines and industries (e.g. Zablah *et al.* 2004, Boulding *et al.* 2005, Payne & Frow 2005).

The essence of CRM for the company is, in ideal circumstances, the ability to communicate continuously with customers on an individual basis (Peppers *et al.* 1999, Park & Kim 2003, Kapanen 2004). Accordingly, most companies communicate with their customers across several channels including, for instance, the internet, face-to-face channels and through call centers (e.g. Bradshaw & Brash 2001, Parvatiyar & Sheth 2001, Payne & Frow 2005, Thomas & Sullivan 2005, Neslin & Shankar 2009). However, with the growing number of channels, getting customers' time and attention has turned into a major challenge (Davenport & Beck 2000). Due to this, it has become more difficult for companies to find the appropriate media and strategies to communicate with their customers. To overcome these challenges, the mobile medium is growing rapidly in the multichannel environment to improve standards of communication with customers (Liljander *et al.* 2007, Neslin & Shankar 2009).

In CRM, the mobile medium performs essentially the same function as any other channel. Essentially, the company can communicate with customers through the mobile medium and offer them access to the same services as the company could through personal contact (Liljander *et al.* 2007). However, the different channels have also certain distinguishing characteristics which largely determine which activities can be serviced by a specific channel. For instance, the mobile medium allows access to an individual virtually anytime and anywhere (e.g. Balasubramanian *et al.* 2002, Tsang *et al.* 2004, Shankar *et al.* 2010), whereas all other channels are restricted in this respect. Therefore, some channels are more suited to, or more often used for, certain communications (Verhoef & Donkers 2005).

Axiomatically, the mobile medium as a channel not only creates opportunities, but poses challenges as well. For instance, the intimate nature of the mobile medium

sets up a high standard for communication through the mobile medium since the companies cannot afford to irritate the customers even once (Tsang *et al*. 2004, Carroll *et al*. 2005, Shankar *et al*. 2010). Therefore, the correct way to communicate with the customers is expected to be different than through other media.

Against this backdrop, it is considered of critical importance to examine antecedents and facilitators of mCRM more specifically.

1.2   Justification

The purpose of this chapter is to identify the research gap as well as justify this study academically, conceptually and practically. As an academic research stream mCRM is relatively fresh. In order to justify this study, the previous academic research concerning the phenomenon under investigation is presented and, consequently, the research gap this study contributes to filling is identified. Table 1 presents examples of academic research on mCRM. In order to trace the academic research papers on mCRM, the online journal databases (i.e. ABI/INFORM, Academic Search Premiere, Econlit, Emerald Fulltext, Ingenta Journals and Science Direct) and Google Scholar were searched to provide a comprehensive bibliography. This search was conducted by using the keyword term "mobile customer relationship management". The purpose was to delimit the search to pertain to only academic papers explicitly discussing and focusing on mCRM and having apparent relevance to the marketing discipline.

Reviewing this research concerning mCRM, it appears that the first academic research papers concerning mCRM can be traced back to 2005. After 2005, mCRM as a research stream has gained increasing recognition among academics although the amount of research is still very scarce. From the customer's perspective, academic research has initially focused on the effects of mCRM efforts on customers' loyalty (Lin & Wang 2005, Liljander *et al.* 2007, Chen & Ching 2007), customers' intention to use mobile services (Lee *et al.* 2008) and customer satisfaction (Hsu & Lin 2008). For instance, Liljander *et al.* (2007) examined how mobile CRM services are perceived by the loyalty program customers of an airline. The key finding of that study was that customers did not seem to be ready to fully embrace the mobile medium as a part of an airline's CRM program. However, the study examined the mobile services provided through the MIDlet application, something that customers had to download into their mobile phones in order to use it. Therefore, the findings of this study can be, to some extent, questioned and rather suggest that customers are not willing to do

anything extra in order to adopt mCRM. Furthermore, it may be that customers are more willing to use the mobile medium with existing and more familiar services, such as SMS (short message services) and MMS (multimedia messages services), in communication with a company.

Table 1. Academic mCRM research (publications by the author are excluded) [12]

Author	Type	Method	Perspective
Camponova *et al.* (2005)	Conference proceeding	Quantitative	Company
Lin & Wang (2005)	Journal	Quantitative	Customer
Hartel *et al.* (2006)	Conference proceeding	Quantitative	Company
Valsecchi *et al.* (2007)	Journal	Qualitative	Company
Unnithan *et al.* (2007)	Conference proceeding	Qualitative	Company
Schierholz *et al.* (2007)	Journal	Qualitative	Company
Chen and Ching (2007)	Conference proceeding	Quantitative	Customer
Liljander *et al.* (2007)	Journal	Quantitative	Company/Customer
Hsu & Lin (2008)	Journal	Quantitative	Customer
Lee *et al.* (2008)	Journal	Quantitative	Customer
Duran (2010)	Journal	Qualitative	Company

From the company' perspective, academic mCRM research has focused on depicting the emerging markets (Camponova *et al.* 2005), company benefits related to launch of mCRM solutions (Valsecchi *et al.* 2007), developing a structured method for the design of mobile solutions in the CRM field (Schierholz *et al.* 2007) and exploring how SMS communication can be combined with existing channels and services to enhance banks' CRM (Duran 2010). For instance, Duran (2010) found that integration of mCRM with the core CRM systems presented challenges in regard to how the business functionality should work. In addition, the research has focused on critical success factors for mobile CRM (Hartel *et al.* 2006, Unnithan *et al.* 2007).

The point to this discussion is not to discredit past research, but to emphasize the fact that the research concerning mCRM is scattered and diverse. As this review pinpointed, there is relatively little knowledge, at this point, on mCRM

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[1] In addition to these studies, mCRM has generated a number of non-academic works, such as white papers. These are, however, excluded of this table due to their pragmatic nature.

[2] Noteworthy, these presented research papers approach mCRM as a part of interaction with the company and the customers. Accordingly, research papers approaching mCRM as a part of sales force automation in which the company personnel can retrieve customer data while being on the road are excluded (see e.g. Ranjan & Bhatnagar 2009, Nguyen *et al.* 2007)

and, thus, several research gaps can be easily identified from the existing literature. Additionally, the approach of previous studies differs in one major respect from this study, since none of the previous research focuses on communication as a key element of mobile CRM as this study does. This is, in large part, due to the fact that communication is commonly considered as a key element of interaction through the mobile medium. For instance, according to Balasubramanian *et al.* (2002) a key characteristic of mobile commerce is communication. In addition, Leppäniemi (2008) emphasizes the role of communication in mobile marketing. More specifically, no previous research focuses on, for instance, the underlying issues or challenges of communication through the mobile medium, such as how to initiate communication or build a database for communication.

However, the academic mCRM research shares the same statement that the mobile medium is changing the way customer relationships are managed. For instance, Duran (2010: 26) suggested that *"CRM related mobile services can provide more timely and relevant information to customers, increasing customer loyalty and retention."* Furthermore, according to Valsecchi *et al.* (2007: 765) *"mCRM enables personalized and interactive communication with customers, thereby allowing the firm to improve its customer intelligence by making it easier to gather data about each customer. This permits the firm to understand customer needs better and develop suitable responses, as well as to improve interaction with customers by retaining a record of their inquiries, transactions, complaints and problems solved"*.

In general, the mobile medium as a channel has not been taken into account in the existing CRM discussion with but a few exceptions. For instance, Payne and Frow (2004) did use the term m-commerce in referring to the mobile medium and features such as telephony, text messaging, WAP (wireless application protocol) and 3G mobile services. However, they do not elaborate further on the mobile medium as a channel or on its role among all the other channels.

Apart from academic research focusing on mCRM or CRM, many academics have proposed the importance of examining the issues related to mCRM. While the potential of the mobile medium in CRM is widely acknowledged among academics (e.g. Martyn 2001, Kannan *et al.* 2001, Barnes & Scornavacca 2004, Aungst & Wilson 2005), many studies have emphasized that the emergence of new channels, such as the mobile medium, is significantly altering how companies interface with their customers (e.g. Schultz & Bailey 2000, Parvatiyar

& Sheth 2001, Bradshaw & Brash 2001, Peltier *et al.* 2003). Table 2 summarizes the main arguments, apart from mCRM research, of importance for this study.

Table 2. Argumentation for the need of this study.

Studies	Argument
Newell & Newell-Lemon (2001)	Understanding the new rules of wireless CRM – anytime, anywhere- is critical to organizations' long-term success
Kannan *et al.* (2001)	wireless [mobile] technology is ideal to implement the concept of CRM
Martyn (2001)	Mobile customers relationship management systems (MCRM) will be a requisite to compete and retain customers who are mobile users
Barnes & Scornavacca (2004)	The convergence between marketing, CRM and m-commerce represents a potentially powerful platform for wireless marketing
Payne & Frow (2004)	Call for research on how organizations use new mobile technologies when engaging with customers in the CRM context
Boulding *et al.* (2005)	CRM research should focus on sub-processes, instead of entire CRM, since CRM is too complex and integrative for one study.
Frow & Payne (2009)	What is the current and future role of different channels in CRM?

As mentioned, the existing mCRM research appears to be highly fragmented. For this reason, at large part, the common conceptualization of mCRM is lacking. Therefore, this study also proposes the conceptualization of mCRM. This is considered very important since without the consensual definition of key concepts, there cannot be coherent discussion (Peterson & Balasubramanian 2002).

Additionally, this study strives to conceptualize the phenomenon of mCRM. In order to propose a preliminary conceptualization of the mCRM phenomenon, Camponova *et al.* (2005: 2) defined mCRM services *"as those that 1) aim at nurturing customer relationships, acquiring or maintaining customers, 2) support marketing, sales or service processes, and 3) use wireless networks as the medium of delivery to the customer"*. While the researcher of this study agrees with the basic elements of this definition, it is still considered inadequate in some respects. This definition makes no mention of any particular means of delivery. As such, this definition is somewhat inexact since Camponova *et al.* do not specify how the mobile medium is used and so do not exclude any other means. Additionally, the definition does not focus purely on the mobile medium as a channel. This is due to the fact that other media, such as laptops or the internet, can utilize wireless networks too.

Further, Sinisalo *et al.* (2006: 2) have proposed a conceptualization by defining mCRM as "*utilizing mobile medium (i.e. mobile phone, smart phone or*

PDA) for the purpose of managing customer relationships and activate customers to start dialogue with company via mobile medium". The researcher also agrees with the elements of this definition, but concurrently acknowledges that this definition does not specify how the mobile medium is utilized either. Accordingly, it is argued in this study that the deficiency of the above two definitions is that they do not highlight the role of communication in the utilization of the mobile medium although communication is commonly considered as a key element of interaction through the mobile medium (e.g. Balasubramanian *et al.* 2002, Liljander *et al.* 2007, Leppäniemi 2008).

Liljander *et al.* (2007: 25) defined mobile CRM as *"customer relationship management of any kind including interactive communication between on an organization and a customer using a mobile device"*. This definition is useful for the purpose of this study. Accordingly, the researcher acknowledges that defining CRM, being the underlying concept of mCRM, more specifically is not considered pertinent for the purpose of an mCRM conceptualization. This is because companies can use the mobile medium as a channel in CRM regardless of how they perceive CRM.

Although Valsecchi *et al.* (2007) did not provide an implicit definition of mCRM, they considered mCRM services as an improvement of other services that can be considered the "principal service". In other words, mCRM services are coupled with principal services. For instance, the provision of a metro transport service in Helsinki is the principal service and, related to it, booking a metro ticket through the mobile medium is the mCRM service. The researcher partially agrees with the previous statement. However, in this study it is argued that mCRM works to complement sales and marketing related – activities in addition to services. Accordingly, the prior definition does not encompass CRM as a whole for the purposes of this study.

As noted, there is evidently no consensus as to the most appropriate way in which this emerging phenomenon should be defined. Accordingly, this study attempts to propose such a conceptualization capturing the true nature of mCRM that sufficiently emphasizes the role of communication.

In practice, the technological development has led to a situation where companies from several industries (e.g. retailing, banking, insurance, airline industries) across the world have utilized the mobile medium broadly in various types of communication with their customers at least from the beginning of this millennium. For instance, revenues on mobile messaging marketing globally are anticipated to be about about $9.2 billion in 2010 and are expected to grow to $12

billion in 2011 (eMarketer 2007). Similarly, the mobile medium as a channel has been adopted to a large extent in Finland by marketers. This we know from 2008 expenditure on customer relations communication, mainly via SMS, being 9.9 million euro and consisting of around 100 million messages send to end users (Idean 2009). In addition, the market growth potential is estimated to be high for customer relation communication with reaching a 16.7 million euro expenditure forecast by 2014 in Finland alone.

There is a huge gap between the continuously evolving reality and the theory development within the CRM discipline. Accordingly, the mobile medium as a channel in CRM is a topical issue from academic, conceptual and practical viewpoints. Despite the academic literature on mCRM is gradually evolving, there is still a lack of empirical research on this topical issue. The aim is, therefore, to begin to fill this gap by developing the theoretical understanding of mobile CRM and proposing the conceptualization of this nascent phenomenon. The phenomenon is largely approached from a pragmatic viewpoint.

To sum up, there is a severe lack of academic research that takes a broader approach to mCRM from a company perspective. Furthermore, the existing academic literature of mCRM does not provide a clear indication of the underlying issues and challenges of mCRM communication. While the mobile medium offers various exceptional opportunities for managing customer relationships, there is no evidence regarding how companies communicate through the mobile medium among other channels in CRM.

On this basis, this study enhancing our understanding of communication through the mobile medium in CRM from the company's viewpoint, with the inclusion of a qualitative case study, is expected to be a welcome addition to this research stream.

1.3 Research problem

As mentioned, the current body of academic research on mCRM has several deficiencies. This chapter addresses the research problem of this study. In order to do so, it is necessary to determine the scope, research questions, and research framework of the study.

1.3.1 Scope

In order to help in solving the main research problem, mobile CRM is defined in this study as:

> "communication, either one-way or interactive, which is related to sales, marketing, and customer service activities conducted through the mobile medium for the purpose of building and maintaining customer relationships between a company and its customer(s)" (Sinisalo *et al.* 2007).

Based on the definition, this study focuses on the business-to-consumer (B2C) context meaning that the customers who the company communicates with are private persons, rather than being other companies (cf. business-to-business marketing). Furthermore, this study empirically describes the different elements of mobile CRM communication within this context.

Accordingly, the object of evaluation is communication through the mobile medium as a part of CRM. Furthermore, this study focuses on communication as a part of the relationship rather than the entire relationship excluding other vital processes that every relationship includes**.** This is because communication is the key tenet of CRM (Kapanen 2004) and relationships in particular (Duncan & Moriarty, Golik Klanac 2008). In addition, communication is considered as a key element of interaction through the mobile medium (e.g. Balasubramanian *et al.* 2002, Liljander *et al.* 2007, Leppäniemi 2008). This definition also implies that communication through other channels is excluded.

In this study, it is acknowledged that the communication through mobile medium in CRM is highly dependent on the technology. For instance, a customer database is a prerequisite for any communication conducted through the mobile medium and, additionally, communication in mCRM is facilitated by a device. However, the purpose is not to provide a detailed understanding of technologies underlying communication through the mobile medium. Therefore, in the line with the conceptualization of mobile commerce by Balasubramanian *et al.* (2002), this conceptualization of mobile CRM is independent of any underlying technological platform. Therefore, this conceptualization of mCRM is applicable for future mobile technologies as well.

This study focuses on communication through the mobile medium. This represents mediated communication in which communication is facilitated by a device (Hoffman & Novak 1996). The purpose of this study is not to argue that the mobile medium is the best channel in CRM. Rather, this study suggests that

communication through the mobile medium may differ significantly from communication through other channels. Furthermore, it is acknowledged that unmediated channels enabling personal communication may be more suitable for complex communication involving issues such as customer complaints or customer acquisition.

As mentioned, in this study mCRM refers to communication between the company and the customers, instead of referring the communication as a part of sales force automation in which the company personnel can retrieve customer data while being on the road.

This study focuses mainly on messaging- based communication, such as SMS and MMS, through the mobile medium (see a list of message types in Appendix 1). This is due to the fact that these constitute an overwhelming majority in terms of technology of the mobile medium used in practice. According to ABI Research, SMS will account for 83 percent of all mobile messaging revenues until 2013 (ABI Research 2009) despite the best efforts of practitioners and academics alike for at least a decade to promote existing and emerging technologies enabling much richer communication (e.g. Salo *et al.* 2008, Kavassallis *et al.* 2003).

This implies that other vital and richer means of mobile communication, such as voice calls and the mobile internet, are excluded. Although richer means of mobile communication definitely represents a significant research field within this area, it is important first to gain in-depth understanding of the more basic level mobile communication that forms the ground for other, richer forms of mobile communication.

1.3.2 Research questions

As stated, the purpose of this study is to enhance our understanding of communication through the mobile medium in CRM from a company viewpoint. On this basis, the main research question is:

How do companies communicate through the mobile medium in CRM?

The main research problem will be answered through the following five sub-questions (RQs):

RQ1)   How is mobile customer relationship management conceptualized?
As mentioned, a common conceptualization of mCRM is lacking. In order to assure coherent discussion on mCRM, the phenomenon under

investigation has to be conceptualized. Conceptualizing clarifies and positions the concept of mCRM in relation to marketing theory.

RQ2)   *What are the underlying challenges and issues of mobile CRM communication?*
Since the mobile medium is a relatively novel channel in CRM, it is assumed that there are several underlying issues and challenges to be overcome in order to initiate communication through the mobile medium. Therefore, it is of critical importance to resolve the marketing and technology-related issues surrounding the initiation of mCRM communication.

RQ3)   *What are the phases of building a customer database for mobile CRM?*
Related to initiation of the communication through the mobile medium, it is necessary for the company to have a customer database consisting of at least customers' mobile phone numbers. Therefore, it is of critical importance to know what are the key elements and phases in building a customer database for mCRM purposes.

RQ4)   *What is the communication process like within the mobile context?*
Although the mobile medium is just one channel in the multichannel environment to manage customer relationships, the rules that companies will encounter in utilizing it are different from those in traditional channels. These differences are mostly due to the unique features of the mobile medium. Therefore, it is of critical importance to shed a light on elements of the communication process through the mobile medium.

RQ5)   *What kind of role does the mobile medium have in multichannel CRM communication?*
Currently, it is almost a necessity for companies to use multiple channels in communication with customers. Additionally, the mobile medium needs the support of other channels, at least at the beginning of the communication process, due to legislation. Therefore, it is of critical importance to examine the role of the mobile medium among other channels and in parallel, acknowledge the importance of other channels for mCRM.

In order to answer these research questions, this study consists of four individual published research papers. Table 3 describes the research papers and their relation to the research questions.

Table 3. The research papers of this thesis.

#	Title	Author(s)	Paper	RQ
I	Mobile Customer Relationship Management – Underlying Issues and Challenges	Sinisalo J, Salo J, Karjaluoto H, & Leppäniemi M.	Business Process Management Journal, 2007, 13(6): 771–787	RQ1, RQ2
II	Building Customer Database for Mobile Customer Relationship Management	Sinisalo J, Salo J, Leppäniemi M Karjaluoto H & Zhao X.	Proceedings of 4th International Conference on Information and Management Sciences, 2005, Kumning, China	RQ1, RQ3
III	Mobile Customer Relationship Management – A Communication Perspective	Sinisalo J & Karjaluoto H.	International Journal of Electronic Customer Relationship Management, 2007, 1(3): 242–257	RQ1, RQ4
IV	The Role of the Mobile Medium in Multichannel CRM communication	Sinisalo J.	International Journal of Electronic Customer Relationship Management, 2011	RQ1, RQ5

As noted, three of the research papers have been published or accepted for publication in international academic journals, and one has been published as a conference paper. As noted, the sub-questions (RQ2-RQ5) are specific to particular research papers, whereas all four research papers aim to partially answer to first sub-question (RQ1: How is mobile customer relationship management conceptualized?). Therefore, this thesis combines the contributions of each paper in order to contribute to our understanding of communication through the mobile medium in CRM and, similarly, to answer to the main research question (How do companies communicate through the mobile medium in CRM?). An overview of the research papers is presented in chapter 4.

