# Internship report

# Analyzing the environment of Mobile Marketing using Short Message Service

By

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# 1. Introduction

This report has been written within the framework of a NCCR Summer Internship for Female Undergraduate Students. The research work has been conducted, on the one hand, at the University of St-Gallen, more specifically within the Institute for Media and Communications Management. On the other hand, the work has been carried on at the University of Lausanne within the Institute of Business Information Systems. Moreover the "*state of the art*" has been written with the collaboration of Patricia Balagova, third-year student at the University of Neuchâtel and trainee in the same internship.

The goal of this report is to describe and analyze the environment of Mobile Marketing using SMS within Europe and Switzerland.

The first section introduces the concept of Mobile Marketing. This includes analyzing different definitions and classifications found through a literature review in order to develop broader descriptions. Furthermore, the aim is to bring Mobile Marketing into the broader Marketing Mix context to eventually manage to create some Mobile Marketing design aspects.

Secondly the authors conduct their analysis by making use of an environmental ontology: the latter encompasses an analysis of both demand (market) and supply (actors) side of the Mobile Marketing environment, as well as a discussion of several issues considered to be crucial in this field. As this is a complex environment, the three latter elements cannot be analyzed separately; therefore it is necessary to take the various influence relationships into account.

Our ultimate hope is, hence, to be able to make recommendations to industry. A particular attention is set on privacy which is regarded as key to allow the development of Mobile Marketing.

The methodology is primarily based on a literature review of the Mobile Marketing environment. Then in order to conduct an analysis in a comprehensive and structured manner, the authors have made use of an environmental ontology presented by Camponovo et al. [Camponovo et al., 2004], in which they identify three key elements characterizing a strategic environment.

Figure 1: Environmental Ontology



Source: adapted from [Camponovo et al., 2004]

The **market** represents the demand side of the firm's environment. This requires understanding the customers' world: their various needs, wishes and demands to build a valuable strategy. Moreover managers ought to analyze the diverse users' segments in order to develop diverse usages and applications that allow them to gain competitive advantages. Hence throughout the market analysis, usage by consumers, application and adoption of the technologies under scrutiny need to be assessed. [Camponovo et al., 2003]

As far as the **actors** are concerned, they correspond to the supply side of the environment. The accurate players to be analyzed are those who have a direct or indirect power to influence the company's success. This indeed includes taking into account direct competitors, as well as other actors along the value chain such as suppliers, distributors, and substitute product producers [Porter, 1980]. It could be also valuable to take into account other players such as regulatory authorities and technology suppliers that indirectly have the power to enable or prevent development of the monitored environment. [Godet, 2001] Therefore to consistently depict the supply side, each actor's business model should be described. This basically implies the presentation of the organization's value proposition, its target customers, its infrastructure and its financial aspects [Osterwalder and Pigneur, 2002]. Then the different interactions along the supply chain need to be assessed, for example, by using the value chain concept, first described by Porter and Millar [Porter and Millar, 1985].

At last but not least **issues** refer to open and controversial questions or imminent changes that will significantly influence the environment of a company. Issues can emerge in various areas such as the market, technology, regulation, economic, geographical and social areas. The most interesting ones are those on which actors disagree and have different means of influence.

In order to go beyond the simple description of the present environment and apprehend as accurately as possible its future environment, building scenarios can be a solution. The comprehension of the various issues is likely to help developing these scenarios and to improve the corporate understanding of the future.

Each of the three elements depicted above interact with the others through **influence relationships**: first of all, market and actors are linked by a *market relationship*. The end users influence the developments of certain propositions by adopting products and services in line with their needs. On the other hand, actors often impact on the market by creating new needs.

Then market and issues are connected by an *adoption relationship*, which means that, on the one hand, issues have an impact on customers' reaction, on their adoption of the diverse products and services. On the other hand, users' concerns about issues have also an impact on their evolution.