Figure 1 describes the research framework of this study. As described, the research papers basically address two sequential parts of mCRM: the initiation and actual communication. Accordingly, the first part covers underlying issues and challenges of mCRM communication and, related to these underlying issues, building a customer database for mCRM purposes in detail. The second part covers the communication process in mCRM and the role of the mobile medium amongst the other channels in CRM communication.
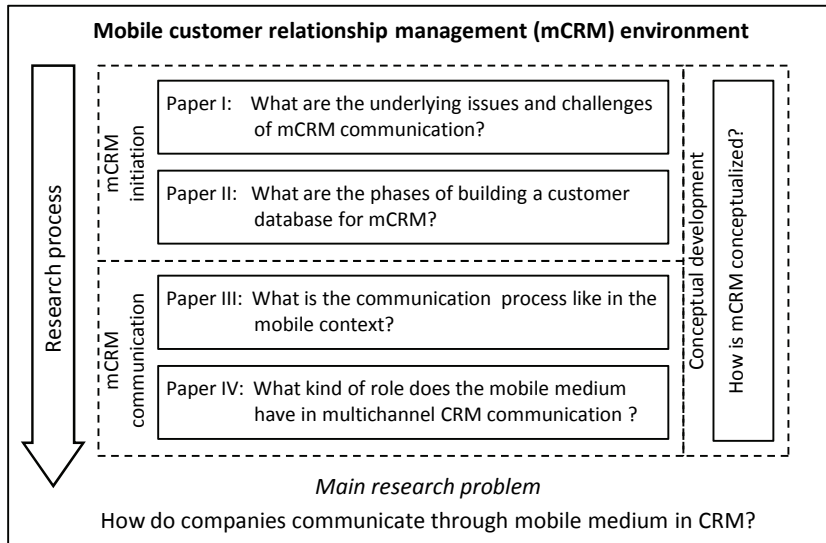
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┌─────────────────────────────────────────────────────────────────────────────┐
│           Mobile customer relationship management (mCRM) environment          │
│                                                                               │
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│  │  │  ┊ mCRM ┊ Paper I:  What are the underlying  ┊┊ ┊ ┊ ┊ ┊      │
│  │  │  ┊init. ┊        issues and challenges of    ┊┊ ┊ ┊ ┊      │
│  │  │  ┊      ┊        mCRM communication?         ┊┊ ┊ ┊ ┊      │
│  │  │  ┊      ┊ Paper II: What are the phases of    ┊┊ ┊ ┊ ┊      │
│  │  │  ┊      ┊        building a customer         ┊┊ ┊ ┊ ┊      │
│  │  │  ┊      ┊        database for mCRM?          ┊┊ ┊ ┊ ┊      │
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Mobile customer relationship management (mCRM) environment

Research process

mCRM initiation
- Paper I: What are the underlying issues and challenges of mCRM communication?
- Paper II: What are the phases of building a customer database for mCRM?

mCRM communication
- Paper III: What is the communication process like in the mobile context?
- Paper IV: What kind of role does the mobile medium have in multichannel CRM communication ?

Conceptual development

How is mCRM conceptualized?

Main research problem

How do companies communicate through mobile medium in CRM?

Fig. 1. Research framework.

As this study can be considered as early work in this nascent field of research and is intended to develop the theoretical understanding, this study is, understandably, descriptive in nature (Bonoma 1985). Accordingly, all research papers describe parts of mCRM communication pragmatically in the empirical sections. More specifically, in line with the research questions, this study describes how the company initiates its mCRM communication, how it builds a customer database, what the communication process is like and what kind of role the mobile medium has in multichannel CRM communication. These descriptions are, further, used as components for theory development concerning mCRM.

Table 4 describes the contribution of the author of this study to the papers numbered from I to IV. In a nutshell, the author has had the major responsibility for planning and writing each of the research papers. In research papers I and II, some of the data was analyzed in cooperation with co-authors. In paper III, the named co-author only provided valuable insights that contributed to the integrity of the paper. Research paper IV was the sole responsibility of the author, from developing the idea to finalizing the paper via data collection and analysis.

Table 4. The contribution of author.

#	Title	The contribution of author	%
I	Mobile Customer Relationship Management – Underlying Issues and Challenges	The author was responsible for planning and writing the paper as well as coding and analyzing the data. The data was partially analyzed in cooperation with co-authors.	85
II	Building Customer Database for Mobile Customer Relationship Management	The author was responsible for planning and writing the paper as well as coding and analyzing the data. The data was partially analyzed in cooperation with co-authors.	80
III	Mobile Customer Relationship Management – A Communication Perspective	The author was mainly responsible for planning and writing the paper as well as coding and analyzing the data. The co-author provided valuable comments on the manuscript of the paper.	95
IV	The Role of the Mobile Medium in Multichannel CRM communication	The author was solely responsible for production of the paper	100

1.4 Theoretical positioning

This section attempts to shed light on the relevant academic literature streams underlying the phenomenon under investigation, mCRM. Currently, there is not conceptual consensus on the term "mobile CRM communication". Therefore, this section helps to position this study in relation to other literature streams addressing relationship oriented marketing, different aspects of communication and the mobile medium as a communication channel. Furthermore, this study examines communication through the mobile medium with CRM from a company perspective. Figure 2 illustrates the four fundamental literature streams related to this study that are 1) customer relationship management (CRM), 2) relationship marketing (RM), 3) mobile commerce and 4) communication literature mainly within the marketing field. Of these literature streams, CRM and mobile commerce are considered the focal literature streams constituting mCRM.
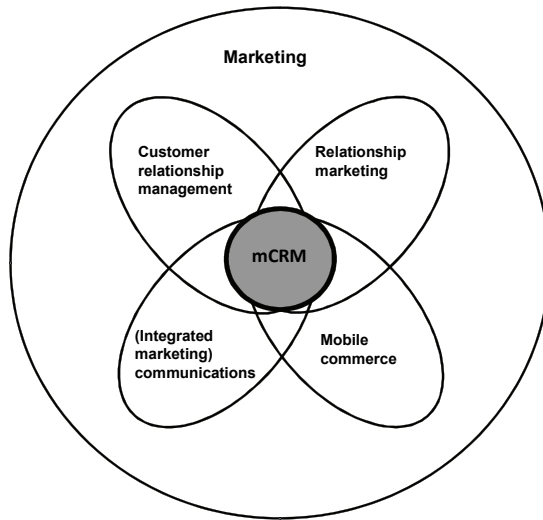
Fig. 2. Theoretical positioning of mCRM.

1.4.1 Customer relationship management

This study contributes to CRM domain within marketing field. Therefore, CRM literature forms the main theoretical backbone of this study. The conceptual development of CRM is discussed more profoundly in chapter 2.1.1. The origins of CRM can be traced back to the concept of relationship marketing (Parvatiyar & Sheth 2001, Gebert *et al.* 2003, Zablah *et al.* 2004). However, in the line with Zablah *et al.* (2004), this study considers that RM and CRM are different phenomena albeit interrelated and highly associated with each other. In other words, CRM is a specific relationship management domain (Zablah *et al.* 2004, Boulding *et al.* 2005).

On this basis, this study adopts a process view of CRM (e.g. Srivastava *et al.* 1999, Zablah *et al.* 2004, Reinartz *et al.* 2004). According to this view *"CRM is concerned with the development and maintenance of a portfolio of profit-maximizing customer relationships that is likely to include exchange relationships that vary along the transactional-relational continuum"* (Zablah *et al.* 2004: 481). Furthermore, CRM does not focus exclusively on the establishment and maintenance of close, collaborative exchange relationships contrary to RM. Following the process view of CRM, this study adopts a relational perspective in which the customer relationships are viewed as being in continuum from transactional to relational.

24

The process view emphasizes that CRM consists of highly related sub-processes. In other words, CRM can be further divided into several sub-processes one of which is interaction management (e.g. Hirschowitz 2001, Reinartz *et al.* 2004, Zablah *et al.* 2004). The focus of the study, communication through the mobile medium in CRM, can be considered to relate to this sub-process. The importance of interactions as a key element of management of customer relationships is widely recognized in CRM studies (e.g. Day & Van den Bulte 2002, Reinartz *et al.* 2004, Parvatiyar & Sheth 2001).

The process view also determines the importance of information exchange (i.e. communication) between the company and customers important (e.g. Parvatiyar & Sheth 2001, Palmatier *et al.* 2006, Reinartz *et al.* 2004). Additionally, this view also implies that the companies need to manage and coordinate these interactions with customers across different channels (e.g. Greenberg 2001, Thomas & Sullivan 2005, Payne & Frow 2005).

1.4.2 Mobile commerce

The other focal stream stems from mobile commerce literature (e.g. Balasubramanian *et al.* 2002, Kavassallis *et al.* 2003, Dickinger *et al.* 2005, Nysveen *et al.* 2005, Leppäniemi 2008, Shankar & Balasubramian 2009, Jayawardhena *et al.* 2009, Mallat *et al.* 2009, Shankar *et al.* 2010). To conceptualize mCRM it is of critical importance to scrutinize mobile commerce literature as well since CRM literature does not focus on either individual channels or communication within these channels. Therefore, mobile commerce literature complements CRM literature in order to conceptualize mCRM.

Following the seminal work by Balasubramanian *et al.* (2002) outlining conceptualization of mobile commerce, this study acknowledges similarly that communication through the mobile medium has a ubiquitous nature. In other words, *"at least one of the parties engaged in the communication must be mobile, in the sense that his, her, or its ability to communicate is not contingent on being at a fixed physical location at a particular point in time"* (Balasubramanian *et al.* 2002: 350). This study also acknowledges that *"when a concept is deeply embedded in technology [...] it is necessary to separate the concept from its underlying technologies to arrive at a stable conceptualization that is not subject to the volatility of short-run technological changes."* (Balasubramanian *et al.* 2002: 350). Accordingly, the conceptualization of mCRM attempts to fulfill this criterion.

The mobile commerce literature also highlights the unique characteristics of the mobile medium. Therefore, this literature is also utilized in order to find out characteristics of mobile medium that creates novel channel to manage customer relationships. It is acknowledged in this study, that the characteristics of mCRM are mostly due to the exceptional features of the mobile medium. Thus, building on mobile commerce literature (e.g. Barwise & Strong 2002, Kavassallis *et al.* 2003, Bauer *et al.* 2005, Nysveen *et al.* 2005, Jelassi & Enders 2006, Shankar & Balasubramanian 2009) this study strives to identify salient characteristics that are vital in CRM (these characteristics are elaborated on chapter 2.2.1).

1.4.3 Approaches to communication

As noted, communication has a vital role in this study. Therefore, it is vital to look for different approaches to communication. This is especially important since both CRM and mobile commerce literature are relatively silent about facets of communication. Accordingly, this study builds on two approaches to communication: communication theory and integrated marketing communications.

Following the communication theory (e.g. Schramm 1960, Mohr & Nevin 1990, Hoffman & Novak 1996, Duncan & Moriarty 1988), this study acknowledges the importance of communication as a critical element of building and maintaining customer relationships. For instance, Duncan & Moriarty (1998: 2) have stated *"when communication is foremost and listening is given as much importance as saying, interactive relationships become the focus"*.

The communication theory also has a particular emphasis on distinguishing unmediated communication from mediated communication (Hoffman & Novak 1996). Accordingly, it is acknowledged in this study that communication through the mobile medium represents mediated communication in which communication is facilitated by a device. Naturally, this has strong influence on the nature of the communication and, consequently, the conceptualization of mCRM.

This study also utilizes the traditional communication model that has emerged from this theory (Schramm 1960). This is due to the fact that the basis of communication is equal regardless of the medium used. According to Schramm (1960) communication involves four key components: sender, message, media and receiver. More specifically, this model is adaptively compared against the communication process model within the mobile context.

The studies within the area of (integrated) marketing communications (e.g. Schultz 2002, Schultz & Bailey 2000, Stewart & Pavlou 2002, Peltier *et al.* 2003,

Pickton & Broderick 2005) deal broadly with new electronic media. Following the (integrated) marketing communications approach, this study also stresses the role of database and communication technologies in the current marketing environment in order to enable personalized communication with individual customers.

Both communication theory and that on (integrated) marketing communications share the argument on the importance of interactivity within communication (e.g. Duncan & Moriarty 1998, Stewart & Pavlou 2002, Peltier *et al.* 2003) and following a similar approach in this study the concept *interactivity* is considered one of characteristics making the mobile medium unique. For instance, Duncan and Moriarty (1998: 8) have stated that *"interactivity is a hallmark of the paradigm shift in both marketing and communication."* In dealing with this concept, this study acknowledges that interactivity of communication through the mobile medium is more dependent upon users rather than the media itself. As the following citation proves *"media themselves may possess characteristics that facilitate or impede interaction, but the locus of interactivity exists in the decisions of actors who choose to interact when it serves their purpose(s)"* (Stewart & Pavlou 2002: 380).

1.4.4 Other literature streams

There are some other literature streams that could be considered suitable for the subject of the study. However, these literature streams are used to an insignificant extent or are excluded from this study.

The multichannel retailing approach (e.g. Deleersnyder *et al.* 2002, Berman & Thelen 2004, Simons & Bouwman 2006, Albesa 2007, Balasubramanian *et al.* 2005, Rangaswamy & Van Bruggen 2005) was used in this study in order to depict a multichannel environment. However, the main purpose of retailing is sell something and, thus, the evaluation of different channels is based on the economic contribution of the channels (see e.g. Deleersnyder *et al.* 2002, Neslin *et al.* 2006). Therefore, the underlying assumptions within this approach as a whole were not suited to the purposes of this study.

The service management approach of the Nordic School of Marketing as found, for instance in the work of Christian Grönroos and Evert Gummesson, considers interactions to be a core phenomenon in marketing. Additionally, they emphasize the role of communication in managing customer relationships (e.g. Gummesson 1999, Grönroos 2004, Lindberg-Repo & Grönroos 2004, Heinonen

& Strandvik 2005). However, the main emphasis in this approach is predominantly the value as an outcome of interaction and communication. While this study implicitly acknowledges the importance of value both for the company and the customer as an outcome of communication, the concept and its influence on communication is still beyond the scope of this study.

The research tradition of the Interaction approach in industrial marketing (e.g. Lapierre 2000, Ulaga 2003, Golik Klanac 2008) considers communication (i.e. exchange of information) an important part of any relationship and one of the core processes in buyer-seller interaction. Although this literature has given valuable insights of relationship management, this approach focuses purely on industrial marketing and, consequently, the customer relationships are considered to be mutual, close and collaborative exchange relationships.

1.5   Research approach

This chapter introduces the research approach of this study. The main research problem of this study - *how do companies communicate through the mobile medium in CRM?* – has guided decisions made concerning the research approach and methodologies. Accordingly, this thesis uses a case study approach that builds on the foundations of critical realism and abductive logic. These choices are elaborated in more detail next.

1.5.1 Philosophy of science

The core issue related the research approach is to describe *a research paradigm* referring to *"a basic belief system or worldview that guides the investigator"* (Guba & Lincoln 1994: 105). The research paradigm includes certain underlying assumptions concerning ontology, epistemological stance, and basic research methodologies. The choice of methodological approach is always affected by the philosophy of science adopted by the researcher. Thus, it is of critical importance to explicitly state the underlying assumptions of this study (Easton 1995). As mentioned, this study consists of four individual published research papers. While each of them has a similar methodological approach, all the papers have a unique aim and research process. Therefore, these individual papers may, to some extent, represent different paradigms. In addition, the distinctions between different research paradigms are often considered to be blurred (Easton 1995). Based on

this, I have, as a researcher, tried to choose the most certain paradigm from among others that most reflects my worldview.

As mentioned, my overall understanding of the world is closest to what has termed critical realism (e.g. Sayer 1992, Sayer 2000, Easton 2002, Easton 2010)[3]. In brief, critical realism assumes that there exists a reality independent of observers but, concurrently, acknowledges the essentially constructionist process in knowledge creation (Sayer 2000, Easton 2010). Accordingly, I, as a researcher, assume that mobile CRM as a phenomenon exists independently of me. Furthermore, I believe that issues related to mobile CRM, whether the server, customer database, multichannel environment or communication process, include objective characteristics but also key informants subjective perceptions and experiences of them.

The critical realism perspective emphasizes the fallibility of knowledge (Sayer 2000). Thus, the reality, in terms of measurable probability, is only imperfectly comprehensible through observations (Guba & Lincoln 1994, Easton 2002). Accordingly, I acknowledge that my knowledge of the world and the object of this research is only partial: a situation exacerbated by only being able to deal with the information key informants provided during the interviews about their own personal constructions of the knowledge and observations made during the research process.

1.5.2 The abductive research approach

Researchers having a worldview akin to critical realism most often adopt a research logic based on abduction (Järvensivu & Törnroos 2010, Easton 2010). The use of the abductive approach is also strongly supported in case studies (e.g. Eisenhardt 1989, Perry 1998, Dubois & Gadde 2002). This is due to the fact that this study can be considered as an early work in the nascent field of research concerning mCRM, and a work intended to develop the theoretical understanding of mCRM. Consequently, the research questions are primarily pragmatically evolved and empirical findings will be of critical importance. Therefore, the abductive approach is considered most appropriate for the purposes of this study.

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[3] This study employs critical realism and scientific realism interchangeably with the term realism as defined by Sayer (1992, 2000). For instance, Hunt (2003: 286) argues that Sayer (2000) is the key figure in the critical realism movement.

In the abductive approach, a theoretical framework evolves in parallel with data collection and data analysis (Eisenhardt 1989). Moreover, abductive research logic combines the principles of inductive and deductive approaches, but is different from both of them (Dubois & Gadde 2002). As Perry (1998: 789) stated *"pure induction might prevent the researcher from benefiting from the existing theory, just as pure deduction might prevent the development of new and useful theory"*. Actually, abductive reasoning is not, therefore, a rare phenomenon since purely inductive or deductive approaches are seldom found.

Figure 3 describes in more detail the abductive research process of research paper IV. Essentially, there have been different phases to the abductive approach during this research process. Thus, the logic of the research has in some phases followed abductive reasoning, whereas in some other phases the logic has leaned more towards deduction or induction.

As described in Figure 3, the initiation of the research process was guided by a pre-understanding of the subject of the research paper ("The role of the mobile medium in multichannel CRM communication"). The pre-understanding was based, primarily, on the previous research papers for this thesis. Apart from those research papers, the author also contributed other publications, such as Salo *et al.* (2008) and Leppäniemi *et al.* (2006), which gave vital insights for this, at that point, forthcoming paper. Based on this, the initial research problem and initial theoretical framework was formed. After this, the author conducted a background interview concerning the research phenomenon. Further, this interview was analyzed and, consequently, the research problem was specified. This also led, in conjunction with the contact with the case company, to modification of the theoretical framework in the sense that additional literature was reviewed in order to capture the research phenomenon more specifically
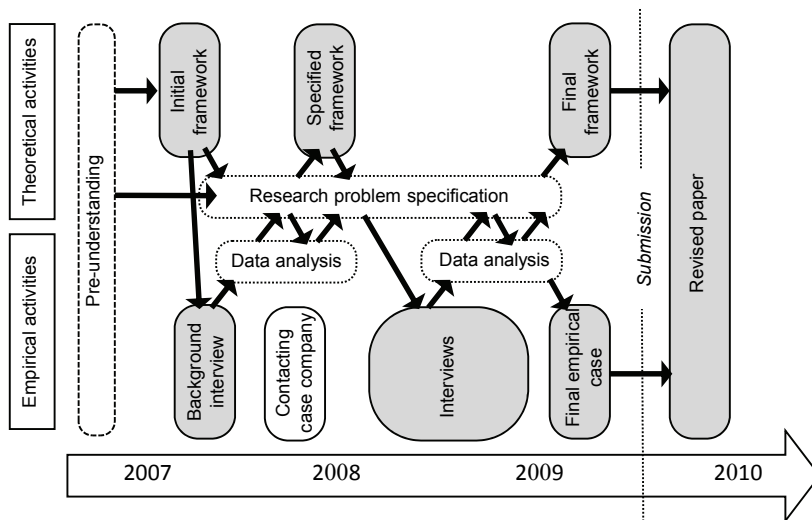
Fig. 3. The abductive research process of research paper IV.

Subsequently, an empirical study consisting of interviews within the case company was conducted. In the course of the interviews the data was also analyzed. Accordingly, this led to further modifications of the research problem. For instance, this phase of writing research paper IV was, primarily, inductive in nature. This was because the empirical data was a driving force underlying the formation of a final theoretical framework for the paper. Finally, the research problem was specified in parallel with enriching the theoretical framework and finalizing the empirical case.

1.5.3 Case study research

The empirical part of this study relies on a case study research method in order to deepen the understanding of mCRM communication. The choice of the method was largely prompted by the fact that the study is an early work in a nascent field of research intended to develop the theoretical understanding of the phenomenon. For a critical realist, a case study approach is particularly well suited, especially, to relatively clearly bounded, but complex phenomena such as mobile CRM (Easton 2010). Due to the paucity of investigation of the research area, the case study design and qualitative research techniques were considered appropriate for

the empirical investigation (Bonoma 1985, Lincoln & Cuba 2000, Stake 2000, Ghauri & Grönhaug 2002).

The present study pursues a deep understanding of the subject phenomenon in a specific setting. The empirical setting of this study is Finland, which is considered ideal for studying mobile CRM for the following reasons. In Finland, mobile phones have in general become an everyday commodity. According to the Finnish Communications Regulatory Authority (2009), at the end of June 2009, the number of mobile phone subscribers was 7.3 million while the population was only 5.2 million. Furthermore, 99 per cent of people of age between 15 to 79 years have a mobile phone. In the first six months of 2009, people sent over 1.8 billion text messages (approximately 10 percent more than in the equivalent period in the previous year) and 20 million multimedia messages (approximately 13 percent up on the equivalent six month period in 2008).

From company viewpoint, the mobile medium as a channel has been adopted by marketers to a large extent in various industries in Finland. This is best illustrated by the fact that the expenditure on customer relations communication, mainly via SMS, was 9.9 million euro consisting of 100 million messages send to end users in 2008 (Idean 2009). Furthermore, great market growth potential is anticipated for customer relation customer communication estimates indicate a 16.7 million euro expenditure in 2014. On the basis of these figures, Finland seems to be an appropriate territory on which to conduct this study.

The case study covers several industries, but in each company focus is the communication through mobile medium in CRM. For the empirical analysis, the companies were selected based on the idea of theoretical sampling, in which the companies are selected to represent the problem addressed by study. The choice of companies is elaborated in chapter 3.2. The research process, from initiating research paper I to collation of the whole dissertation has lasted from 2004 to date 2010.

1.6   Outline

Figure 4 describes the outline of this thesis. As noted, the dissertation consists of two parts. The first part is devoted to an overview of the dissertation and the second part consists of four original research papers. The first chapter of this work primarily highlights the importance of examining communication through the mobile medium in CRM and describes how the phenomenon is examined in this study.
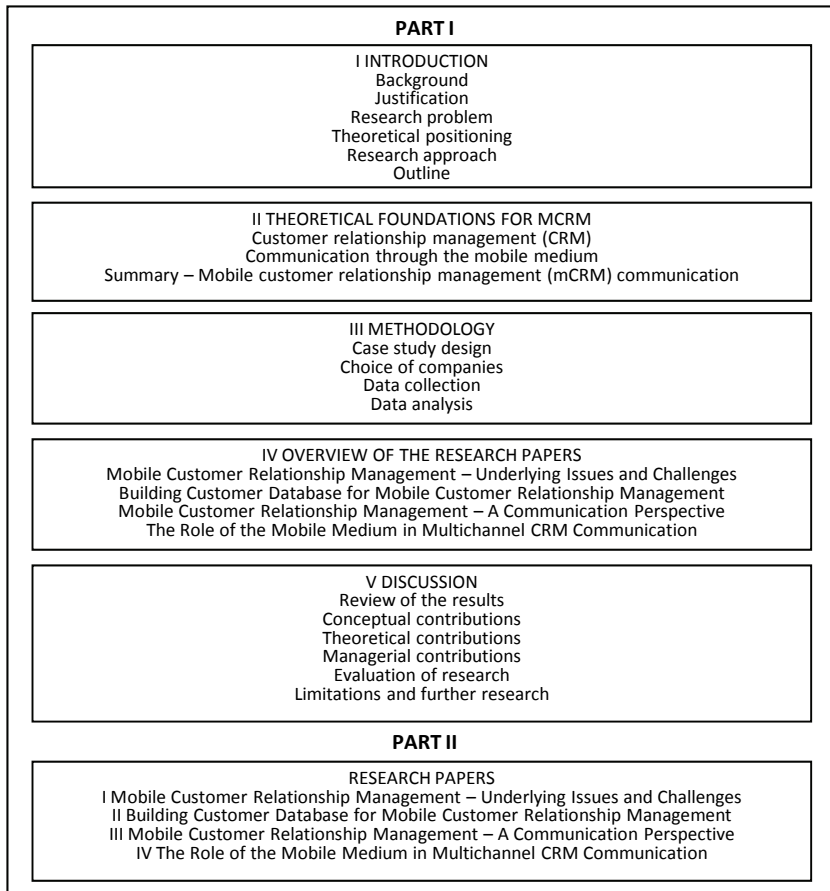
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│                              PART I                                   │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │                        I INTRODUCTION                             │ │
│ │                          Background                               │ │
│ │                         Justification                             │ │
│ │                       Research problem                            │ │
│ │                     Theoretical positioning                       │ │
│ │                        Research approach                          │ │
│ │                            Outline                                │ │
│ └─────────────────────────────────────────────────────────────────┘ │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │              II THEORETICAL FOUNDATIONS FOR MCRM                  │ │
│ │              Customer relationship management (CRM)               │ │
│ │               Communication through the mobile medium             │ │
│ │ Summary – Mobile customer relationship management (mCRM) communication │ │
│ └─────────────────────────────────────────────────────────────────┘ │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │                        III METHODOLOGY                            │ │
│ │                       Case study design                           │ │
│ │                       Choice of companies                         │ │
│ │                        Data collection                            │ │
│ │                          Data analysis                            │ │
│ └─────────────────────────────────────────────────────────────────┘ │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │                IV OVERVIEW OF THE RESEARCH PAPERS                 │ │
│ │ Mobile Customer Relationship Management – Underlying Issues and Challenges │ │
│ │ Building Customer Database for Mobile Customer Relationship Management │ │
│ │ Mobile Customer Relationship Management – A Communication Perspective │ │
│ │ The Role of the Mobile Medium in Multichannel CRM Communication  │ │
│ └─────────────────────────────────────────────────────────────────┘ │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │                         V DISCUSSION                              │ │
│ │                      Review of the results                        │ │
│ │                     Conceptual contributions                      │ │
│ │                     Theoretical contributions                     │ │
│ │                     Managerial contributions                      │ │
│ │                      Evaluation of research                       │ │
│ │                  Limitations and further research                 │ │
│ └─────────────────────────────────────────────────────────────────┘ │
│                             PART II                                   │
│ ┌─────────────────────────────────────────────────────────────────┐ │
│ │                       RESEARCH PAPERS                             │ │
│ │ I Mobile Customer Relationship Management – Underlying Issues and Challenges │ │
│ │ II Building Customer Database for Mobile Customer Relationship Management │ │
│ │ III Mobile Customer Relationship Management – A Communication Perspective │ │
│ │ IV The Role of the Mobile Medium in Multichannel CRM Communication │ │
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Fig. 4. The structure of dissertation.

The second chapter deals with theoretical foundations of mCRM. In more detail, CRM, mobile commerce and communication literature is reviewed in order to form a theoretical framework of mCRM communication. The third chapter describes the methodology of this thesis by illustrating case study design, data collection and data analysis. The fourth chapter gives an overview of the research papers of this thesis. The fifth chapter is devoted to discussion of the findings of the research and the contributions of the study, evaluation of the study and recommendations for further research.

2   Theoretical foundation

The purpose of this chapter is to develop a theoretical framework of mCRM based on the research papers.

This theoretical framework reflects the current knowledge of the author. Accordingly, it is acknowledged that discussion in the research papers may be in some way controversial or inadequate compared to current knowledge. The comparison is considered of critical importance since the research process has been relatively long and three of the four papers were published over three years ago. For instance, in research paper *II* the authors do not make any synthesis of the discussion related to CRM and mobile marketing. Instead, the discussion is discrete by nature and, thus, does not make accurate contribution to mobile CRM literature. In parallel with progress in the research process, my thoughts have naturally crystallized about mCRM. Therefore, some suggestions and arguments presented in the research papers are compared to current knowledge in this section.

As mentioned, the theoretical foundations for mCRM communication lie in the CRM, mobile commerce and communication literature. Therefore, the framework focuses on these focal discussions related to mCRM communication.

2.1   Customer relationship management (CRM)

Customer relationship management (CRM) is one of the focal concepts within this study. In particular, CRM act as underlying thought of communication through mobile medium in this study. In order to enhance understanding of mCRM, it is considered of utmost importance to peek briefly at this underlying thought guiding mobile CRM efforts. Therefore, this chapter discuss on the conceptual development and the key elements of CRM. Then, CRM as a process is discussed. Finally, the channels through which a company interacts with its customers and the role of individual channels are presented.

2.1.1 Conceptual development of CRM

This chapter illustrates the conceptual development of the focal concept of this dissertation, CRM. That inevitably means entering into the perpetual debate on the CRM and RM concepts. This is due to the fact that these discussions are, most often, intertwined with each other and so, it is impossible to separate them.

Although the foundation for research on CRM was laid in the late 1970s, and it is acknowledged that there is a plethora of literature sharing similar ideology to CRM, the acronym CRM itself made its debut in academic literature as late as 1996. The acronym CRM was coined by Stone, Woodcock and Wilson (Stone *et al.* 1996). However, the authors use the term customer relationship management merely in the title and from then on discuss RM (Sinisalo 2007a). Thereafter, the first wave of academic CRM literature came to prominence in the late 1990's. In those years, there was evidently confusion around the term customer relationship management. Accordingly, the ideology underlying CRM was "plagiarized" mainly from others and, therefore, it had striking similarities with other relationship oriented concepts. The basic elements of CRM, such as mutually beneficial relationships, were adopted mostly from RM philosophy. Thus, CRM did not have an identity of its own. As an example, Davids (1999) used CRM interchangeably with the cognate terms, such as RM, lifetime value marketing, loyalty marketing, and one-to-one marketing while giving guidances on how to increase the chances of success for CRM applications. In paralleling, Peppers *et al.* (1999) developed a guide for companies to implement one-to-one marketing program and used CRM as a synonym for one-to-one marketing and RM. This refers to the idea that there is only one philosophy associated with attempts by companies to develop and maintain relationships with the customers, but several terms to describe it.

In the year 2001, the academic literature of CRM witnessed explosive growth (Sinisalo 2007a, Ngai 2005). At that time, many authors still waded into the perpetual debate of the relation of CRM to other management concepts, such as RM. The majority of the authors contributing to the CRM literature used the terms CRM and RM as if they were synonyms. Moreover, Parvatiyar and Sheth (2001) argued that these terms had not been distinguished from each other in the marketing literature. However, this approach was not without controversy. The academics, concurrently, pursued a common conceptualization that would manifest the uniqueness of the concept of CRM. Many authors considered CRM as a modus operandi for RM (e.g. Plakoyiannaki & Tzokas 2002, Stefanou *et al.* 2003, Gummesson 2004). For instance, Gummesson (2004) defined CRM as the values and strategies of relationship marketing – with particular emphasis on customer relationships – turned into practical application. Contrary to some, Plouffe *et al.* (2004) questioned the whole logic of attempting to create a common conceptualization of CRM because of each firm's uniqueness.

The perpetual debate slowed somewhat when Zablah *et al.* (2004) concluded the comparison between CRM and RM terms by stating that relationship marketing and CRM are different phenomena albeit interrelated and highly associated with each other. Additionally, they provided a conceptualization not only outlining CRM's domain but also reconciling the divergent perspectives stemming from academic and popular literature.

Recently, the number of academic articles focusing on CRM and being published in the mainstream marketing journals has been growing steadily. Many respected marketing scholars have addressed interest in the phenomenon. For instance, when Industrial Marketing Management (IMM) devoted an issue to CRM, it generated more submissions than any other special issue the journal had produced (LaPlaca 2004). In addition, the special section on CRM in the Journal of Marketing could be considered as one landmark of this interest (Rogers 2005).

As noted, there were a relatively large number of academic papers on CRM with a normative orientation. This is not extraordinary in the light of the bulk of CRM handbooks that inherently have a normative orientation. Generally, these normative papers present "to-do-lists" and "best practices" relating to some CRM issues among other things. These papers are most often published in journals concentrating on management practice, such as the Harvard Business Review. In parallel with the increasing interest in the phenomenon, CRM research has broken free from the "normative burden" inherent to practical CRM literature and the confusion around the concept of CRM seems to be slowly decreasing (Sinisalo 2007a, Boulding *et al.* 2005).

In line with Zablah *et al.* (2004), this study considers that RM and CRM are different phenomena albeit interrelated and highly associated with each other. In other words, CRM is a specific relationship management domain having unique elements (Zablah *et al.* 2004, Boulding *et al.* 2005).

2.1.2 Key elements of CRM

As mentioned above, CRM as a concept has been a topic of major importance among academics for more than a decade (Payne & Frow 2005, Boulding *et al.* 2005, Richards & Jones 2008, Keramati *et al.* 2010) and the principles on which CRM based have existed for much longer (Payne & Frow 2004, Boulding *et al.* 2005). Despite the gradually evolving academic interest, the research on CRM has consistently been fragmented and many issues lack any consensus (see e.g. Boulding *et al.* 2005). This may be due to the fact that significant disagreement

exists among academics and practitioners as to the nature of CRM (Zablah *et al.* 2004). Table 5 gives a glimpse of the variety of perspectives on CRM.

Table 5. Different descriptions of CRM.

Author	Description
Frow & Payne (2009)	CRM is a cross-functional strategic approach concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. It typically involves identifying appropriate business and customer strategies, the acquisition and diffusion of customer knowledge, deciding appropriate segment granularity, managing the co-creation of customer value, developing integrated channel strategies and the intelligent use of data and technology solutions to create superior customer experiences.
Richards & Jones (2008)	A set of business activities supported by both technology and processes that is directed by strategy and is designed to improve business performance in an area of customer management
Boulding *et al.* (2005)	CRM relates to strategy, the management of the dual creation of value, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate (long-term) relationships with specific customer and/or customer groups, and the integration of processes across the many areas of the firm and across the network of firms that collaborate to generate customer value
Payne & Frow (2005)	CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. CRM unites the potential of relationship marketing strategies and IT to create profitable, long-term relationships with customers and other key stakeholders. CRM provides enhanced opportunities to use data and information to both understand customers and co-create value with them. This requires a cross-functional integration of processes, people, operations, and marketing capabilities that is enabled through information, technology, and applications.
Zablah *et al.* (2004)	CRM is an ongoing process that involves the development and leveraging of market intelligence for the purpose of building and maintaining a profit-maximizing portfolio of customer relationships.
Chen & Popovich (2003)	CRM is a combination of people, processes and technology that seeks to understand a company's customers. It is an integrated approach to managing relationships by focusing on customer retention and relationship development.
Rigby *et al.* (2003)	CRM allows companies to gather customer data swiftly, identify the most valuable customers over time, and increase customer loyalty by providing customized products and services.
Parvatiyar & Sheth (2001)	CRM is a comprehensive strategy and process of acquiring, retaining and partnering with selective customers to create superior value for the company and the customer.

Author	Description
Stone & Woodcock (2001)	CRM is a term for methodologies, technologies and e-commerce capabilities used by companies to manage customer relationships.
Shoemaker (2001)	CRM is a technology used to blend sales, marketing and service information systems to build partnerships with customers.
Swift (2000)	CRM is an enterprise approach to understanding and influencing customer behaviour through meaningful communication to improve customer acquisition, customer retention, customer loyalty, and customer profitability.
Srivastava *et al.* (1999)	CRM is concerned with the creation and leveraging of linkages and relationships with external marketplace entities, especially channels and end users.
Peppers *et al.* (1999)	CRM can be viewed as an application of one-to-one marketing and relationship marketing, responding to individual customer on the basis of what the customer says and what else is known about the customer.
Galbreath & Rogers (1999)	CRM is about the management of technology, processes, information resources, and people needed to create an environment that allows a business to take a 360-degree view of its customers

As noted, these definitions vary from CRM as being technology solutions (e.g. Stone & Woodcock 2001, Shoemaker 2001) to a holistic approach to managing customer relationships (e.g. Parvatiyar & Sheth 2001, Boudling *et al.* 2005). In fact, CRM technology is often incorrectly equated with holistic CRM resulting in many failures (Reinartz *et al.* 2004, Lambert 2010). Accordingly, it is not surprising that there is lot of confusion around the term CRM (Payne & Frow 2005, Boulding *et al.* 2005). Against this evidence, there is definitely a lack of consensus on the definition of CRM, although recently academics have pointed to an increased clarity in the proferred definitions (Frow & Payne 2009).

Despite the many different descriptions, there are two commonly acknowledged key elements that all definitions of CRM, either implicitly or explicitly, include. The first of them is the intelligent use of data and technology. Accordingly, it is important to emphasize that technology does play a substantial role in CRM efforts (Chen & Popovich 2003). Empowered by advanced technologies, companies can, among other things, gather an unprecedented amount of data on their customers, and, subsequently, turn this data into customer knowledge (Bose 2002). Accordingly, a customer database enables information on customers from all relevant departments to be centralized in order to further use it intelligently to develop relationships with those customers (Reinartz *et al.* 2004, Jayachandran *et al.* 2005). In addition, providing the consistent service regardless of the channel the company chooses to interact with its customers is largely enabled by intelligent technology (Greigthon 2000, Bradshaw & Brash

2001, Chen & Popovich 2003). Nevertheless success is naturally also dependent on appropriate human interaction with the processes and systems selected (Chen & Popovich 2003, Boulding et al. 2005). For instance, the mere existence of customer data does not lead to understanding customers, and it is people who most often decide how the data is to be utilized for CRM purposes.

The other key element is the focus on customer relationships. This is in line with the paradigm shift in marketing where the focus has shifted from transactional marketing to marketing approaches focusing on building and retaining relationships with the customers (e.g. Dwyer et al. 1987, Grönroos 1991, Sheth & Parvatiyar 1995). However, CRM does not focus exclusively on the establishment and maintenance of close, collaborative exchange relationships, contrary to RM. Instead, the relational perspective of CRM is considered as being on a continuum from transactional to relational (Zablah et al. 2004). Therefore, CRM can be applied, for instance, in a retailing context in which relationships are often based only on loyalty cards and quantity of visits.

Bearing the previous point in mind, CRM is, at its core, about leveraging technology with the purpose of developing customer relationships. For the purpose of this study, not particular definition of CRM is adopted. Furthermore, defining CRM more specifically is not considered pertinent although its importance as an underlying thought for mCRM is acknowledged. However, it is considered vital to elaborate on the process perspective on CRM in the next chapter for the purposes of this study.

2.1.3 CRM as a process

This study adopts a process view of CRM (Srivastava *et al.* 1999, Chen & Popovich 2003, Zablah *et al.* 2004, Lambert 2010). According to Srivastava *et al.* (1999) CRM as a process addresses all aspects of identifying customers, creating customer knowledge, building customer relationships and shaping customer perceptions of the organization and its products.

As noted, it is acknowledged in this view that customer relationships develop over time (Reinartz *et al.* 2004, Zablah *et al.* 2004). Consequently, this view acknowledges that a customer relationship process evolves through distinct phases (Dwyer *et al.* 1987). According to Reinartz *et al.* (2004) the CRM process at the customer facing level consists of three key stages, namely the initiation, maintenance, and termination phases. Furthermore, it is of critical importance for

companies to interact with customers and manage relationships differently at each phase (Srivastava *et al.* 1998).

Furthermore, this macro-level process can be further divided into highly related sub-processes (Srivastava *et al.* 1999). One of these sub-processes of CRM is interaction management (e.g. Hirschowitz 2001, Reinartz *et al.* 2004, Zablah *et al.* 2004). According to this view, interactions with customers are considered as a key element of the management of customer relationships (e.g. Parvatiyar & Sheth 2001, Day & Van den Bulte 2002).

Within interaction management, it is of critical importance that interactions are consistent experiences for customers regardless of the channel and the personnel the customer interacts with in the company (Payne & Frow 2005, Neslin *et al.* 2006). This demands improving and coordinating information across time and contact channels to manage the customer relationships systematically (Reinartz *et al.* 2004, Thomas & Sullivan 2005, Richards & Jones 2008). Companies can interact with the customers more appropriately when the information on them is detailed and up-to-date (Jayachandran *et al.* 2005). The essence of CRM is, thus, to learn about customers needs and identify how best to satisfy them (Srivastava *et al.* 1999). Without this identification and understanding, customers are invisible to the company and, therefore, unmanageable (Park & Kim 2003).

As with CRM, the interaction management process is also highly dependent on the technological and human resources of a company (Zablah *et al.* 2004). For instance, CRM technology and the mobile medium enable personalized communication with customers who may be unreachable through other channels (Jelassi & Enders 2006). Irrespective of the potential of technology, humans as representatives have an indispensable role to play in interaction management. This is due to the fact that humans have a unique ability to understand individual customers and interact with customers in complex situations, such as customer complaints or customer acquisition (Payne & Frow 2004, Zablah *et al.* 2004).

Within interaction management, communication (or information exchange) between the company and customers is considered critically important (e.g. Parvatiyar and Sheth 2001, Reinartz *et al.* 2004, Jayachandran *et al.* 2005, Palmatier *et al.* 2006). The emphasis CRM places on relationships is also redefining how companies communicate with their customers. Accordingly, the focus of the communication in CRM, contrary to that of transactional marketing, is not purely persuasive, instead it is more interactive and mutual between the company and customers (Duncan & Moriarty 1998, Heinonen & Stranvik 2005).

Furthermore, in ideal circumstances CRM strives for communication with customers on an individual basis (Park & Kim 2003, Campbell 2003). For that, the mobile medium appears exceptionally well suited.

As mentioned, companies need to manage and coordinate their interaction with customers across different channels (Thomas & Sullivan 2005, Payne & Frow 2005, Neslin *et al.* 2006). Therefore, the next section addresses the multichannel environment through which the company and customers interact with each other.

It is worth mentioning before continuing that although the process view of CRM is considered as the most appropriate underlying thought for communication through the mobile medium in CRM, it is acknowledged that the companies can use the mobile medium as a channel for CRM regardless of whether CRM is viewed within the company as a process, a technology, a philosophy, a strategy or a capability.

2.1.4 Multichannel environment

Most companies interact with their customers across several channels including, for instance, the internet, face-to-face channels and through call centers (Parvatiyar & Sheth 2001, Bradshaw & Brash 2001, Payne & Frow 2004, Thomas & Sullivan 2005). In parallel, customers have developed expectations of being able to choose the channel through which they interact with a company (Payne & Frow 2004). This development has led to a situation where supporting a range of channels (i.e. a multichannel environment) is a necessity for companies in most industries (Parvatiyar & Sheth 2001). Additionally, this has also challenged companies to manage this multichannel environment effectively (Neslin *et al.* 2006, Payne & Frow 2004).