Eventually, actors and issues are associated by a *position relationship*. According to the strategy they introduce players can have a significant impact on issues, depending on the position they take, on the power they have to influence the evolution of concerns. On their side issues can impact on organizations' environment and on their strategic moves.

Furthermore influences appear between each of the factors and themselves. The whole network of interconnections creates an extremely complex environment which is difficult to grasp.

# 2. State of the art

In the following section, definitions and classifications of the Mobile Marketing concept are presented to obtain a more comprehensive vision of this environment and framework.

Then the aim of the third part of the state of the art is to integrate Mobile Marketing in the broader marketing strategy. This is done through the presentation of the marketing mix including Mobile Marketing, the description of Mobile Marketing activities. We also mention the impact on the relationship with customers. At last we bring up the ambivalence between the personal characteristics and the mass-communication features of mobile devices.

Fourthly, we expose the diverse design aspects found in a broad literature review. This goes from strategic elements to content and privacy factors, passing by technical characteristics.

# 2.1 Definitions

In this section this aim is to present eight definitions of Mobile Marketing found in the literature. First of all, each of them is analyzed separately; then some general statements are made about the diverse descriptions and finally the authors of this report state their own definition of the concept.

1. According to Kavassalis et al. [Kavassalis et al, 2003], Mobile Marketing is a concept technologically simple. It is based on mobile messaging and uses the mobile network as a complementary distribution channel for delivering old-fashioned commercial information and interactive promotional advertising. This definition is also used by Stanoevska-Slabeva in a recent paper [Stanoevska-Slabeva, 2004].

The latter description emphasizes the fact that Mobile Marketing is a tool to deliver information by using mobile messaging. However, it does not mention other kind of mobile devices that could also be used to distribute this content. Nevertheless, they bring up that Mobile Marketing should be a part of an integrated marketing process, using both traditional information and interactive advertising.

2. In his presentation at the ICT-Investment Meeting Nils Hafner, [Hafner, 2004] enlightens that Mobile Marketing is based on concepts that aim at delivering a consistent one-to-one Marketing while taking into consideration the whereabouts and the personal preferences of end-customers.

The author mainly pinpoints the usefulness of Mobile Marketing in building a professional, personalized and secure relationship with the end-customer. Nevertheless he does not fall on neither the diverse mobile technologies underlying the concept nor the manner to make use of the latter. Moreover there is no reference to the peculiarities of this kind of communication tools.

3. The authors of a primer report on Mobile Marketing [First Partner Research and Marketing, 2003] define the term as being more than a trendy new media channel. According to them it is a powerful

communication tool with considerable audience reach and awareness. It covers a broad range of formats in which the target audience interacts with a campaign using their mobile phone.

They primarily focus on the leverage possibilities concerning consumer reach and awareness enabled by this tool. They present Mobile Marketing as part of a company's communication policy in which the consumers interact with the company using their mobile phones. Hence it is an integrated part of the media mix of firms.

4. Dickinger et al. [Dickinger et al., 2004] describe Mobile Marketing as the use of interactive wireless media to provide customers with time and location sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders.

First of all, they present a facet that none of the latter authors have mentioned before. They bring Mobile Marketing back within its global strategic framework: it should create added value for every stakeholder, including consumers. Secondly they do not restrict Mobile Marketing to Short Message Service (SMS) marketing even though their exploratory qualitative research is based on the latter marketing tool. The authors also pinpoint one of the key advantages of mobile devices namely interactivity. At last but not least they draw the reader's attention to the necessity of having time and location sensitive services which is still seldom the case due to technological difficulties.

5. The authors [Heinonen and Strandvik, 2003] describe Mobile Marketing as a marketing communication where a consumer can be reached anywhere, anytime.

They specially focus on the consumer reach that is enabled by the particularities of mobile devices. They also mentioned that it is a tool inserted within the communication policies of a company. However one could argue that consumers can control this reach as they may read the message whenever they want to. Furthermore they can also turn off their device and consequently decrease the effect of location based services (LBS), for example.