In CRM, the multichannel environment aims to establish an integrated and single understanding of the customer regardless of the communication channel the customers use (Park & Kim 2003, Payne & Frow 2005, Neslin *et al.* 2006). This enables for the companies to ensure that the customer experience is shared across all channels (Reinartz *et al.* 2004, Weinberg *et al.* 2007). Acquiring a better understanding of customers allows companies to interact, respond, and communicate more effectively with them (Chen & Popovich 2003).
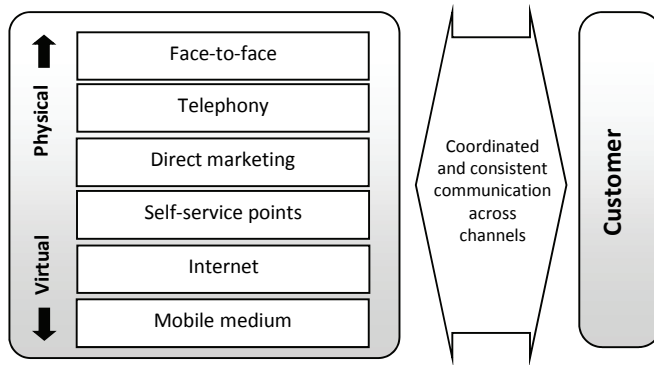
Fig. 5. The multichannel environment in CRM (Sinisalo 2010, Payne & Frow 2004).

Payne and Frow (2004) separated a wide variety of channels utilized by companies into six categories based on the balance of physical or virtual contact. Accordingly, these channel categories can be considered as a continuum of forms of customer contact ranging from the physical (such as a face-to-face interaction) to the virtual (such as interaction through Internet or mobile medium) (Payne & Frow 2004). Based partially on their work, Sinisalo (2010) suggested in research paper IV that the more appropriate way to describe the multichannel environment is as consisting of the following channels: 1) *face-to-face*, 2) *telephony*, 3) *direct marketing*, 4) *self-service points*, 5) *the Internet,* and 6) *the mobile medium* channels (see Figure 5). These channels are further elaborated in research paper IV.

The underlying assumption of the multichannel environment is that the use of only one channel may limit a company's performance (Albesa 2007). Therefore, it is important for companies to establish a multichannel strategy for CRM that takes advantage of the different characteristics of each channel, allowing the company to overcome the inherent limitations of any single channel (Berman & Thelen 2004, Warrington *et al.* 2007).

The multichannel environment demands continuous evaluation of the most appropriate combination of channels (Payne & Frow 2004). Companies may, for instance, target cost reduction when making a decision, since the costs associated with many traditional channels involving personal contact, such as a sales force, are increasing (Bradshaw & Brash 2001, Payne & Frow 2004). Therefore, a common response of companies is to cut costs by increasing technology-enabled channels, such as the mobile medium, in which human interaction is substituted

for or diminished by the use of technology (Walker *et al.* 2002). For instance, banks have directed customers towards using technology-enabled channels instead of branches for everyday transactions, such as checking balance, by changing the pricing basis of these kinds of services.

Nevertheless, the use of technology-based channels in the context of CRM can be a double-edged sword (Colgate & Smith 2005). Issues may emerge from the technology itself or originate with customer attitudes or knowledge related to technology. For instance, the technology can malfunction, and even when the technology functions properly, customers may be very suspicious of it. Consequently, looking from the customer perspective, we might question the rationality of the growth of technology-enabled channels. Therefore, it is of critical importance that there is still a balance maintained between face-to-face and technology-enabled channels (Weinberg *et al.* 2007). It does not serve companies to make cost savings, if there is a significant reduction in customer perceived value as a result of the introduction of a new channel (Payne & Frow 2004).

Furthermore, the multichannel environment in the CRM consists of several channels and serves the company as a whole. In this multichannel environment, an individual channel may serve several purposes. However, the role is dependent, to a large part, on the unique characteristics of the channel in question, since it is those that determine the kind of activities, the purposes and the customer relationship phase in which the company may effectively utilize the channel. For instance, face-to-face channel represents a richest way of communication due to its ability to communicate, for instance, gestures and emotions (Daft & Lengel 1984). From companies' perspective, this type of channels is most expensive to support, especially for minor issues. However, it is necessary for ambiguous tasks, such as customer complaints, and important customer segments (Payne & Frow 2004). Accordingly, the individual channel within this multichannel environment may serve different roles. The following discussion attempts to clarify this issue.

2.1.5 The role of individual channel

As mentioned above, companies cannot communicate identically across the different channels and, thus, some channels are more suited to, or more often used for, certain communications (Verhoef & Donkers 2005). Furthermore, it is of critical importance to acknowledge that different channels may serve different purposes (Neslin *et al.* 2006).

44

It is sometimes forgotten that communication in CRM is not only about sales, but about marketing and service activities as well (Jayachandran *et al.* 2005, Xu *et al.* 2002). Bearing this in mind, one channel may function mostly as an information source for customers, while another channel may serve as the sales channel (Berman & Thelen 2004). Furthermore, marketing efforts in one channel can enhance sales through another channel (Neslin & Shankar 2009). This is especially inherent to direct marketing channels, such as television or radio, which permit only one-way communication, and are often used to direct the customers to others channels in order to complete a purchase. For instance, customers may find information from the Internet and, thereafter, go to a bricks and mortar store in order to buy the product or service in question.

Different channels may also be more appropriate in different phases of the customer relationship (Neslin & Shankar 2009). Companies often use different channels to acquire customers than they do to maintain customer relationships (Bolton *et al.* 2004, Verhoef & Donkers 2005). Several different channels are available to companies seeking to acquire new customers. Those acquisition channels most relevant to the multichannel environment presented here are direct marketing, the Internet and face-to-face channels (Bolton *et al.* 2004, Verhoef & Donkers 2005).

The role of the individual channel may also be significant without it having a direct financial outcome. This is contrary to traditional research on the multichannel environment in the retailing context, where the evaluation is usually based on the economic contribution of each channel (see e.g. Deleersnyder *et al.* 2002, Neslin *et al.* 2006).

To conclude the discussion, it is worth mentioning that in some instances the use of a particular channel may be neither desirable nor appropriate from the customer's perspective. This is because not all customers are necessarily willing to communicate with the company through certain channels. Some customers may prefer face-to-face relationships, in spite of the opportunities presented by the technology, such as messaging-based communication through the mobile medium (Gwinner *et al.* 1998, Dibb & Meadows 2001, Gremler & Gwinner 2000).

2.2   Communication through the mobile medium

This chapter discusses communication through the mobile medium. In this study, it is argued that communication between the company and the customer cannot be

exactly the same through the mobile medium as it would be through other channels. This is due to characteristics of the mobile medium.

Therefore, the chapter first discusses the characteristics of the mobile medium and, subsequently, the communication phases and communication modes of mobile CRM.

2.2.1 Characteristics of the mobile medium

Axiomatically, the mobile medium, such as any other channel, has its strengths and weaknesses. This chapter depicts vital characteristics of the mobile medium in CRM. The inherent characteristics of communication through the mobile medium are described in Table 6.

Table 6. The mobile medium as a communication channel.

Characteristic	Description	Example studies
Flexibility of communication	Only the mobile medium, among all mediated communication channels, allows access to an individual virtually anytime and anywhere. Thereby, the mobile medium provides reach beyond any other medium including the internet.	Anckar & D'Incau 2002, Kavassallis *et al.* 2003, Balasubramanian *et al.* 2002, Tsang *et al.* 2004, Jelassi & Enders 2006, Shankar & Balasubramanian 2009, Shankar *et al.* 2010
Permission needed	The necessary prerequisite to initiate communication with customers is to get their permission for it. However, customers are more willing to communicate through the mobile medium when the company has obtained explicit permission from them.	Barwise & Strong 2002, Banes & Scornavacca 2004, Tsang *et al.* 2004, Carroll *et al.* 2005, Heinonen & Strandvik 2007,
Cost-efficient	The mobile medium can be very cost-efficient channel for the company. Especially, the costs of the mobile medium are relatively low when the company uses text messages in order to communicate with the customers.	Kavassallis *et al.* 2003, Shankar & Balasubramanian 2009, Duran 2010,
Traceability	The mobile medium enables tracing the communication afterwards due to the messages are automatically stored. This is important because both parties can recall the communication better and more likely avoid misunderstandings	Peppers & Rogers 2004, Simons & Bouwman 2006, Valsecchi *et al.* 2007, Shankar & Balasubramanian 2009

Characteristic	Description	Example studies
Personalization	Unlike other media, a mobile phone generally belongs to only one person and, thus, advanced personalization is vital in communicating through the mobile medium	Nysveen *et al.* 2005, Jelassi & Enders 2006
Familiarity	Majority of people, if not all, are familiar with the use of messaging services which has become everyday commodity among people.	Rangaswamy & van Bruggen 2005, Salo *et al.* 2008, Duran 2010
Convenience	The utilization of mobile medium is convenient and may save time for the customers. Especially, when the timing and content of communication is relevant from the customer's viewpoint.	Anckar & D'Incau 2002, Shankar & Balasubramanian 2009, Duran 2010
Interactivity	The mobile medium, as such, exhibits all characteristics necessary to establish an interactive communication between the company and its customer.	Barwise & Strong 2002, Barnes & Scornavacca 2004, Bauer *et al.* 2005, Valsecchi *et al.* 2007, Shankar & Balasubramanian 2009
Leanest communication	The mobile medium has a limited set of visual and audio capabilities. The messaging based communication, especially text messages, enables very lean communication due to its inability to communicate, for instance, gestures and emotions. This limits the exposure opportunities of the mobile medium	Jelassi & Enders 2006, Nysveen *et al.* 2005, Simons & Bouwman 2006, Shankar & Balasubramanian 2009

As mentioned, this study focuses mainly on messaging based communication, such as SMS and MMS, through the mobile medium. An overwhelming majority of the technology still used, in practice, within mobile communication is based on the messaging features of the mobile medium (e.g. Rangaswamy & van Bruggen 2005, Shankar & Balasubramanian 2009, Duran 2010).

Furthermore, the messaging services inherently take advantage of the unique characteristics of the mobile medium. Only the mobile medium among all communication channels allows access to an individual virtually anytime and anywhere (e.g. Balasubramanian *et al.* 2002, Kavassallis *et al.* 2003, Tsang *et al.* 2004, Shankar & Balasubramanian 2009). Accordingly, the mobile medium, in contrast to other channels, has an autonomous nature in terms of temporality and spatiality (Liljander *et al.* 2007). Furthermore, messages sent through the mobile medium are most often read instantly by the receiver and, subsequently, messages have a high response rate (Kavassallis *et al.* 2003, Schierholz *et al.* 2007, Shankar

& Balasubramanian 2009) enabling instant and interactive communication, unlike through other mediated channels (see Figure 6).

Fig. 6. Comparing communication through mediated channels.

Due to its autonomy and instantaneous character, the mobile medium is considered exceptionally well suited to certain types of communication. Given the potential of the mobile medium for communication with customers, there is a fundamental difference in how company is approaching this nascent medium. The mobile medium's characteristics do not, as such, contribute any businesses to the company unless and until they are appreciated and, subsequently, utilized. Research paper IV describes the upgrade service provided by one airline, Finnair, for its loyalty program members. In this service, Finnair offers an upgrade by text message for the passengers. The service is offered when business class seats are available on flights and the passengers in question have enough Finnair frequent flyer Plus points or air miles to be able to claim the seat. This service can be considered as an example of communication that utilizes the inherent characteristics of the mobile medium in CRM. It emphasizes the flexibility, familiarity and interactivity of message-based communication. According to the Finnair informants, this kind of communication is viewed positively by their customers.

Obviously, the communication poses challenges for companies as well. Since communication through the mobile medium may easily irritate customers (Tsang *et al.* 2004, McManus & Scornavacca 2005, Carroll *et al.* 2005, Shankar *et al.* 2010), it is of critical importance that the timing and content of the communication is relevant for the customers. For instance, if we imagine the situation where a communication sent through the mobile medium is incorrect and/or contradicts what is sent through other channels but a customer acts on it. Such a situation may seriously harm the trust in communication through the mobile medium since the mobile medium is very intimate device and an incorrect message sent at a bad time could easily work against the company (Barnes &

Scornavacca 2004). In addition, incorrect information received through the mobile medium seems more likely to irritate customers than communications coming through other channels.

Given these unique characteristics, the mobile medium as a channel can be used as a complementary, supplementary or substitutive channel in CRM. Table 7 provides a description and representative example of each of the three alternatives. In this study, a substitute channel refers to a situation where the mobile medium replaces one of the existing channels which formerly provided activities. A complementary channel refers to a situation where CRM activities conducted through the mobile medium are similar to activities conducted through some other channels. A supplementary channel refers to a situation where CRM activities are purely designed to utilize the unique features of the mobile medium. In other words the company provides novel activities which are designed for and available through the mobile medium.

Table 7. The mobile medium as a complementary, supplementary or substitutive channel for CRM activities.

Reason	Description	Example
Substitute	The mobile medium replaces one / some of the existing channels through which activities used to be provided. Accordingly, activities that used to conducted through the replaced channel are relocated to be conducted through the mobile medium	Finnish car service company send a text message to customers after the car is serviced and can be picked up
Complement	The mobile medium is an additional channel providing existing activities for customers who want to interact with the company through the mobile medium	The customers of a large Finnish retailer can order products introduced in a magazine or homepage of the retailer through the mobile medium simply by sending an SMS message including the product codes
Supplement	The mobile medium provides novel supplementary activities that are designed for and available only through the mobile medium	A Finnish dental practice sends a text message to the next five customers waiting for the treatment immediately after the cancellation of an appointment. The fastest reply to the message will be allocated the appointment time.

For instance, the national airline of Finland, Finnair, provides information for passengers about flight delays or cancellations through the mobile medium by using text messages. This kind of service activity is a good example of a

supplementary service that is designed for (and useful only) in the mobile medium since the information could most probably only reach passengers through the mobile medium

2.2.2 Communication phases

As customer relationships, the communication process through the mobile medium is assumed to evolve through distinct phases (Sinisalo & Karjaluoto 2007). Accordingly, the author suggests that the communication process through the mobile medium consists of initiation and maintenance stages. Both of these stages involve unique purposes, activities to accomplish those purposes, and channels through which the communication can be conducted (see Figure 7).

As noted, the necessary prerequisite to initiate communication with customers is to get their permission to do so. Getting customers' permission to send messages is essential for companies in mCRM. This is due to the fact that the use of mobile medium as a marketing channel is, in the European Union (EU) area, regulated by law and involves asking end users' permission to send unsolicited marketing messages via all electronic communications for marketing purposes (the European Union 2002)

	Initiation	Maintenance
PURPOSE	To attract customers' attention so that they give permission to initiate communication	To maintain valid permission and communicate consistently and continuously to enhance customer loyalty
ACTIVITIES	Votes, competitions, lotteries, and quizzes	Information, advertising, promoting, feedback, surveys, reminders, alerts, shopping, ordering
CHANNELS	Newspapers, magazines, television, radio, outdoor, internet,	Mainly mobile medium for the complementary activities in companies' media-mix
	ACQUISITION	CONSOLIDATION → ENHANCEMENT

Fig. 7. Communication phases (Sinisalo & Karjaluoto 2007).

The main exception to this directive is that within the context of an existing customer relationship the companies can use electronic contact details to promote similar products or services. However, the user should be able to withdraw permission for the company to use his or her contact details for marketing purposes immediately, easily and without costs. In addition, it has been argued that companies benefit from getting consumers' permission to be contacted (Marinova *et al.* 2002) and the numerous studies have showed (e.g. Barwise &

Strong 2002, Tsang *et al.* 2004, Heinonen & Strandvik 2007) that the customers are more willing to receive messages through the mobile medium if it was sent with their permission.

Accordingly, and in contrast to any other media, the mobile medium as a channel needs to be complemented by some other channel at least in the initiation phase of communication (see e.g. Sinisalo *et al.* 2005, Geysken *et al*. 2002). Thus, the main purpose of the initiation phase is to attract customers' attention so that they give the company their permission to initiate communication. This refers to the idea that a company strives to attract new customers by making a proposal to customers and, consequently, customers join the regular customer program (Sinisalo & Karjaluoto 2007). Customers can join the program by providing some information necessary to initiate communication with them. The information can be given with either with the help of a mobile device or through traditional channels. The role of mass media in this phase is to open more direct forms of communication and encourage potential customers to identify themselves (Duncan & Moriarty 1998). In this phase, the communication is based on planned activities that do not require much two-way interaction or participation (Lindberg-Repo & Grönroos 2004). In the mobile context, a suitable way to attract customer attention, which in turn results in their giving the permission, are considered to be different polls, competitions, lotteries and quizzes (Sinisalo *et al.* 2006).

For the maintenance of customer relationships the mobile medium presents a completely new medium offering entirely new opportunities. According to Kannan *et al.* (2001) the mobile medium is ideal for maintaining customer relationships. The reasons for this are the ability to provide truly personalized content and service by tracking personal identity; the ability to track consumers across media and over time; to provide content and service at the point of need, and finally, the capability to provide highly engaging content. However, the main purpose of the maintenance phase is to ensure that the customer does not withdraw the permission (Sinisalo & Karjaluoto 2007). Once the customer relationship has reached the maintenance phase, the first messages sent to the customers are critical for the company. Basically, the customers can give the company a chance to prove that the mobile medium is useful and, above all, beneficial for them. Thus, companies have to be capable of convincing the customers of the advantages of the mobile medium right from the beginning. In order to do so, it is of critical importance that the companies seek to promote means of communication so that the communication benefits both parties.

This communication process is discussed further in research paper III. However, the discussion about the communication process in the paper is insufficient since it parallels the phases of the customer relationship with the phases of communication process. Accordingly, research paper III does not make a clear distinction between the two, although the phases do not necessarily happen concurrently. Therefore, it is of critical importance to acknowledge that a customer relationship can be, for instance, at the maintenance phase from the company's perspective, while the communication through the mobile phone is at the initiation phase. Research paper IV clarifies this idea further.

2.2.3 Communication modes

Based on the degree of activity of the communication parties (i.e. the company and its customers) communication through the mobile medium can be divided into three categories: (1) pull-based, (2) push-based and (3) interactive communication. Figure 8 describes these categories.
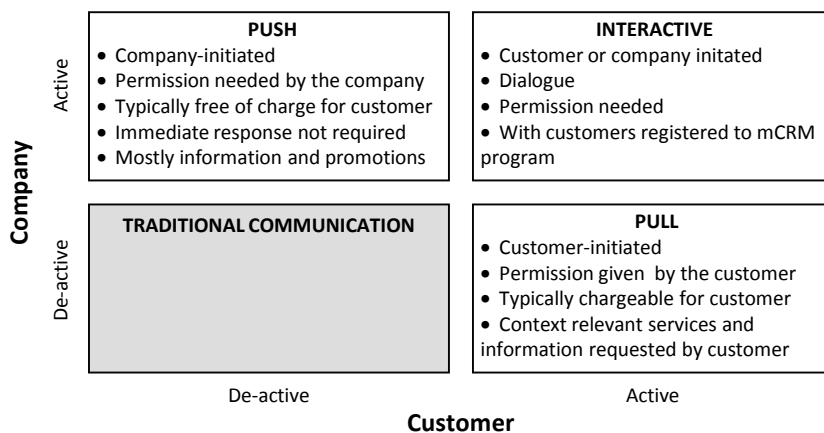
Fig. 8. Communication modes in a mobile context (Sinisalo & Karjaluoto 2006).

Push-based communication refers to communication which is initiated by the company and messages are sent or "pushed" without a particular request from the customer (Mobile Marketing Association 2008). In order to do this, the company has to obtain permission from all customers messages are sent to as mentioned in the previous chapter. Therefore, company-based communication refers to sending messages to already registered customers or to customers that have otherwise

given their acceptance beforehand or at the time of communication (opt-in) (Sinisalo & Karjaluoto 2006). From the customer's point of view, push-messages are typically free of charge. For instance, Finnish banks send SMS based information about the share prices of stocks customers are interested in. Push communication may also occur in the form of teasers guiding customers, for example, to some Internet page.

Pull-based communication can be defined as any content sent to the customer upon request shortly thereafter on a one time basis (Mobile Marketing Association 2008). In other words, pull-based communication is initiated by the customer, who "pulls" the message. Pull-based mobile communication refers to the messages that provide a way for customers to participate in the communication without being prompted, for instance, through competitions or voting. However, within mCRM pull-based communication usually refers to context relevant services and information (Sinisalo & Karjaluoto 2006). As pull-based communication is highly dependent on the needs and desires of the customer and the customer receives relevant communication at the time and place preferred, pull-communication is a relatively safe form of communication for the customer. At the time the customer requests the message, he/she has an opportunity to give permission for the company to send more messages. Pull-based communication is typically chargeable to the customer. For example, customers of a Finnish real estate agent are able to request specific information about an apartment in detail through the mobile medium.

To create real *interactive communication* i.e. dialogue, customers have to respond to messages sent to them by the company and *vice versa*. Basically, interactive communication combines the advantages of both *company* and customer based communication. In fact, numerous studies have emphasized interactivity as being one of the main characteristics making the mobile medium unique (e.g. Barwise & Strong 2002, Barnes & Scornavacca 2004, Bauer *et al.* 2005, Valsecchi *et al.* 2007, Shankar & Balasubramanian 2009)[4].

Although the media themselves may possess characteristics that facilitate or impede interaction, the locus of interactivity exists in the decisions of actors who choose to interact when it serves their purpose(s) (Stewart & Pavlou 2002). While the mobile medium as a channel is inherently interactive and, thus, considered ideal for interactive communication, it only enables interactivity. In order for

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[4] See Leppäniemi (2008: 51-58) for thoroughly examination of the concept interactivity

communication to become interactive after the customer has accepted the medium, there are three prerequisites: (1) the messages have to be understood by the receiver (shared meaning i.e. receiver needs to understand the meaning of the sender's communication), (2) the messages have to generate interactivity (responding should serve the receiver's purposes) and (3) the receivers must respond to the messages immediately (Pickton & Broderick 2005, Sinisalo & Karjaluoto 2006). It should be mentioned that the response does not necessarily have to be conducted through the mobile medium. To be interactive communication, the response of one actor is required to follow directly and logically from the action of another (Alba *et al.* 1997). Just like in company-based communication, interactive communication can only occur with already registered customers or to customers that have otherwise beforehand, or at the time of communication, given their acceptance (opt-in).

If both parties are inactive in using the mobile medium as a means of communication, the only way to communicate is through traditional marketing communications.

2.3 Mobile customer relationship management (mCRM) communication

The purpose of this chapter is to develop a theoretical framework of mCRM communication. Accordingly, this chapter gives an overview of the previous discussions and, on that basis, discusses mobile CRM communication more profoundly. The purpose is, thus, to enhance understanding of the key concept of this study. However, it is concurrently acknowledged that this framework is not an exhaustive one but very context-bound as are other theories as well. Therefore, this framework is not necessarily applicable to all industries and all contexts within all countries as such. Instead, it is considered as a foundation for further examination of this phenomenon under investigation in different contexts.

In this study, it is argued that the concept of mCRM involves following features:

– Communication, either one-way or interactive, for the purpose of being a part of building and maintaining customer relationships between a company and its customer

- The communication refers to sales, marketing, and customer service activities conducted through the mobile medium between the company and the customer
- Communication can be initiated by either the company or the customer
- Communication refers to messaging based communication, such as SMS and MMS, through the mobile medium, making a difference to mobile Internet browsing, and to voice calls through a mobile phone or landline.
- At least one of the parties engaged in communication must be human and, naturally, communicate through the mobile medium

To accurately define the mCRM concept, it is also critical to establish how it relates to CRM. In this study, mobile CRM communication is seen as a part of the process view of CRM. Therefore, CRM has a vital role as an underlying thought in this study. Accordingly, the purpose of this communication is to be part of building and maintaining customer relationships by being beneficial rather than persuasive for customers. Furthermore, mobile CRM, as a part of CRM, has long-term focus on customers and, thus, communication is predominantly continuous and interactive with the customers. In ideal circumstances, the communication occurs at the point the customer needs it. This implies that mobile CRM does not take a short-term, transactional perspective on communication. Accordingly, the focus of the communication in CRM, contrary to that in transactional marketing, is not purely persuasive, but interactive and mutually beneficial between the company and customers (Duncan & Moriarty 1998, Heinonen & Stranvik 2005).

Basically, the mobile medium is one channel among others in CRM. Accordingly, the mobile medium performs essentially the same function as any other channel in CRM. While the channels share the purpose of CRM, the different channels have certain distinguishing characteristics. These characteristics of particular channels largely determine which activities can be serviced by a specific channel. On the one hand, the mobile medium lacks the ability to provide a complete range of activities from the companies (Nysveen *et al.* 2005). This is, in large part, due to the mobile medium having a limited set of visual and audio capabilities (Jelassi & Enders 2006). In addition, messaging based communication, especially text messages, enables very lean communication (see Daft & Lengel 1986). On the other hand, the mobile medium, for instance, provides reach beyond any other channel including the Internet. Therefore, it is argued in this study that the challenges and possibilities of utilizing the mobile medium in managing customer relationships are unique.

Despite its limitations, the mobile medium acts as an enabler for each functional areas of CRM (i.e. marketing, sales and service). In practice, companies have utilized the mobile medium most often in relation to service activities throughout different industries in CRM. For instance, the customers of the national railway company of Finland can receive their train tickets by SMS or MMS message or a consignee can receive notification of an incoming delivery from a parcel courier service. In many cases, it is difficult to distinguish between the different functional areas when it comes to messaging based communication through the mobile medium. For instance, a local newspaper in northern Finland sends an SMS message when customers' subscriptions are expiring. The customer can then renew the subscription simply by replying to the message. As noted, a simple text message basically covers all functional areas of CRM. The service area emerges from the reminder for the customer that the subscription is expiring. At the same time, the communication can be considered as marketing related with the purpose of selling something. Finally, the communication is sales related at the very least if the receiver replies to the message. These examples demonstrate the unique qualities of messaging communication through the mobile.

The inevitable prerequisite for this kind of communication is that the company has the customer's information – meaning - at least the mobile phone number and permission to communicate through mobile medium. Companies can then communicate in relation to CRM activities with the identified customers. In addition, the company can provide various kinds of personalized services only when the company has information about its customers' needs and preferences. Finally, it is of critical importance for the company to somehow convince the customers that the communication through the mobile medium is useful and, above all, beneficial for them.

3 Methodology

This chapter introduces the methodology of the study. The purpose of this chapter is to justify the chosen method and qualitative techniques and, subsequently, describe how the empirical part of this study was conducted. In relation to the case study method, the choice of case companies is explicated, and there follows some further detail on data collection within the study.

3.1 Case study design

As mentioned, the phenomenon under investigation in the study is mobile CRM communication. The empirical part of this study relies on a case study research method in order to further understanding of mCRM communication. There are several arguments for the choice of this method. Due to the novel nature of this phenomenon in which the researcher has little or no control over events as they occur in a real-life context, a case study is the most appropriate method (Stake 2000, Yin 2009). This is especially important since mCRM communication cannot be distinguished from real-life context. In addition to this, the case strategy can be considered as particularly strong in providing new insights into a phenomenon of which very little is known (Eisenhardt 1989, Ghauri & Grönhaug 2002). As mentioned, the phenomenon under investigation meets the dual conditions of little theoretical knowledge and high complexity. The field of communication through the mobile medium in CRM is a relatively novel phenomenon, deeply embedded in technology and, thus, characterized by short-run technological changes. Therefore the case study design and qualitative research techniques were considered as appropriate for the purposes of this study (Bonoma 1985, Stake 2000).

To sum up, the context-dependency and the complexity of the phenomenon under investigation as well as scarce amount of previous research justifies the choice of case study design and qualitative techniques.

3.2 Choice of companies

Case selection is a fundamental phase in case research (Perry 1998, Pettigrew 1989, Stake 1995, Eisenhardt 1989). The case study here takes place within several industries in Finland. The companies were selected based on the idea of theoretical sampling, in which the companies are selected to represent the

phenomenon of the study as well as possible. Nevertheless, the decisions as to how many cases and which particular cases are selected are left to the researcher (Romano 1989). In this study, a total of seven **case** companies were selected. This case study is instrumental in nature (Stake 1995, 2000) meaning the case itself is of secondary interest.[5] Accordingly, the cases have a supportive role, instead of being unique facilitators the understanding of communication through the mobile medium in CRM. Therefore, each of the selected companies utilizes the mobile medium as a communication channel in CRM and is expected to offer rich insights into the phenomenon under investigation. Naturally, one of the reasons for choosing the particular companies is the access provided. Information on the kinds of issues studied here is often latent and confidential, and thus the researcher must have access to an organization to be able to identify them (Yin 1994).

The first company, *the retailer*, is one of the biggest retailers in Finland. The retailer has a lot of expertise in communication through the mobile medium, since it continuously gathers new customers to its customer database through the mobile medium and utilizes it for mCRM purposes. In addition to this, the retailer offers its customers the option of ordering products via the mobile medium. This is done by sending a text message with the product information and contact address to the retailer.

The second company, *the service operator*, is a part of a Finnish telecommunications group and produces competitive national mobile communication, data and fixed-line network voice services. Traditionally, operators have been leaders in utilizing the mobile medium as a channel for managing customer relationships. This makes the company very familiar with communication through the mobile medium and it is therefore considered an appropriate case for the purposes of this study.

The third company, *the application service provider I*, is the leading mobile marketing and mCRM application company in Europe. The application service provider I provides mobile technology for mobile operators, portals, and media companies that are developing technology for mobile content services, mobile CRM and mobile marketing. On this basis, the application service provider I has

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[5] Stake (1995) has identified two types of case study: instrumental and intrinsic. As opposite to instrumental case study, intrinsic case study refers to unique case in which the particular case itself is of interest.

the most expertise in mobile communication among the selected cases, and is thus considered eminently valuable for this research.

The fourth company, *the service provider*, is a leading directory service company in Finland. The service provider offers a directory service and a service that enables customers to find the closest providers of services they are interested in. Because both services involve interactive communication through the mobile medium, the company is considered to represent the problem addressed in the study.

The fifth company, *the digital advertising company*, focuses on digital business and marketing. The digital advertising company provides, for instance, strategies, solutions and tools for CRM that utilizes the mobile medium as a channel. Accordingly, the company represented the problem addressed in this study and could give valuable insights into communication through the mobile medium within CRM.

The sixth company, *the application service provider II*, provides enterprises and organizations with mobile solutions that work on all GSM (Global System for Mobile communication) mobile phones and networks. Additionally, application service provider II has been involved with the mobile communication of the airline company. On this basis, the company in question has brought fundamental knowledge to this study from the technological perspective.

The seventh company, *the airline company Finnair*, is one of the world's oldest operating airlines. The airline company has been a forerunner in the use of the mobile medium among other channels in managing customer relationships. For instance, the airline company introduced text message services providing information on flight schedules, departure and arrival times, frequent flyer plus points and tax-free offers in 1998—the first airline in the world to do so. In 1999, the airline company launched WAP services including flight booking, changing, and cancellation of flights in parallel with the launch of Nokia's first WAP-enabled mobile phone. In 2004, the airline company was the first airline to enable passengers to check-in for flights in advance by replying to a text message sent automatically by the airline. Such advances are what make the airline company suitable for this study since the mobile medium has been a part of its CRM for a decade, and that longevity makes it likely that the role of the mobile medium has stabilized among other channels.

3.3 Data collection

In this study the data collection is conducted by using multiple sources of information consisting of semi-structured interviews, observations and diverse data gathered (e.g. minutes of meetings, e-mails, personal notes, company visits) during the research projects. Following the principles of critical realism, the study aims for data triangulation using diverse data (Patton 2002, Yin 2009). With the help of the data triangulation employed here, the validity and reliability of the research was increased (Eisenhardt 1989). Table 8 describes the data collection and its phases in this study.

Table 8. The main data collection phases.

Data collection phases	Sources of data collection
Pre-understanding	Academic literature
	Reports, trade journals, electronic sources
	Working as a researcher in research projects (e.g. seminars, cooperation with project companies, negotiations, e-mail)
	Academic publications related to the phenomenon (e.g. Sinisalo *et al*. 2005b, Sinisalo *et al.* 2006, Sinisalo 2007a)
Data collection Paper 1#	Interviews (by other researchers)
	Observation
	Documents, minutes of meetings, industry reports and company visits
	Personalized Mobile Marketing Services (PEAR) - research project
Data collection Paper 2#	Interviews (by other researchers)
	Observation
	Company reports, presentations and other documents
	Personalized Mobile Marketing Services (PEAR) - research project
Data collection Paper 3#	Interviews (by other researchers)
	Industry expert comments
	Observation
	Future Mobile Marketing Services (FUMMAS) – research project
Data collection Paper 4#	Interviews
	Group interview
	Observation
	Company meetings
	Company reports, presentations, e-mail, company news archive, company blog and company homepage

In order to examine mCRM, the researcher needed to have a pre-understanding of the phenomenon. Accordingly, it was considered important to gain an

understanding of the different parts, such as industry and service providers, of the phenomenon. Due to the novel academic nature of the phenomenon, the data focused mainly on undertaking a broad review of industry related pragmatic material, such as discussions with industry representatives, company documents and websites. The goal was to familiarize the researcher with the industry setting and gain a holistic view of mCRM from a practical viewpoint in order to form a picture of specific companies, and the business principles, and technologies used. The pre-understanding was also gained through academic publications related to research projects (see Sinisalo *et al.* 2005b, Sinisalo *et al.* 2006, Sinisalo & Karjaluoto 2006) in which the researcher was involved.

The semi-structured interviews form the main data source from which the issues related to mCRM were identified (Arksey & Knight 1999, Kumar *et al.* 1993). As described in Table 9 and 10, altogether twelve semi-structured interviews and one group interview with four participants were conducted for this study. The interviewees of this study were encouraged to tell (naturally depending on the research paper) how they perceive the subject phenomenon under investigation[6]. For instance, the interview guide for research paper IV covered next major areas related the role of the mobile medium in multichannel CRM communication: multichannel communication in general, the role of the mobile medium in multichannel communication and the mobile services of the case company. Although the set of topics and questions were determined in advance, additional questions emerged during each interview process. In addition, the interview guide was slightly changed for each interview based on the position of interviewee and issues that came up in previous interviews.

The choice of informants was based on the principle that information is best gained through the people involved in the phenomenon under investigation. Although other respondents working in the same company could have offered additional viewpoints, the researchers tried to choose key informants from the company who had been actively involved in the specific issues related to mCRM that the research paper focused on and who possessed explicit and definite insight into it. As mentioned, the communication through the mobile medium in CRM as a phenomenon is both marketing and technology related. Accordingly, the informants were chosen to represent many facets of this phenomenon. Generally,

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[6] See Appendix 2 for the semi-structured interview guide of research paper IV for assistant vice president of customer relationship marketing division in airline.

management personnel had the ability to provide a holistic picture of the business surrounding the phenomenon under investigation. In addition, marketing personnel could provide an insight into the marketing-related issues, while technological personnel offered perspectives on the technology-related issues of the phenomenon studied. By involving people that are in charge of various tasks, this study strives to acquire a holistic view of the phenomenon.

Table 9. Interview data.

Company	Position	Content	Date and duration
Airline company	Assistant vice president/Customer relationship marketing	Interview (and e-mail & telephone correspondence)	December 1st, 2008, 2 hour 15 minutes
Airline company	Director / Global customer relationship sales / Airline company	Interview (and e-mail correspondence)	February 16th, 2009, 1 hour 5 minutes
Airline Company	Assistant vice president/Customer relationship marketing	Phone interview (and e-mail correspondence)	April 21st, 2009, 35 minutes
Application Service Provider I	Chief technology officer	Interview (and e-mail & telephone correspondence)	January, 17th, 2005, 2 hours 20 minutes
Digital Advertising Company	Partner	Interview (and e-mail & telephone correspondence)	November 13th, 2007, 1 hour 15 minutes
Retailer	CEO	Interview (and e-mail correspondence)	September 8th, 2004, 1 hour 40 minutes
Retailer	Marketing manager	Interview (and e-mail correspondence)	September 8th, 2004, 1 hour 40 minutes
Retailer	Technology advisor	Interview (and e-mail correspondence)	October, 18th, 2004, 1 hour 45 min
Retailer	Electronic commerce manager	Interview (and e-mail & telephone correspondence)	November, 5th, 2004, 1 hour 36 min
Retailer	Electronic commerce manager	Interview	February, 23rd, 2005, 1 hour 24 minutes
Service Operator	Business manager	Interview	February, 25th, 2005, 1 hour 40 minutes
Service Operator	Development manager	Phone interview	January, 28th, 2005, 30 minutes

Additionally, research paper IV utilized a group interview with three highly experienced practitioners and one academic (see Table 10). The group interview followed the themes of the individual interviews. Participants were selected on

the basis of their knowledge of different channels and customer relationship management. The group provided insights into 1) the nature of different channels, 2) the multichannel environment as it relates to customer relationship management, and 3) the role of the mobile medium in multichannel CRM. The discussion progressed from the general to the specific level concerning the case company, since three of the four participants were involved with the airline company.

Table 10. Group interview data.

Company	Position	Content	Date and duration
Airline Company	Assistant vice president/Customer relationship marketing	Group interview (and e-mail & telephone correspondence)	November 7th, 2008, 2 hour, 1 minute
Application Service Provider II	Project manager	Group interview	
Application Service Provider II	CEO	Group interview (and e-mail & telephone correspondence)	
University	Professor	Group interview	

Furthermore, several additional questions emerged during the transcription and in order to clarify these questions, the author requested further information from the informants by e-mail or telephone. In addition, researchers took notes during the interviews.

All the interviews were conducted in Finnish and were, if needed, translated into English in cooperation with a native English speaker in order to avoid misunderstandings and retain the exact meaning.

In order to ensure the accuracy of the responses, all the interviews were recorded with the permission of the interviewees. The recordings were subsequently transcribed in their complete form as precisely as possible for analysis.

Besides interviewing, *observation* played a vital role in data collection. This was because observational evidence provided useful additional information for the purposes of this study (Yin 2009). According to Patton (2002) the observations enable better understanding of the context. With the aid of the observations, the author gained richer insights of the context and though those increased the understanding of the phenomenon. Observation has a more

significant role in the first three research papers due to the fact that the researcher was an active participant in two research projects and research papers were written and published as part of those research projects. The research projects enabled close collaboration with the case companies in the form of meetings, seminars and discussions. Although some of these observations remain undocumented, the role of the latter collaboration in enhancing the knowledge of the author cannot be overemphasized. For instance, presentations by companies in seminars during both research projects have, undoubtedly, had an influence into the author's insights on different facets of the phenomenon under investigation.

Additionally, the fourth research paper is written in parallel with designing the research cooperation with the case company. Thus, the qualitative data was also collected through observations. Additionally, the observations enabled a more detailed understanding of mCRM in practice. Therefore, the personal experience gained in the research field was a critical element in the process of collecting and analyzing data (Gummesson 2000). Without the observations, it would have been rather difficult to understand the true nature of the investigated phenomenon.

3.4   Data analysis

Data analysis of case study material is an integral part of the entire research strategy. In this study, the data collected for each research paper were analyzed following Miles and Huberman's (1994) framework in which three three main elements of analysis are: data reduction, data display and drawing the conclusions. As Miles & Huberman (1994) stated these elements are more or less concurrent and are not separate from analysis, but a part of data analysis.

Before conducting data analysis, it was critically important to familiarize myself, as a researcher, with the collected data (Miles & Huberman 1994). Therefore, I read transcripts, notes and other documents relating to each research paper in their entirety before the actual analysis phase in order to gain a holistic view of the data.

Data reduction of analysis involves several procedures: selecting, focusing, simplifying, abstracting and transforming data (Miles & Huberman 1994). Accordingly, the author searched for key issues relevant to the stated purpose of each research paper from the data. Subsequently, every quote considered relevant to the purpose of the paper from each interview was copied to other document as part of the initial analysis. In addition, other data, such as notes, were carefully re-

read. After that, the author assigned a preliminary category to the quotes and titled them. In line with the abductive research approach, data analysis was characterized by a continuous interaction between the data and theory. After the initial data analysis, the author returned to the theoretical framework to modify it. In other words, the author explored links between the data and previous academic literature, and was able to concurrently identify areas of contribution to the existing knowledge. As the main research problem became clearer, the author then returned to the empirical analysis. The author analyzed the data afresh as the focus of the study was sharpened in the analysis phase, a method inherently part of the abductive research approach. Accordingly, the data from all research papers was read thoroughly several times. Consequently, the data analysis had an effect on what was further sought from the theoretical discussions.

The author's understanding of the phenomenon increased as each paper progressed, as the method outlined above bore fruit. In parallel, the theoretical framework was further developed and the main research problem became more accurately defined. As an example of this process, the draft version of research paper IV ("The role of the mobile medium in multichannel CRM communication") consisted of approximately 20 000 words. This was mainly due to the richness of interview data that made it difficult for the author to truncate the paper. The paper eventually became far more concise when the author had become more profoundly acquainted with the empirical data and theoretical discussions related to the phenomenon.

Data display refers to an organized and compressed assembly of information, such as tables and figures (Miles & Huberman 1994). In this study, different kinds of tables and figures were formed for each paper as well as for this introductory part of the dissertation. The purpose of these figures and tables was to describe relevant issues in a compressed form and thus make them more understandable for the reader. For instance, the empirical section of research paper I presents a figure about empirically grounded framework of initiation of mCRM (see Figure 2 of research paper I). Undoubtedly, this figure is more informative for the reader than pure text depicting this environment. As Miles & Huberman (1994: 11) stated: "*deciding on the rows and columns of a matrix for qualitative data and deciding which data, in which form, should be entered in the cells – are analytic activities*".

Finally, the empirical findings of each research paper were summarized and evaluated and, based on these, the concluding remarks were written.

4 Overview of the papers

The overall purpose of the dissertation is to contribute to our understanding of mobile CRM communication. Accordingly, the main research question is: *How do companies communicate through the mobile medium in CRM?* The main research question was further divided into five research questions (RQ1-RQ5) and these research questions were answered with the help of four research papers. As described in Table 11, each research paper provided an answer for one sub-question (RQ2-RQ5). Additionally since the topic under investigation, mobile CRM, is such a novel phenomenon in academic literature, all the presented papers aim to, either implicitly or explicitly, conceptualize the phenomenon (RQ1).

Table 11. The relationship between research questions (RQs) and published papers

	Paper I	Paper II	Paper III	Paper IV
RQs	RQ1: How is mobile customer relationship management (mCRM) conceptualized?			
	RQ2: What are the underlying challenges and issues of mCRM communication?	RQ3: What are the phases of building customer database for mobile CRM?	RQ4: What is the communication process like within the mobile context?	RQ5: What kind of role does the mobile medium have in multichannel CRM communication?