6. On their website experts from Enpocket, Mobile media, technology and consulting company [Enpocket, 2004] give a description of what they believe to be Mobile Marketing. It is hence a new medium used to target a specific audience at the right time, in the right place, in a direct and personal manner. It stimulates interaction through other media anytime, anywhere. It is a way to deliver phone numbers, vouchers... It can also be used to provide personal alerts, reminders, offers and information.

The new concept here is that Mobile Marketing should be considered as a part of the Direct Marketing process of a company. Furthermore they bring up that it should not be an element to consider on its own but should be integrated in the whole marketing strategy. Secondly they also expose the fact that it should aim at building a time and location sensitive relationship with the customers.

7. In a recent paper about mobile spam Camponovo and Cerutti [Camponovo and Cerutti, 2004] use a definition of Mobile Marketing borrowed from Kalakota et al. [Kalakota et al., 2002]. According to them Mobile Marketing broadly refers to the distribution of any kind of promotional or advertising messages to customers through wireless networks.

Once again the authors enlighten the communicative and distributive capabilities of Mobile Marketing within a promotional and advertising process. They also bring up the use of wireless networks to conduct the latter task successfully.

8. The Mobile Marketing Association [Mobile Marketing Association, 2004] presents Mobile Marketing as being the use of the mobile medium as a communications and entertainment channel between a brand and an end-user. Mobile Marketing is the only personal channel enabling spontaneous, direct, interactive and / or targeted communications, any time, any place.

First of all they pinpoint the need of wireless media to deliver content: information as well as entertainment. They are the first authors to emphasize the use of Mobile Marketing as an entertainment channel. Moreover, the authors present the concept as being integrated in a Direct Marketing process which allows interactive and personalized communications.

While having a general look at the definitions, one can notice that **interactivity** and the use of a **mobile medium** when introducing Mobile Marketing are the concepts that come out most of the time. On the contrary most authors do not insert the concept of Mobile Marketing in a broader marketing or strategic framework. Nevertheless four of them pinpoint its considerable usefulness when setting up a one-to-one and personalized Marketing. Finally two other notions that seem to be important for a few authors is, on the one hand, the use of Mobile Marketing as a communication channel for promotional information and advertisement. On the other hand, it is the capability of Mobile Marketing to induce audience reach anytime, anywhere.

Based on the diverse conceptions that have been enlightened above, a broader definition of Mobile Marketing could be:

Mobile Marketing is a mobile medium that, while still being mainly based on mobile messaging, is used as a complementary channel to deliver time and location sensitive, promotional information, advertisement or entertainment. Its aim is to build a one-to-one marketing in which customers interact anytime, anywhere using their mobile devices. In a global strategic framework, the goal of Mobile Marketing is to use a new kind of direct marketing interacting through mobile networks in order to create added value for stakeholders.

# 2.2 Classifications

In this part of the work the different manners of organizing Mobile Marketing discovered in the literature are described. Furthermore an analysis of the latter is conducted and the article's aim is to check if it is possible to combine them to create a broader classification. Secondly, as Mobile Messaging is the most widespread type of Mobile Marketing, diverse forms of the latter type of campaigns are introduced. The authors also examine these diverse approaches to to bring them together and build a wider taxonomy.

# 2.2.1 Classifications of the different types of Mobile Marketing

1. The FirstPartner's experts [FirstPartner Research and Marketing, 2003] introduce four different formats in which the audience interacts by using their mobile devices:

- Messaging based: marketing using SMS / Multimedia Message Service (MMS). Most campaigns today use Short Message Services messaging. Despite the large thrust in the market for MMS, the penetration in the end-customer population is still relatively low.
- *Browser based*: marketing using the "mobile Internet" in Wireless Application Protocol (WAP) format via banner ads and interstitials
- Voice based: marketing using voice lines
- *Emerging*: current cutting edge campaign formats which are being used by just a few specialist agencies such as Java Games, voice mail marketing and LBS.