4.1 Mobile customer relationship management: underlying issues and challenges (Paper I)

Research paper I examines the underlying issues and challenges facing companies when moving towards mCRM. This research paper was published in 2007. The actual composition of the research paper had already started in 2005. At that point, academic literature on the central phenomenon mCRM was very scarce, or even non-existent. Accordingly, one of the main arguments of the paper was that that the existing theories did not adequately explain the phenomenon. Therefore, the paper presents a definition of mCRM delineating its unique characteristics in order to encourage coherent discussion of the phenomenon. In that paper, mCRM is defined as: *communication, either one-way or interactive, which is related to sales, marketing, and customer service activities conducted through the mobile medium for the purpose of building and maintaining customer relationships between a company and its customer(s).* The authors separated the definition from the underlying technologies of the mobile medium in order to sidestep the

volatility of technological changes. Additionally, the definition emphasized the critical role of communication in the mCRM context.

Building on the theoretical framework of the initiation of mobile CRM communication, the paper argues that the underlying issues and challenges can be roughly divided into categories called: endogenous, exogenous and mCRM-specific issues. While the paper discusses endogenous (CRM system and customer database) and exogenous (regulatory and mobile infrastructure) factors theoretically, the empirical part of the paper aims to enhance understanding of mCRM-specific factors which are further divided into technology- and marketing-related issues.

The paper builds on a case study in the retailing industry with one focal company. The company in question started a process of developing mCRM and it was investigated from August until December 2004. Semi-structured interviews with four key informants – staff with knowledge of and different perspectives on the phenomenon under investigation - form the main data and identify the key technology- and marketing-related issues. Finally, to validate the findings obtained from the interviews, the framework was presented to an industry expert to be evaluated and commented on.

In the light of the case study, there are five critical issues at the technological level revolving around the sourcing and implementation of mCRM technology enabling communication through the mobile medium. As described in Figure 4, these technological issues are 1) acquiring the mCRM server or renting the hosting of a mCRM server, 2) sourcing and setting up a short number to handle (inbound and outbound) messages, 3) connections to the mobile networks, 4) the development of campaign logic and 5) setting the message price. At the marketing level, it is of critical importance for a company to consider how to attract the attention of potential customers and through which complementary channels this will be done. Additionally, the second issue to consider is permission management in order that mCRM communication conforms to ethical and legislative requirements.

4.2 Building customer database for mobile customer relationship management (Paper II)

Research paper II examines the key elements of building a customer database for mCRM and, consequently, depicts how a company can build such a database. This paper was written and published in 2005 and so can be considered to be the

first publication concerning mobile CRM in this dissertation. The theoretical section of the paper begins with the discussion on CRM and mobile marketing. The authors suggest that it is of critical importance for companies to view the mobile medium as a part of their CRM strategy rather than as a separate project. The implication is that the mobile medium is seen as one channel among others through which the company can manage customer relationships.

Further, the paper suggests that the key elements of building a customer database for mCRM are customers' trust, the identification of customers and obtaining permission from customers to send messages to their mobile medium. The paper argues that the most important element of building a customer database for mCRM is trust, since customers lacking trust in the company will be most unlikely to give any information and, therefore, it will not be possible to identify them to initiate personalized mCRM communication. Accordingly, trust is basically the foundation on which the two other elements lie. As the essence of CRM is treating different customers differently, the second key element associated with the building of a customer database is the identification of customers. In order to communicate with customers appropriately, it is of critical importance for the company to identify customers and their preferences. This is especially important in the mCRM context, since mobile phones are very personal devices. Given this personal nature of the mobile medium, permission based communication is considered vital in this context. Related to building a customer database, getting customers' permission is essential for companies.

The case study method was regarded as the most suitable way of pursuing an understanding of the subject phenomenon in a specific setting. Retailing formed the empirical context for studying the building of customer database for mCRM in this study. The main data collection method was semi-structured interviews. Accordingly, three key informants who had been actively involved in developing mCRM in the case company were interviewed. In addition, the marketing campaign of the case company related to building the database was closely observed and monitored.

According to the case study, building a customer database basically consisted of four phases. *In the first phase,* the company mapped how the campaign would be is incorporated into the company's overall marketing strategy in order to attract potential customers. In parallel, the company chose the media through which to do so. *In the second phase,* the company focused on the message itself by working out how to get a desired response from the campaign. If the marketing message achieved that desired response, the customers would, *in the third phase*

69

respond to questions and provide their details using SMS messages. *In the fourth phase,* the data sent in the form of SMS message by the customers would be received and stored in the server which would turn the data sent by the customers into customer information for the company.

4.3   Mobile customer relationship management: a communication perspective (Paper III)

Research paper III examines mCRM communication in detail. The paper was written in 2006 and published in 2007. The purpose of the study was twofold. Firstly, the paper contributed to the general understanding of communication within mCRM. Second, the paper presented a model of the communication process within the mobile context. Accordingly, the paper suggested that communication through the mobile medium may differ significantly from communication through traditional channels, such as face-to-face, and on the Internet.

In theoretical terms, the paper elaborated on communication through the mobile medium. At first, the paper assessed the possible opportunities and challenges of such communication. One advantage that makes the mobile medium exceptional is access to customers. In other words, the mobile medium allows access to customers virtually anytime and anywhere, when all other channels within CRM are restrictive in this respect. Additionally, the paper emphasized the fact that the mobile medium exhibits, as such, all the features necessary to establish a direct dialogue between the company and the customers. However, communication through the mobile medium does not offer only opportunities, but poses challenges as well. For instance, the mobile medium has several inherent limitations, such as small screen size, compared to other channels within CRM. Moreover, the communication through the mobile medium is often considered more complex than communication through any other media, since the content has to be optimized for a myriad of different devices. Due to these facts, the paper suggested that the mobile medium be used as complementary channel since it lacks the ability to provide a complete range of activities by the company in most cases.

Secondly, the paper divided communication into two separate phases: initiation and maintenance. Both of these phases involve unique purposes and activities to accomplish them. The main purpose of the *initiation phase* is to attract customers' attention so that they would give the company their permission

to initiate communication. The paper, further, suggested that the most suitable ways to attract customer attention, in that they are most likely to result in customers giving their permission, are considered to be polls, competitions, lotteries and quizzes. The main purpose of the *maintenance phase* is to maintain valid permissions and, in parallel, communicate consistently and continuously with customers. In this phase, it is of critical importance for the company to convince the customers that the communication through the mobile medium is useful and, above all, beneficial for them.

Finally, the paper briefly described the traditional communication model consisting of four key components: sender, message, media and the receiver. However, this model was considered insufficient to describe the communication process through the mobile medium. Therefore, the empirical part of the paper was devoted to enhancing understanding of true nature of the communication process within the mobile context.

The case study was considered suitable for providing insights into the phenomenon under investigation. The semi-structured interviews formed the main data source through which the model and key elements of the communication process were identified. Four case companies that utilized the mobile medium in communicating with customers were selected in order to accomplish the purpose of the study. Interviews were conducted with one key informant in each company. The companies were: a retailer, a service operator, a service application provider and a service provider.

The case study revealed six key elements of the communication process in the mobile context. The key elements were: a customer database, permission management, personalization, application, interaction and the customer.

4.4   The role of the mobile medium within multichannel CRM communication (Paper IV)

Research paper IV examines the role of the mobile medium among other channels within CRM communication. The paper was written in 2009 and will be published in 2011. The purpose of the paper is to shed light of the role of the mobile medium in multichannel CRM communication.

Theoretically, the paper began with the critical assessment of the current literature on multichannel CRM. In more detail, the paper first assessed the seminal work of classification of the channels within multichannel CRM environment. Based on that assessment, the paper made suggestions about the

terms used in the classification and made one addition to the classification to enhance its precision.

The paper also elaborated theoretically on the role of individual channels within multichannel CRM communication. The underlying assumption was that the unique characteristics of particular channels largely determine which activities can be serviced by a specific channel and how the company can communicate with its customers through that channel. In other words, due to the unique characteristics of particular channels the communication between the company and customers is never exactly equivalent in every channel and, thus, some channels are more suited to, or more often used for, certain communications. The discussion indicated that it is vital for companies not to evaluate channels based purely on the channels' economic contribution to profitability. This is because the role of individual channel may be significant without it having a direct financial outcome. In addition, in some instances the use of a particular channel may be neither desirable nor appropriate from a customer perspective.

The empirical part of the paper relied on the case study research method in order to further the understanding of the role of the mobile medium. The research builds on an empirical case study from the airline industry, with Finnair being the case company in question. This is because the mobile medium has been a part of its multichannel environment for a decade making Finnair very suitable for this research. There were two main data collection methods in this study. First, three key informants were interviewed and second, there was a group interview involving three highly experienced practitioners and one academic.

In the empirical section, key issues that emerged from the case study are discussed. Based on the case study, the paper first suggested that the customer events are added to the theoretical framework as a channel. This is because the current academic literature on multichannel CRM does not acknowledge customer events as a channel within the multichannel environment. Although the mobile medium has a simple service role among other channels, it is considered very important by the company in the context of travel. The unique characteristics of the mobile medium enable the company to take account of the customer travel process in its communications to a degree that would be impossible with any other channels. Therefore, the role of the mobile medium is considered to be quite significant in this context, even though the role focuses on services, and given that other channels may make a more direct economic contribution to the company. The role is enhanced when the company takes into account the phase of the customer relationship and, moreover, the customers' travelling process.

5 Discussion

5.1 Review of the results

The overall purpose of the dissertation is to contribute to our understanding of mobile CRM communication. Therefore, the main research question is: *how do companies communicate through the mobile medium in CRM?* This problem was approached by answering five more specific research questions concerning the different aspects of the phenomenon: 1) how is mCRM conceptualized? 2) what are the underlying challenges and issues of mobile CRM communication? 3) what are the phases of building a customer database for mCRM? 4) what is the communication process like within the mobile context? and 5) what kind of role does the mobile medium have in multichannel CRM communication?

As mentioned before, all four research papers at least in part strive to answer the first sub-question, and it is directly addressed in chapter 5.2. Research paper I targets the second sub-question, research paper II the third sub-question, research paper III the fourth sub-question and, finally, research paper IV strives to answer the fifth sub-question.

The underlying challenges and issues of mobile CRM communication

The second sub-question ("what are the underlying challenges and issues of mobile CRM communication?") was answered in research paper I. The purpose of the paper was to develop an empirically grounded framework of the underlying issues in the initiation of mCRM. In other words, the paper aims to describe kind of underlying issues and challenges a company faces when moving towards mobile CRM. Furthermore, this paper uses a case study to illustrate the decisions the company has to deal with in this phase.

The paper argued theoretically that the underlying issues and challenges can be roughly divided into categories of: endogenous, exogenous and mCRM-specific issues (see Figure 9). Both the exogenous and the endogenous issues are first briefly elaborated upon.

There are two *endogenous* issues and challenges affecting mCRM specific issues. The first challenge emerges from the CRM system of the company. In order for the mobile medium to be an additional channel for and part of companies CRM activities, it is vital to integrate the mCRM solution into the

company CRM system. This system integration is important in order to ensure coherent management of the interactions across different channels, such as the Internet, face-to-face communication, and the mobile medium. Many of current CRM systems support the extension of CRM to the mobile medium. The second challenge emerges from the customer database. A customer database is a prerequisite for any interaction conducted through the mobile medium. In order for a company to communicate with its customers, the information in the customer database has to at least consist of its customers' mobile phone numbers.

There are also two *exogenous* issues affecting mCRM specifically. First, regulatory constraints are the most important element demanding of consideration - since intelligent communication involves the utilization of customers' personal information. Second, a significant element contributing to mCRM is the mobile infrastructure. Basically, the mobile infrastructure concerns the mobile networks and mobile devices in use. While the mobile infrastructure is constantly advancing, business based on mobile technology will be profoundly different in the near future. Furthermore, the introduction of 3G and 4G technologies provides a foundation for evolving activities through the mobile medium. While these developments offer various opportunities for communication through the mobile medium in CRM, they also make mobile CRM activities far more challenging since technological diversity is likely to increase. Accordingly, communication through the mobile medium (with the exception of SMS based communication) is becoming more complex since the content has to be optimized for a myriad of different devices.

Consequently, the empirical part of the paper aimed to enhance understanding of *mCRM-specific* factors; further divided into technology- and marketing issues. Based on the paper, there were five critical issues at the technological level. These revolve around sourcing and implementation of mCRM technology enabling communication through the mobile medium. First, the company has to acquire an mCRM server capable of sending, receiving and storing, an unprecedented number of SMS and MMS messages. The company has to decide either to build in-house expertise or rely on a partner, and whether to use a managed or a hosted solution. Second, the company has to decide how to acquire a number which directs SMS messages from mobile phones to the mCRM server. Either the company can apply for the number, in Finland, from the Finnish Communications Regulatory Authority or rent the number from some mobile marketing service provider. The third issue concerns the total number of service operators needed to reach a target audience. In other words, the number of connections established

with the operator's messaging network. As at 2006, there were approximately 17 service operators in Finland. The major service operators provide a service for connecting to their messaging network. This service is often called as a messaging interface which enables sending and receiving SMS and MMS messages between mobile devices and companies' information systems. Fourth, it is vital for the company to consider a campaign logic which is, consequently, built into the mCRM server. Campaign logic refers to the details that customers are supposed to provide and includes, at a minimum, plans for a keyword at the beginning of message sent by a customer and the content of the return message subsequently received by the customer. Without this logic, the company cannot communicate with its customers through the mobile medium. The fifth issue is the price collected from the customer sending messages to the service number. Basically, there are three options for setting the price per message. The first option is the normal SMS price, which is charged according to the pricelist of the operator in question. The second option is a free of charge SMS message. The last option is a premium-rate SMS message, which means that the price collected from the customer is determined on the basis of a premium rate pricelist provided by the operator in question.

Once the technology is implemented, it is of critical importance for the company to consider the marketing it will use to initiate CRM through the mobile medium with its customers. First, the company has to consider how to attract the attention of potential customers so that they will use the mobile medium in communication. Because the attraction phase is conducted with the aid of other media, the initiation of mCRM has the same basic principles as any other traditional marketing campaign. Accordingly, the company has to identify its target audience, determine the communication objectives, design the message and choose the channel through which to attract customers' attention. The second issue is to consider permission management. The purpose is that the communication through the mobile medium conforms to all requirements, both ethical and judicial. Thus, permission management deals with opt-in lists. Accordingly, customers to whom messages will be sent must have already registered or otherwise give their permission beforehand. Basically, there are three ways to obtain a permission-based (opt-in) database, consisting of at least mobile phone numbers: purchasing, renting or collecting the database independently.

To summarize, to initiate mCRM companies have to consider several issues. This paper found that acquiring or renting hosting on a mobile marketing server,

sourcing and setting up a short number to handle inbound and outbound messages, connections to the networks, the development of campaign logic, and setting the message price are the key technological issues with the initiation of mCRM communication. From a marketing perspective, a database of mobile numbers for the desired target audience, and the integration of mobile marketing into companies' overall promotion mix should be taken in consideration when designing a mCRM campaign.
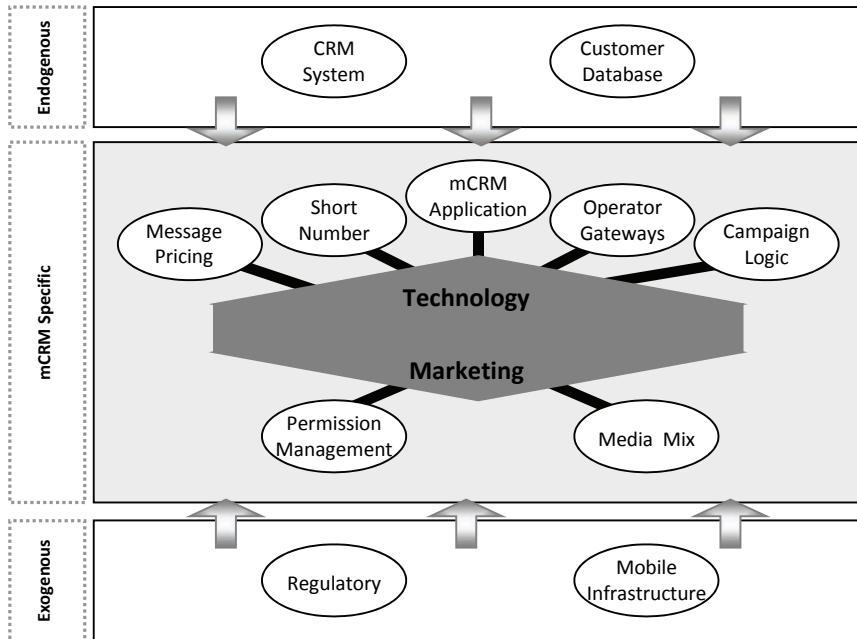

Fig. 9. Empirically Grounded Framework of Initiation of mCRM.

Building a customer database for mobile CRM

The third sub-question ("What are the phases of building a customer database for mCRM?") was answered in research paper II. The main purpose of this paper was to describe the phases in building customer database for mobile CRM purposes. Furthermore, this paper describes decisions the company has to deal with in this phase by the aid of the case study.

This case study was conducted by interviewing key informants and closely observing and monitoring the campaign of the case company in a retailing context. In this campaign, the goal of the company was to gather a database for mobile CRM purposes consisting not only of customers' mobile phone numbers, but also customers' preferences and permission to communicate through the mobile medium. Accordingly, the company designed a questionnaire in order to gather necessary information from customers. Gathering the customer database was unique in the sense that customers replied to questionnaires and signed up for the case company's loyalty program by sending an SMS message. According to the case study, building a customer database basically consists of the four phases described in Figure 10.

In the first phase, the company makes a decision about how the campaign is to be incorporated into the company's overall marketing strategy in order to attract the prospective customers. In parallel, the company choose the media (i.e. channel) through which to do it. Since communication through the mobile medium is permission based, the company cannot utilize the mobile medium at this point. Therefore, the company has to choose a complementary channel from a selection including, for instance, the Internet, direct marketing or TV. In other words, the company has to decide which complementary media is most suitable to reach potential customers who most likely are willing to communicate with the company through the mobile medium.

In the second phase, the company focuses on the message that will be published in the chosen medium/media in order to get a desired response from the campaign. In order to incentivise target customer to start communication through the mobile medium, the case company offered a brand new car as a lottery prize. In addition, the company also promised to send valuable information and special offers via SMS message to those signing up on the loyalty program and giving permission for future contact.

In the third phase customers respond to the data-gathering and give their details via SMS message. In this case, the marketing message seemed to stir positive emotions, although the influence of the incentive should not be underestimated, since approximately 18 000 respondents answered the questions and gave their permission to start communication through the mobile medium.

In the fourth phase, the data sent in the form of SMS message by the customers is received and stored on the server, so turning the data sent by the customers into customer information for the company. Supported by the mobile marketing server, the company can monitor information about their customers by

using, for instance, a web interface and, subsequently, utilize this information for mobile CRM purposes.

Fig. 10. Building a customer database for mCRM.

The communication process in mobile CRM

The fourth sub-question ("what is the communication process like within the mobile context?") was answered in research paper III. The purpose of the paper was to present a model of the communication process within the mobile context based on a case study. In the paper, a total of four cases companies were selected, consecutively, in order to accomplish the purpose of the study. Each of the selected companies utilises the mobile medium actively in different types of campaigns involving communication with customers. The semi-structured interviews form the main data source through which the model and key elements of the communication process within the mobile context are identified.

The basis of the communication process is similar regardless of the media used. In the light of the case study, we found new important elements in the mobile context that are not acknowledged in the current literature. The key elements vital to the communication are examined in the course of presenting the model. There were six key elements in the communication process in the mobile context. The key elements were: a customer database, permission management, personalisation, application, interaction and the customer (see figure 11).

Customer database. Naturally, the first step in the communication process is to define its objectives. Based on the objectives, the customer or customers to communicate with are selected from the customer database. Accordingly, a

78

customer database is a prerequisite for any interaction conducted through the mobile medium. At its plainest the database can consist of only the customers' mobile phone numbers and marketing permissions. However, a simple customer database has major problems, since it is impossible to communicate with the customers individually, and, thus, there is a risk that the customers become irritated. Advanced technology enables companies to gather an unprecedented amount of data about their customers, which accumulates throughout the relationship. In the mobile context, customer data comprises of all messages from the customer and is used to gain better understanding of the customer so that appropriate responses can be made. However, the existence of customer data does not lead to simply understanding the customers. In order to be useful, the companies have to turn these data into viable customer information by utilizing, for instance, data mining techniques and, subsequently, they have to know how to utilize this information for mCRM purposes. CRM requires information from all relevant departments to be centralised to the customer database so that customer information can be used effectively in order to develop relationships with customers, regardless of the channel through which the customer chooses to interact with the company. The customers are usually profiled by demographics, psychographics and behavioural and social behavioural data. While demographics, psychographics, and behavioural data are used traditionally in categorising customers, social behavioural data are used increasingly within the mobile context. Basically, it refers to the similar behaviour of a group of people.

Permission management. Permission management plays a major role in communication through the mobile medium. Permission management in the context of mCRM basically deals with permission (opt-in), and customer databases. The rule is that the validity of the permission has to be ensured every time and thus customer relationships cannot be maintained without the ongoing utilisation of the customer database and the permissions. Although the customers give their permission only once, a mobile permission is not permanent and is valid only in relation to a given service Typically, the permission is valid for a certain period of time. For instance, the permission may be valid for the whole relationship, or the company might have permission to send ten messages to customers before renewing the permission. The existence of a previous customer relationship also allows the companies to send CRM messages in push mode (The European Union, 2002). However, according to the EU Directive, mobile marketers must always allow customers to opt out easily.