When considering *messaging based Mobile Marketing*, disadvantages result from the limited content's size and the small screens of the mobile phones. Indeed only 160 characters are available and no complex pictures or graphics can be displayed. The latter limitation is improved by the enrichment brought by MMS messaging even though the end-customer penetration is still weak. MMS messaging enables color pictures, photos, sampled audio...

As far as *browser based advertising* is concerned, this enables the delivery of Internet information and data services. It is a way to widen the traditional online marketing process. One can also deliver colored pictures and graphics via these kinds of devices. This kind of formats has also cons such as the fairly narrow space on WAP screen. Moreover some procedures such as the use of search engines are rather complicated.

Having a look at *voice based marketing* [8hertz, 2002] one can enlighten opportunities such as the offering of speech services, natural and intelligent dialog navigation through speech recognition. This allows broadening the concept of telephone marketing by inserting a mobile dialog between the company and the end-user. Other types of voice based marketing such as registration for a vote or submission of details can remain pretty simple.

Finally what they call "*emerging*" creates an opportunity of offering time and location sensitive content to end-user. This enables to deliver content even more relevant which is adapted to all the situations of the consumer's life context. It is thus possible to better target a specific consumer segment and, consequently, to improve the precision of marketing.

Hence one can easily realize that as the formats differ from one another, the content and the form of the message will also be different. Therefore the Mobile Marketing process will also be different. As a result, this brings up interesting elements to build a wider taxonomy.

2. One-to-one Interactive [Karnell, 2002] presents three different tactics available within the Mobile Marketing environment. Their classification was first used by the Mobile Marketing Association [Mobile Marketing Association, 2000].

- WAP / i-MODE advertising types: within this category there are several ways to contact the consumer. For example one can use text (text ad for branding or information; not dynamic), text link (hypertext that links to another URL, more text, graphic, logos), graphic (visual for branding / information; not dynamic), graphic link (visual that links to another URL, ...), intraactive ads (text or graphic with user input within a form field, pull-down menu, or dialog box), interstitial (full page text and graphic appearing between calls for pages of content), or at last wireless emails (promotion distributed via e-mail, specifically formatted for viewing on wireless devices)
- *Personal Digital Assistant (PDA) advertising types*: the same type of advertising can be used with a PDA as with a WAP / i-MODE device. The only difference is the protocol.
- *Mobile messaging Advertising types*: the different types of campaigns will be described below (cf. 2.2.2)

First of all, as each of these interface options contains its own unique way of retrieving and displaying data, it consequently requires a different kind of Mobile Marketing. Then you can notice that this classification resembles the one stated above by FirstPartner. However they do not mention voice lines and the new emerging tendencies. This is quite normal as these sorts of technologies were not yet available in 2000.

Moreover they decided to add PDA as a specific category. Nevertheless when analyzing the differences between WAP / i-MODE advertising and PDA advertising this can be concluded that the main difference comes from the protocol. The content and the form of the advertisement is more or less the same. Therefore the paper raises the question whether it is really relevant to differentiate between both concepts.

This part of the work was rather difficult as researchers and experts do not often focus on the Mobile Marketing process in its whole but on the Mobile Messaging part of it. The latter way of delivering data is, indeed, the one with the highest penetration in the customer population. Moreover authors rarely differentiate between Mobile Marketing in general and the Mobile Messaging area. At the moment of the research the authors only managed to find two classifications that are, unfortunately, fairly similar. In this sense there is no real difficulty to combine them in order to create a new taxonomy. Based on what was presented above, a general taxonomy could be:

- Mobile Messaging based: this includes using SMS, MMS, Enhanced Messaging Service (EMS) to deliver the content
- Browser based: including WAP / i-MODE / PDA
- Voice based: this includes using natural voice recognition
- More complex forms of Mobile Marketing: entertainment such as Java Games; LBS; voice mail marketing; ...