Personalization. The personalization phase refers to the design of the actual message. Because the nature of the mobile medium is very intimate, allowing access to an individual virtually anytime and anywhere, advanced personalisation is vital in communicating through the mobile medium. In order to succeed in this the company must first identify the customers and understand their needs, wants and preferences. Without this identification and understanding, the customers are invisible and therefore unmanageable. Basically, the messages are personalised in either a mass way or individually. In the mass approach, customers are segmented into a number of groups and usually approached with push-based messages, such as promotions and informative messages. Individually personalized communication is usually interactive and used in services like the check-in service of airlines. Personalization can be based on either the content of the message or the target group. However, advanced personalisation demands creative planning, which may not be an easy task to do.

Application. In the mCRM context the companies communicate automatically using some application managed by a human. Thus, the application is in charge of delivering and responding to sales, service, and marketing messages. In other words, a question arises as to what kind of content is delivered to whom and under what circumstances. The content delivered through the mobile medium often is in line with the company's overall CRM, since interviewees agreed that leveraging the mobile medium in parallel with other media in the companies' media-mix is the best practice at the moment. Engaging in interactive communication with customers places a high premium on the application used. This is due to the fact that the application has to be able to respond to all kinds of communication initiated by the customer. In addition, the application must include tools for maintaining communication with customers, which refers to all the activities the company has to conduct to communicate continuously and consistently with its customers. For example, the logic of each message belonging to some campaign is built into the application. Campaign logic refers to the details that the customers are supposed to provide on request during the campaign. Without this logic, the application cannot receive and store the messages sent by the customers.

Interaction. As mentioned before, the interaction between company and customer is based on active participation, each party being engaged in the communication. As such, the mobile phone exhibits all the characteristics necessary to establish a direct dialogue between the company and its customer. Therefore, it is practical to use those characteristics. If the interactivity is not

utilised, many of the benefits of the mobile medium vanish. Based on customer information, the mobile medium allows companies to maintain a high level of interaction with the customer. The company should strive for interactive communication, since in an interactive context consumers have more influence on the process and on subsequent marketing communications by searching for, selecting, processing, using and responding to information. Moreover, one-way communication is unlikely to produce trust whereas two-way interactive communication facilitates trust building and commitment.

The customer: As customers receive messages, they interpret them it according to their personality, mood, and feelings about the sender of the message. Furthermore, the customer may react to the way in which the message has been sent or worded. To generate a response, the message has to include some kind of interactive element. Communication may be argued to be successful if it generates the action the company desired. If the company desires to generate interaction and the customer replies, the customer will become the sender of the message. In addition to this, communication through the mobile medium is considered valuable, since there is no danger that the message is missed, as it might be in traditional media and the Internet, as shown in the next quote: "But, if you receive a message on your mobile phone, the advertiser gets undisturbed time with the customer. I mean, that is to say that the messages are always read by the customer." From the company's point of view, the most critical issue customers have is permission control. In other words, the customer likes to be in control - having the opportunity to change preferences or stop the company from sending messages at any time.

To summarize, the communication process in mobile context consists of six key elements: a customer database, permission management, personalisation, application, interaction and the customer. Of these elements, permission management is considered to be the most important since the intimate nature of the mobile medium dictates that companies using it cannot afford to irritate their customers even once, as those customers might easily vote with their feet.
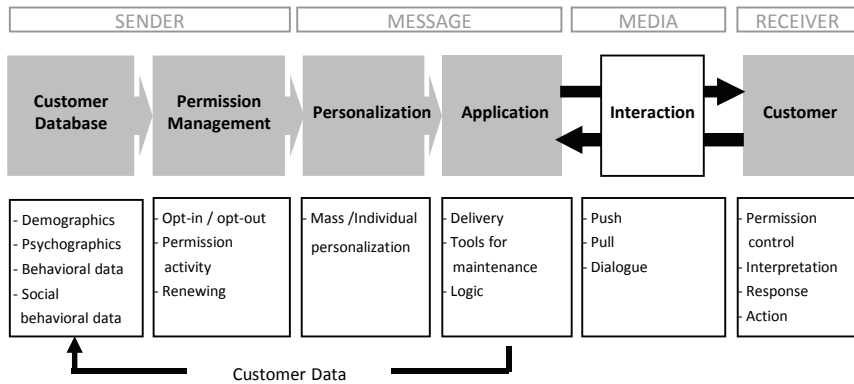
Fig. 11. The communication process in mobile context

The role of the mobile medium in multichannel CRM communication

The fifth sub-question ("what kind of role does the mobile medium have in multichannel CRM communication?") was answered in research paper IV. This paper takes a closer look at the mobile medium among other channels within the multichannel environment in CRM. This paper builds on an empirical case study in the airline industry. The case company, Finnair, is arguably at the forefront of the innovative use of the mobile medium. For instance, Finnair introduced text message services providing information on, for instance, flight schedules as early as 1998 – the first airline in the world to do so. The data for this study is collected mainly from semi-structured interviews from the key informants of the case company.

In light of the case study, we propose that the role of the mobile medium within multichannel CRM communication can be depicted as shown in figure 12. Next, the role of the mobile medium within the airline's multichannel environment is scrutinized.

It is worth noting that the adoption of the mobile medium was driven by Finnair's own belief that it would benefit the customers, rather than being the result of reacting to customers' perceived needs or previous experiences. As such, the utilization of the mobile medium is considered to differentiate Finnair from other airline companies. The interviewees all agreed that the mobile medium is perceived positively by the customers. Their views are supported by the fact that, for instance, none of the customers who have received text messages have opted-

out and refused Finnair permission to send further messages. In contrast, customers have complained about not receiving messages and have requested to opt-in to receive text messages in the future. In addition to increasing convenience for the customer, the mobile medium is adopted in order to cut costs. This is because the mobile medium can be a very cost-efficient channel for a company. In particular, the costs of the mobile medium are relatively low when a company uses text messages to communicate with its customers. For instance, checking passengers in through the mobile medium is approximately 50 times cheaper per customer for Finnair than using a traditional check-in desk.

The interviewees' views were in line with the theory that suggests that the effective utilization of channels clearly depends on the stage of the customer relationship. Interestingly, the empirical findings indicated that the phase the customer relationship is in influences customer behaviour as well. Accordingly, the channel the customers choose to use is largely based on the phase of their relationship with the airline. As the relationship progresses, customers are able to use technology-enabled channels, such as the mobile medium, more often.

Currently, Finnair communicates quite broadly through the mobile medium. Obviously, it is considered of critical importance that the timing and content of the communication are relevant and personalized for the customers as in this case. Therefore, the communication through the mobile medium is largely bound to the customers' travelling process. For instance, customers can receive a text message about flight delays when there are less than 48 hours before departure. On this basis, Finnair has adapted its communication for its customers. Consequently, the communication through the mobile medium is based both on the phase of the customer relationship and on the customer's travel process. This kind of communication can be applied smoothly in the airline context since the airline company is always aware when the customers' travel process is underway.

The underlying thought of these mobile services is to provide added value for the customers by increasing customers' convenience related to travelling. For instance, mobile services, such as baggage and flight information, aim to inform customers accurately and instantaneously about unexpected delays. From Finnair's viewpoint, it is assumed that customers perceive this kind of communication positively, although the messages are not always good news for the customers. As a matter of fact, the lack of such information may have a negative effect on the relationships. In addition to more normal services, the mobile medium plays an important role in unusual situations, as Finnair has an extensive mobile phone number database of its customers. This is due to the fact

that it is the most efficient and, in some cases the only, channel by which to reach people. For instance, when Bangkok airport was closed in August 2008, the only way for the airline company to get in touch with passengers was to send messages to them. Naturally, this requires that passenger contact details are up to date.

The majority of communication is based on text messages. From a company's perspective, the mobile medium is suitable for this kind of activity being a reliable and workable way to communicate with customers. As mentioned previously, these services are well-perceived by the customers. Furthermore, it may well be that the travel-related stress is an explanation for the customers' positive perceptions towards text messages. During the past decade, many customers have become familiar with using text messages to interact with companies. As more people become familiar with the use of messaging services and as text messages are very simple, their use may relieve the travel-related stress. If this is the case then the familiarity of technology is an evident strength of messaging-based communication.

The services offered by Finnair apparently utilize many inherent characteristics of the mobile medium. As mentioned above, the customer travel process acts as a trigger for communication through the mobile medium. Accordingly, these services are enabled by the flexible nature of communication through the mobile medium. The flexibility of the communication emerges from the fact that mobile phone users always carry their devices with them and, therefore, are always accessible. Furthermore, communication with members of the airline's loyalty program is interactive. This is important since the mobile medium, as such, exhibits all the characteristics necessary to establish an interactive communication between the company and the customers. In fact, these kinds of activities are almost impossible to conduct through any channel other than the mobile medium with its messaging capability, without sacrificing the benefit of instantaneous contact. Accordingly, it is argued that—at least in this case—the usefulness of text messages to the company and its customers outweighs any benefits brought by more sophisticated technologies.

However, utilization of the mobile medium is not without its challenges. As already mentioned, it is vital that the multichannel environment establishes an integrated understanding of the individual customer, irrespective of the communication channel. The unique information held on customers enables companies to communicate consistently and in a coordinated fashion with each of their customers. In practice, the interviews revealed that, contrary to theory, the mobile medium is not a synchronized and integrated part of the multichannel

environment. This is largely because CRM systems do not support the mobile medium as a channel. Therefore, Finnair has a separate vendor and software for the mobile medium. Consequently, the mobile medium may to some extent be isolated from other channels. In this case, this functional separation may be a problem for CRM activities conducted through the mobile medium and achieving the single view of the customer becomes a difficult task. This may lead to a situation where the information sent to customers through the mobile medium is incorrect and contradicts information from other channels.

Finnair has also identified some potential problems in technology-enabled channels. Therefore, Finnair most often retains some face-to-face channel involving human contact as a backup channel for its technology-enabled channels. If some technology-enabled channel, for instance, malfunctions, it is considered very important that there are personnel, who can resolve the problems. As Finnair's example indicates, a company may be suspicious of using technology-based channels alone, since the technology can malfunction.

To sum up, the unique characteristics of the mobile medium enable the company to take account of the customer travel process in its communications to a degree that would be impossible with any other channels. This is mainly due to customers always carrying their mobile phone with them, and the likelihood that they will read any text messages immediately after receiving them. This means communication can be instant and interactive. Therefore, the role of the mobile medium is considered to be quite significant in this context, even though the role focuses on services, and given that other channels may make a more direct economic contribution to the company. The role is enhanced when the company takes into account the phase of the customer relationship and, moreover, the customers' travelling process. Unfortunately, the mobile medium seems to be functionally separated from other channels in the multichannel environment primarily because most CRM software does not support the mobile medium as a channel. This poses challenges for Finnair since the communication through mobile medium should be in line with other channels and *vice versa*. Major problems may emerge if communication is misleading or false in different channels.
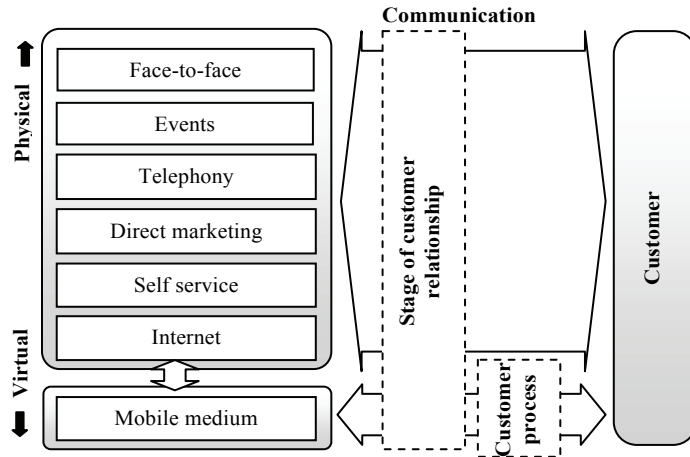
Fig. 12. The role of the mobile medium within multichannel CRM communication.

5.2 Conceptual contributions

The first sub-question ("How is mCRM conceptualized?") was partially answered in all four research papers. As this study pinpointed, the previous academic research on mCRM communication is relatively scarce. Therefore, there is relatively little knowledge of the phenomenon. Accordingly, the main impetus for this study was that the existing theories did not explain mCRM adequately.

In order to guarantee a coherent discussion on the phenomenon, this study strove to conceptualize the focal phenomenon - mobile CRM. Some researchers have already proposed preliminary conceptualizations of it (e.g. Camponova *et al.* 2005, Sinisalo *et al.* 2006, Liljander *et al.* 2007). However, there was evidently no consensus as to the most appropriate to define this emerging phenomenon. Consequently, the previous conceptualizations were considered inadequate to capture the true nature of the phenomenon. Generally, the preliminary conceptualizations did not make mention of any particular means how the mobile medium is used in mobile CRM and, in turn, that omission means that they do not exclude any means. However, the major shortcoming of the available preliminary conceptualizations, with the exception of that made by Liljander *et al.* 2007, is that they do not highlight the role of communication in the utilization of the mobile medium, although communication is considered a key element of mobile

commerce (Balasubramian *et al.* 2002), mobile marketing (Leppäniemi 2008) and mobile CRM (Liljander *et al.* 2007).

Therefore, this study attempts to propose a definition capturing the true nature of mCRM that sufficiently emphasizes the critical role of communication. Accordingly, the following conceptualization of mCRM is suggested: *communication, either one-way or interactive, which is related to sales, marketing, and customer service activities conducted through the mobile medium for the purpose of building and maintaining customer relationships between a company and its customer(s)*. It should be noted that the authors separated the definition from the underlying technologies of the mobile medium in order to avoid the volatility of technological changes. Additionally, the definition emphasized the critical role of communication within interaction through the mobile medium in CRM (cf. Balasubramanian *et al.* 2002, Liljander *et al.* 2007, Leppäniemi 2008).

Accordingly, it is posited that the concept of mCRM involves the following features: communication can be initiated by either the company or the customer and refers, in this study, to messaging based communication, such as short message services (SMS) and multimedia messages services (MMS). Finally, at least one of the parties engaged in communication must be human and, naturally, communicate through the mobile medium.

This study further conceptualized mCRM by eliciting the salient characteristics of communication through the mobile medium in CRM. Although there are numerous of previous studies discussing the characteristics of the mobile medium (e.g. Balasubramanian *et al.* 2002, Kavassallis *et al.* 2003, Shankar & Balasubramanian 2009), they tend to discuss only a few particular characteristics. In this study, the author has aggregated a wider number of characteristics that are considered vital for communication through the mobile medium in CRM. In this way, this study extends the existing knowledge of mobile CRM. These characteristics are built mainly on the literature from the mobile commerce research stream and discussed in section 2.2.1 in more detail. The study suggests that vital characteristics for companies are: *flexibility of communication* (e.g. Anckar & D'Incau 2002, Tsang *et al.* 2004, Balasubramanian *et al.* 2010), *the need for permission* (e.g. Barwise & Strong 2002, Barnes & Scornavacca 2004, Heinonen & Strandvik 2007), *cost-efficiency* (e.g. Kavassallis *et al.* 2003, Shankar & Balasubramanian 2009, Duran 2010), *traceability* (e.g. Peppers & Rogers 2004, Simons & Bouwman 2006, Valsecchi *et al.* 2007), *personalization* (e.g. Nysveen *et al.* 2005, Jelassi & Enders 2006), *familiarity* (e.g. Rangaswamy

& van Bruggen 2005, Salo *et al.* 2008, Duran 2010), *convenience* (e.g. Anckar & D'Incau 2002, Shankar & Balasubramian 2009, Duran 2010), *interactivity* (e.g. Barwise & Strong 2002, Bauer *et al.* 2005, Valsecchi *et al.* 2007) and *lean communication* (e.g. Nysveen *et al.* 2005, Jelassi & Enders 2006, Shankar & Balasubramanian 2009). Based on these characteristics, the mobile medium is considered as being exceptional for certain types of communication. These characteristics are of critical importance for a company to take into account when approaching the mobile medium as a means to communicate with customers. Accordingly, it is vital that the companies acknowledge the existence of these characteristics and, subsequently, strive to utilize them.

5.3 Theoretical contributions

This study theoretically contributes to the two research fields. First, this study contributes to the general CRM domain within the marketing field. Second, this study contributes to the gradually evolving mobile CRM literature.

Contribution to CRM domain

This study adopted a process view of CRM. More specifically, within this view mobile CRM is considered as a part of interaction management. This study contributes to the approach with valuable insights and by discussing mobile CRM communication as part of interaction management.

Although the interactions with customers are considered as a key element of the management of customer relationships (e.g. Parvatiyar & Sheth 2001, Reinartz *et al.* 2004, Zablah *et al.* 2004), the previous literature is, with a few exceptions (e.g. Payne & Frow 2004, Thomas & Sullivan 2005), relatively quiet on the channels through which these interactions occur. For instance, Payne & Frow (2004) separated a wide variety of channels utilized by companies into six categories forming a multichannel environment. However, these studies discuss channels rather abstractly, giving the impression that all channels can perform essentially the same functions in multichannel CRM. Furthermore, theses studies pay insufficient attention to on the individual channels or the different characteristics of each individual channel. Finally, the previous research does not evaluate how these characteristics influence interaction between the company and its customers.

The current study contributes to the area by elaborating on the mobile medium as a channel. As stated above, the mobile medium has several inherent characteristics that have an influence on communication. Furthermore, this study has proved that the mobile medium as a channel differs from all other channels within interaction management. This is based largely on the characteristics of the mobile medium that determine which activities can be serviced. Only the mobile medium of all available communication channels, allows access to an individual virtually anytime and anywhere (e.g. Balasubramanian *et al.* 2002, Kavassallis *et al.* 2003, Tsang *et al.* 2004, Shankar & Balasubramanian 2009). Furthermore, messages sent through the mobile medium are most often read instantly by the receiver and, subsequently, messages have a high response rate (Kavassallis *et al.* 2003, Schierholz *et al.* 2007, Shankar & Balasubramanian 2009) enabling instant and interactive communication, unlike through other mediated channels. To put it briefly, the mobile medium provides reach beyond any other channel including the Internet. Therefore, it is argued in this study that the mobile medium as a channel for managing customer relationships is unique.

Therefore, it is important to make distinction between the concepts of CRM, and mCRM, despite the fact that mobile medium is just one channel in a multichannel environment. Consequently, the rules that companies will encounter for utilizing the mobile medium are different than those found in other channels, including the Internet (Sinisalo *et al.* 2006, Shankar & Balasubramanian 2009).

Contribution of the mobile CRM research stream

As this study has pinpointed, mobile CRM as a research stream has gradually gained interest among academics although research concerning the phenomenon is still at an embryonic stage. Apart from the conceptualization of mobile CRM, this study has extended the knowledge on communication through the mobile medium in CRM. More specifically, this study complements the current research on mobile CRM in the following several ways.

Firstly, the study discusses this phenomenon with a holistic view from initiation to actual communication through the mobile medium in CRM. In this way, this study broadens the view of the previous research (e.g. Camponova *et al.* 2005, Schierholz *et al.* 2007, Duran 2010) concerning mobile CRM from a company perspective. Existing research on mobile CRM does not focus on elements that enable the utilization of mobile CRM. Rather, they tend to focus on outcomes related to the utilization of mobile CRM either from a company or

customer perspective (e.g. Lin & Wang 2005, Valsecchi *et al.* 2007, Liljander *et al.* 2007). This is a rather untenable emphasis since there is still a lack of consensus about what constitutes the phenomenon of mobile CRM. Therefore, this study extends the vital understanding of mobile CRM communication.

Secondly, this study contributes to current research on mobile CRM by founding a theoretical framework for the phenomenon (see chapter 2.3 for details). Accordingly, customer relationship management, mobile commerce and communication literature are considered the focal literature streams constituting mobile CRM. CRM literature elicits the underlying thought of this study (e.g. Srivastava *et al.* 1999, Zablah *et al.* 2004, Boulding *et al.* 2005). Accordingly, the purpose of mobile CRM is to be a part of building and maintaining customer relationships by leveraging technology (Campbell 2003). The mobile commerce literature complements CRM literature by discussing the unique characteristics of the mobile medium (e.g. Balasubramanian *et al.* 2002, Nysveen *et al.* 2005, Shankar & Balasubramian 2009). Since both CRM and mobile commerce literature are relatively silent about facets of communication, the communication literature has a vital role to play in this study (e.g. Hoffman & Novak 1996, Duncan & Moriarty 1998, Stewart & Pavlou 2002). An integration of these theoretical perspectives provides a better understanding of the communication through the mobile medium in CRM. None of the previous research has committed to this vital issue on this scale. Furthermore, this framework can be used as a basis for further research concerning mobile CRM.

Thirdly, this study has contributed to mobile CRM literature by giving an overview of the nature of this kind of communication. Accordingly, the purpose of this communication is to be part of building and maintaining customer relationships. The previous literature on mobile CRM has mainly concentrated on services (e.g. Liljander et al 2007, Valsecchi et al 2007). However, according to the current study mobile CRM communication involves each functional area, namely marketing, sales and service, of CRM (Xu *et al.* 2002, Jayachandran *et al.* 2005) although it is, in many cases, quite hard to make a distinction between the different functional areas when it comes to messaging based communication through the mobile medium. Furthermore, mobile CRM, as a part of CRM, has a long-term focus on customers and, thus, communication is predominantly continuous and interactive with the customers. This implies that mobile CRM does not take a short-term, transactional perspective on communication. Accordingly, the focus of the communication in CRM, contrary to that of transactional based marketing, is not purely persuasive, but interactive and

mutually beneficial between the company and customers (Duncan & Moriarty 1998, Heinonen & Strandvik 2007).

Fourthly, this study focuses on communication as a key element of the interaction between the company and the customer via the mobile medium. This approach is consistent with the seminal conceptualization of mobile commerce by Balasubramanian *et al.* (2002). In addition, communication is considered as the key tenet of CRM, and relationships in particular (Duncan & Moriarty 1998, Kapanen 2004). The previous research does not focus on communication as a key element of mobile CRM. Furthermore, this study applied a traditional communication process model (Schramm 1960) to the mobile context. Although the bases of communication are equal regardless of the channel used, communication through the mobile medium involves unique elements.

Fifthly, this study has also contributed to the knowledge of this nascent phenomenon by describing the communication phases visible within the mobile CRM context. Communication gradually evolves in two consecutive phases, namely initiation and maintenance (cf. Reinartz *et al.* 2004). Both of these stages involve unique purposes, activities to accomplish them, and channels through which the communication can be conducted (see chapter 2.2.2 for details).

Sixthly, this study extends the previous research by identifying the role of the mobile medium within the multichannel environment in CRM. The mobile medium has a specific role among other channels within the multichannel environment in CRM. Although the distinguishing characteristics of the different channels limit their suitability to perform various activities (Bradshaw & Brash 2001, Nysveen *et al.* 2005, Sinisalo *et al.* 2007), research on the role of individual channels among others in CRM is very scarce. The findings of the study indicate that the mobile medium has a simple, but still important service role among other channels in CRM. A role that is particularly enhanced when communication is adapted for customers and takes into account the unique characteristics of the mobile medium, such as flexibility, interactivity, immediacy and capability for personalization.

5.4 Managerial contributions

This study makes several managerial contributions related to communication through the mobile medium in CRM. These managerial contributions can be further divided into three sections: contributions to the initiation of mobile CRM,

contributions to communication in mobile CRM and applicability of mobile CRM to other contexts.

Contributions to the initiation of mobile CRM

It is of critical importance for companies to view the mobile medium as a part of their CRM strategy rather than as a separate project, as to do so may result in an inconsistent and unsatisfactory customer experience. Therefore, the greatest challenge for companies is to combine the mobile medium with traditional media. Because the multichannel integration process is arguably one of the most important processes in CRM (Payne & Frow 2005), leveraging the mobile medium within the context of the company's overall CRM may guarantee the best results. In other words, the communication through mobile medium should be functionally incorporated into a company's overall CRM strategy.

Although there are evidently limitations in the utilization of the mobile medium, the communication conducted through it may have a significant role among the other channels. Although utilization of the mobile medium is not essential for companies, it has the potential to produce novel activities that are not possible to implement through any other channel. Therefore, managers should, at least, consider whether their company could provide added-value of any kind through using the mobile medium for the benefit of customers. If the company is going to utilize or is already utilizing the mobile medium as a part of its CRM communication strategy, it is axiomatic that the communication should be relevant for the customers.

In order to utilise the mobile medium, managers in charge of marketing communication have to have a great deal of knowledge of this particular medium. If the company is a mobile communication novice, it should be open to receiving information from experienced actors in the field. Legislation is a particular challenge that has to be overcome in this area. Therefore the role of consultancy cannot be underestimated. Essentially, consultants bring a combination of practical and theoretical knowledge. This is vital, since the consultant has knowledge of the conditions set by the legislation concerning electronic communication, and it must be ensured that communication conforms to both ethical and judicial requirements.

For the purposes of mCRM communication it is suggested that the company gathers the information and permissions on its own. Accordingly, renting or purchasing a customer database for mobile CRM is not recommended.

92

Furthermore, the companies should not collect customer permissions to communicate through the mobile medium without knowing how to utilize them. Most often, this is done as a precaution— to ensure there is no customer objection to receiving messages at some point in the future. However, we would argue that companies should not ask for permission in advance before having knowledge of the kind of communication the company intends to conduct through the mobile medium. If this is the case, the customers will most probably not give the permission. Therefore, the company risks losing its opportunity to utilize the mobile medium before it has exploited it.

When planning to initiate mCRM, the framework illustrated in this study (see Figure 9) includes all the vital issues that should be considered, and it is a good guideline from which to approach CRM through the mobile medium.

Contributions to communication in mobile CRM

The utilization of mCRM communication provides a novel way of managing customer relationships. Furthermore, communication through the mobile medium is assumed to overcome problems such as information overload and clutter, inherent to traditional media. This is due to the fact that communication through the mobile medium is based on customer preferences and permission. In order to communicate with customers appropriately, it is of critical importance for the company to identify customers and their preferences. Therefore, it is suggested that customer details not only cover the mobile phone number but other information as well. This is especially important in the mCRM context, since the mobile phones are very personal devices.

Regardless of the industry, managers should adapt their communications to their customers, in the way that communication occurs at the right time from the customer's perspective. This means that the customer interaction process, whether related to shopping, travelling, eating, drinking or any kind of interaction with the company, should identify the best time to communicate through the mobile medium, and only communicate at that time. In order to succeed in this, the companies should be aware when the customers' interaction process is underway. For instance, the clothing stores should know when their customers are shopping.

The value of this kind of communication for customers also emerges from providing instantaneously information wherever the customers are. In fact, the mobile medium is the only channel capable of enabling this kind of communication. Even though the messages do not always contain good news for

the customers, the communication may be important since the lack of such information, on the contrary, may harm the relationships with customers more. In such cases that communication does not contain good news for the customers concerning, for instance, information about flight cancellations via text messages. The company should also provide a phone number or internet page in that same message through which the customer can resolve this sudden problem conveniently. This is because the purpose of the communication is to be a part of building and maintaining customer relationships.

Furthermore, managers should take into account the phase the customer relationship is in. As a customer relationship progresses, customers most often become more autonomous and, therefore, communication through the mobile medium is most probably more beneficial for both parties. As a matter of fact, customers may not be ready for communication through the mobile medium in the early stages and may perceive it as scary or irritating, particularly, if they associate the communication with the spam.

From a company perspective, SMS are still the preferred form of communication. As mentioned previously, the reasons underlying this choice are quite evident. In practice, every mobile phone in a market enables SMS communication. Furthermore, we would argue that, in relation to communication through the mobile medium in the CRM context, the usefulness of SMS messages for the company and its customers outweighs that of technologies that are more sophisticated.

When planning or developing some type of mobile communication campaign, the communication process illustrated in this study (see Figure 11) contains all the vital elements that should be taken into consideration. The emphasis on different elements may vary according to the company in question, but it is a good guideline with which to approach communication through the mobile medium.

The applicability of mobile CRM to other contexts

Although mobile CRM communication has inherent potential, it has been utilized quite cautiously to date. This study argues that mobile CRM can be utilized much broadly within different industries and contexts. As mentioned, a Finnish dental treatment center uses the mobile medium with its customers. Immediately after a patient cancels an appointment, the treatment center sends a text message to five customers on standby for the treatment. Then the quickest client to respond gets the appointment time in question. This example indicates several facts about the

utilization of mobile CRM. First, this kind of activity is almost impossible to conduct through any channel other than the mobile medium and without messaging features, at least, as instantly. Second, this kind of mobile CRM communication is undoubtedly beneficial for both company and customer. Third, this example also proves that the technology needed for this kind of communication is already available, albeit the level of penetration is relatively low.

The kinds of mobile CRM communication presented in this study should be used in numerous other industries than those identified. For instance, it is very common in the health care-industry for people to be on standby for treatment, sometimes four hours, sometimes for months. If it were to use the mobile medium, the best method to reach people, the health care-administration could contact people on standby instantaneously saving the costs of empty appointment time or treatment periods. The potential to utilize the mobile CRM communication is there for other industries too. It could be save time spent providing face-to-face services for matters which could be easily conducted through the mobile medium. For instance, tax authorities frequently have to serve customers asking for a tax decision while the taxation process is underway. If people knew that they would be informed immediately through the mobile medium as soon the decision has made, they may not feel a need to pester the authorities during the process. By that way, both the company and the customer would benefit from the mobile CRM communication.

When it comes to the innovative use of mobile CRM communication, communication through mobile medium may decrease channel cannibalization (see Van Baal & Dach 2005, Wolk & Skiera 2009). The assumption underlying channel cannibalization is that an emerging channel may cannibalize the sales of existing channels. For instance, during the infancy phase of the Internet, the fear of ruin through cannibalization by the Internet deterred many companies from adding the Internet into their multichannel environment (Alba *et al.* 1997). By utilizing the communication through the mobile medium, companies may send offers to highly segmented customers while other customers are buying similar products through other channels at normal prices. In this way, company can ensure that all the items are more likely sold. The advantage is that customers are not aware of offers other customers have received. Therefore, the mobile medium does not cannibalize other channels.

The mobile medium is exceptional compared to other channels due to its ability to reach people. In April 2010, global air travel was disrupted due to a

high-altitude plume of volcanic ash from Iceland. One result was that many Finnish passengers were stranded abroad and could not fly back home. While travel agencies were unable to bring them home by plane, many of agencies contacted passengers through text messages in order to sort out where the passengers currently were (Kaleva 20th April 2010). The mobile medium is the only channel likely to be able to reach people in such situations. This is the key characteristic of the mobile medium which should be utilized innovatively in the mobile CRM context. If a company, whether mobile service provider, retailer or barber, finds a solution to utilize the characteristics of the mobile medium in an innovative way so customers perceive benefit and value, the company will be most likely be able to positively differentiate itself from others within the current fiercely competitive situation.

5.5 Evaluation of research

Following the principles of critical realism, as a qualitative dissertation, this study will be judged on criteria consisting of *construct validity, internal validity, external validity and reliability* (e.g. Cook & Campbell 1979, Miles & Huberman 1994, Eisenhardt 1989, Yin 2009).

First, the challenge to the abductive research approach in an essay-based dissertation should be noted. This challenge stems from the fact that the essays written at the beginning of the process may have different analytical foundations than the essays written at the end of the process (Saraniemi 2009). In this study, the research process has been relatively long (2004–2010). Naturally, the way the author thinks about mCRM has been re-evaluated and has crystallized in parallel with the research process. For instance, the conceptualization of the central phenomenon, mCRM, has developed during this period. In addition, some of the suggestions and arguments made in individual research papers are reflected against my current knowledge in the theoretical section of this dissertation (chapter 2).

Construct validity refers to the manner of identifying the correct operation measures for the concepts being studied (Yin 2009: 40). In other words, it involves establishing correct procedures for the research process and can be increased, for instance, by using multiple sources of evidence. Accordingly, the researcher needs to consider construct validity during the data collection phase (Gibbert *et al.* 2008). Following the principles of critical realism, the study aimed for data triangulation using diverse data (Patton 2002, Yin 2009). Accordingly, the

data collection for this dissertation relied on multiple sources of information consisting of semi-structured interviews, observations and the diverse data gathered. The case companies were selected based on the idea of theoretical sampling, in which the cases are selected to represent the problem of the study as well as possible. Therefore, each of the selected companies utilizes the mobile medium as a communication channel in CRM and was expected to offer rich insights into the phenomenon under investigation. Furthermore, Yin (2009) suggests having key-interviewees review a draft of the report in order to increase construct validity. Accordingly, the interviewees have checked the research papers before submissions and, thus, had opportunity to correct issues related to empirical section of papers. However, not all interviewees were able to check the transcriptions or the conclusions probably due to the tight schedules.

Internal validity (or content validity) refers to seeking causal relationships, whereby certain conditions are believed to lead to other conditions (Yin 2009: 40). As noted, the internal validity is mainly valid for explanatory and causal studies. However, this study attempts to enhance internal validity by choosing the informants based on the principle that information is best gained through the people involved in the phenomenon under investigation (for details see chapter 3). Furthermore, the informants were chosen to represent many facets of this phenomenon. Therefore, the author aimed to interview management, technological and marketing personnel for the purpose of this study. Besides, the empirical frameworks of research papers I-III were presented to an industry expert for evaluation and comment in order to validate the findings obtained from the interviews.

External validity (or generalizability) refers to establishing the domain to which the findings can be generalized (Yin 2009: 40). Methodologists identify a further difference between statistical generalization and analytical generalization (Gibbert *et al.* 2008). However, neither single nor multiple case studies allow for statistical generalization (Yin 1994). This study aims, with the aid of a qualitative case study, to enhance the in-depth understanding of the phenomenon. In the line of analytical generalization, this study may be evaluated by its ability to provide novel insights into the phenomenon under investigation (Tsoukas 1989) and to generalize a particular set of results to some broader theory, instead of the larger population (Yin 1994). In this study, the one purpose has been to develop the theoretical understanding of and to conceptualize mobile CRM communication. Therefore, analytical generalization stems from bringing novel insights into the existing academic research concerning mobile CRM. The conceptual, theoretical

and managerial contributions are presented more profoundly in Chapter 5. This theory developed is bound to a specific business-to-consumer context. Furthermore, the case companies featured in this study are from the retailing, airline and mobile industries. Therefore, it is acknowledged that the findings obtained in the various research papers are not necessarily applicable to other contexts or other industries as such.

Reliability refers to demonstrating that the operations of a study can be repeated, with same results (Yin 2009: 40). In other words, subsequent researchers should derive the same conclusions from the study by conducting the study again along the same phases (Denzin & Lincoln 1994). Essentially, reliability within this type of study is complex to prove since a qualitative study inherently involves considerable interpretation by the researcher. In order to enhance reliability, all the interviews were transcribed in their complete form as precisely as possible for analysis. Furthermore, other documentation, such as observation notes, was carefully written in the different events during to the research process. Finally, the empirical data of research papers I and II was partially analyzed in cooperation with co-authors. As a result of other people being involved in the analysis process, reliability has been improved.

Above all, each research paper in this dissertation has gone through a double-blind peer review process from the experts in the area. The author has also had other academic work on the phenomenon published during the research process and parts of the dissertation have been presented at several academic conferences. The conference contributions have not only undergone a double blind review process but also been discussed at the conferences with peers.

5.6   Limitations and further research

The purpose of this chapter is to acknowledge the limitations of this study and use them to produce recommendations for future research following this study.

As in every research, this study should be interpreted in the light of certain limitations. This study can considered as an early research piece giving an overview of mobile CRM communication from the company viewpoint. As such, the subject phenomenon of this study may be considered relatively broad for a single study and that may lead some to view the findings as a little cursory in nature. Therefore, the findings obtained in this study should be considered as tentative and further research is still needed on conceptualizing mobile CRM and its constituent parts in a more precise manner.

Accordingly, the researcher has developed the theoretical understanding of mobile CRM mainly at the general level in order to ensure coherent discussion of the phenomenon. In parallel, this means that the different contexts - which can be understood as something one must know about in order to understand an action and processes (Alajoutsijärvi & Eriksson 1998) - have not been taken into account in this study. However, it is acknowledged that the different contexts may influence different parts of mobile CRM. Accordingly, the emphasis on different elements of mobile CRM may vary according to the industry in question. Finally, these results may present some insights into this phenomenon globally, but they are still only applicable in Finland as such. Therefore, a natural extension of this study would be to look at how mCRM is utilized in different kinds of companies ranging from B2B to B2C markets.

Selecting the case study methodology with a qualitative orientation imposes inherent limitations on the study as well. As a consequence, the study does not strive for statistical generalization of the results, but an in-depth understanding of the phenomenon and an analytical generalization in a business-to-consumer context. Therefore, we should not draw far reaching conclusions from the findings.

Although the interest in this nascent phenomenon has been growing among marketing and information system researchers, knowledge of it is still very limited. Given the potential of the mobile medium it is interesting to understand how consumers are going to relate to mCRM efforts. To gain a holistic picture of the studied phenomenon in-depth interviews with customers would give insights into the utilization of mCRM from the customers' point of view. Although some previous studies concerning mobile CRM (e.g. Lin & Wang 2005, Liljander *et al.* 2007, Chen & Ching 2007, Lee *et al.* 2008, Hsu & Lin 2008) have touched on this important area, further research is needed. This is because it is the customer who determines the value of mobile CRM. If the mobile CRM, or more specifically the mCRM solutions applied in some specific context, do not provide any value for customers, there is no use for the mobile CRM. For instance, travel-related stress may be an explanation for the customers' positive perceptions towards text messages in the airline industry. If this is the case, then the familiarity of the technology is an evident strength of messaging-based communication. However, this issue has not so far been examined despite the potentially valuable contribution it could make to our current knowledge of mobile CRM.

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Appendix 1 List of messaging based communication (Sinisalo 2007b)

Type	Description	Content	Presentation	Capability Needed
vCARD (Business Card)	Electronic business card	Name and contact details	User can store details onto device after receiving them	vCARD / SMS support
vCAL (Calendar Entry)	Open source calendar standard	Start and end times, and message	Different mobile devices handle content differently	vCAL / SMS support
Picture Message (Nokia Smart Messaging)	Comprises several text messages clustered together	Pictures	Can be displayed on the screen of device	Nokia Smart messaging / SMS support
Operator logo (Nokia Smart Messaging)	Comprises several text messages clustered together	Monochrome picture	Appears continuously on the status screen of a device	Nokia Smart messaging / SMS support
Caller Group Graphics (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Monochrome picture	Displayed on the device whilst calls from predefined group of numbers are under way	Nokia Smart messaging / SMS support
Mobile Postcard (Nokia Smart Messaging)	Picture message and text message sent together in three SMS packets	Picture and text (maximum length of text 120 characters)	Can be displayed on the screen of device	Nokia Smart messaging / SMS support
Ring Tones (Nokia Smart Messaging)	Comprised of several text messages that are clustered together	Ringtones	Played to alert for incoming calls	Nokia Smart messaging / SMS support
Text Message / SMS (short message service	Short text messages	text (maximum length 160 characters)	Typically static	SMS support
Extended SMS	Comprised of several text messages that are clustered together	text	Different mobile devices handle content differently	SMS support
USSD	Short text	text (maximum	Unlike SMS, there is	USSD support

Type	Description	Content	Presentation	Capability Needed
(Unstructured Supplementary Services Data)	messages	length 160 characters)	no store-and-forward capability	
Flash Text Message	Short text messages	text	First few words can be read from the screen of device when the message arrives without pressing any buttons	SMS support
EMS iMelody (Enhanced messaging service)	Comprised of several text messages that are clustered together	ringtones, sounds, alerts	single object of audio data	EMS / SMS support
EMS Picture (Enhanced messaging service)	Comprised of several text messages that are clustered together	logos, screen savers	single object of image data	EMS / SMS support
Ringback tones	Personalized ringback tones	sounds, music, audio	Person calling can hear it when waiting in the line instead of general ringback tone	SMS support
MMS (multi-media messaging service)	Messaging application transmitting multi media over wireless networks	text, formatted text, graphics, pictures, video and sound clips	contains one or more slides that are displayed in a sequence	GPRS or similar / MMS support

Appendix 2 Semi-structured interview guide for case company in research paper IV (original guide in Finnish)

<u>Multichannel communication in general</u>

What is the goal of using the multichannel strategy for the company?

- Are there any precise targets?
- What are most important for the company?
- How customer perspective has been taken into account?

What are the perceived benefits of multichannel strategy?

- From company's perspective?
- From customers´ perspective?

Have you had any problems concerning the multichannel environment?

Have you had any unexpected issues related to multichannel environment?

How do you striven for utilizing the possibilities enabled by each channel?

- Do you perceive different channels as a same or do you utilize characteristics of different channels in CRM communication?

<u>The role of the mobile medium in multichannel communication</u>

What is the role of the mobile medium currently among other channels in CRM communication?

- Is mobile medium really one channel among others in multichannel environment or is it separate channel?
- If so, for what reason?

What were the objectives of implementation of mobile medium?

What are the perceived advantages of using the mobile medium in CRM?

What are the perceived disadvantages/problems of using the mobile medium in CRM?

What kind of potential form of applications you perceived to mobile medium?

<u>Mobile services</u>

What is the background of using the mobile medium as a part of multichannel communication?

- What kind of services you have had?
- Why some of these services are not available anymore?
- What kind of services you currently have?

What kind of experiences you have on different services?

What kind of expectations you have for different services?

- How these expectations have filled?
- Anything unexpected?

What are the pros of current mobile services?

What are the cons of current mobile services?

How do you measure the concrete benefits of using the mobile medium?

Original papers

I   Sinisalo J, Salo J, Karjaluoto H & Leppäniemi M (2007) Mobile Customer Relationship Management – Underlying Issues and Challenges. Business Process Management Journal 13(6): 771–787

II   Sinisalo J, Salo J, Leppäniemi M, Karjaluoto H & Zhao X (2005) Building Customer Database for Mobile Customer Relationship Management. Proceedings of 4th International Conference on Information and Management Sciences, Kumning, China

III Sinisalo J & Karjaluoto H (2007) Mobile Customer Relationship Management – A Communication Perspective. International Journal of Electronic Customer Relationship Management 1(3): 242–257

IV Sinisalo J (2011) The Role of the Mobile Medium within Multichannel CRM communication. International Journal of Electronic Customer Relationship Management. In press.

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