# 2.2.2 Classifications of the different types of Mobile Messaging campaigns

1. This communications agency [Carat Interactive, 2002] presents two types of Mobile Messaging campaigns, namely:

- *Push*: proactively sent out to wireless users and devices, be they alerts, SMS, ...; need an established relationship and permission
- Pull: messages are served to users as navigating WAP / wireless sites; user requests specific information from providers / advertisers

First of all, when describing pull campaigns, the authors limit themselves to messages displayed through the Internet whereas many other traditional media such as TV, posters... could be used to deliver the information before the customer interacts with his mobile phone. Moreover, one could argue that it is too restrictive to divide mobile campaigns only into push vs. pull. For example the difference between single and multiple interactions is not made.

2. The authors [Kavassalis et al., 2003] based their taxonomy on a report released by Forrester Research [Forrester Research, 2002]. They made use of four different categories.

- One-off push: relationship creation and maintenance. For example, Internet consumers provide details about their preferences and they decide to **sign in** to receive SMS, promotional alerts as well as diverse offerings... The relationship is either created through a direct digital marketing company, directly with brand names or through mobile operators. Examples of this kind of campaigns are typically responses to SMS based text-to-win or promotional quizzes. The aim is to target a **large number** of customers.
- One-off pull: similar to retail promotion, the focus is placed on a **smaller set** of customers. They give the **permission** to receive SMS coupons, personalized offerings during a certain period of time. Buyers' behavior is monitored then analyzed.
- *Continued dialog*: the goal of such a campaign is to create and maintain brand loyalty. The company creates conditions for **interacting** on a continuous basis with the customers.
- *Fund raising*: this is a simple mechanism that encourages mobile users to donate to charity. This is based on premium-priced SMS numbers.

The first element to bring up is that Kavassalis et al. mention that within one-off pull campaigns the customer's permission is asked in order to deliver personal offerings during a certain period of time. They are the first authors to state that permission is also required in the latter types of campaigns. Researchers affirm this kind of opt-in is only necessary as far as push campaigns are concerned. Moreover, in this taxonomy, they do not explicitly point out that in one-off pull campaigns, traditional media are used to invite the mobile users to respond via SMS, whereas, in Forrester Research's report as well as in many articles, this statement is clearly made. These two aspects might unfortunately drive the reader into confusion.

Secondly, in one-off pull campaigns, the interaction should normally take place only once. Nevertheless this is written that customers are asked for their participation "during a certain period of time". It could be claimed that higher frequencies of interaction should be integrated in continued dialog's campaigns.

One important new element they enlighten is the target group's size. When launching push campaigns, the target segment is rather large, whereas in pull campaigns the customer segment is more concise.

Then, within continued dialog Mobile Marketing, they do not differentiate between push and pull campaigns; however it could be relevant to do so.

At last, the key novelty is to introduce a special category for Fund Raising promotion; which is considered to be an extremely interesting aspect to insert in a classification.

3. Experts from this company of research and marketing consultancies [FirstPartner Research and Marketing, 2003] expose four kinds of campaigns within messaging based marketing:

- Push single-response: this format uses mobile as the primary channel and initiates interaction by sending a message to an end consumer. This may invite or require a response from the end customer. This adds another element to the mix for mobile campaigns, the need for an opt-in database of mobile numbers. Mobile Marketing is regulated in the European Union and requires that messages be sent only to end-customers who have opted-in to receive them. This is a powerful tool for direct marketing with high response rates.
- *Push multiple-response*: The same opt-in database is required. However this kind of campaigns is more difficult to set up and requires more creative and application development work. Interaction loops multiple times.
- *Pull single-response*: such as "Text-to-win" tend to be entry point into Mobile Marketing for most brands and agencies. This type of mobile campaign works as a part of a larger campaign run over multiple media types and provides one of the response mechanisms for the larger project. Interaction through only one response / acknowledgement loop.
- *Pull multiple-response*: this involves more creative design and application development to handle the ongoing dialog with the end-customer. This often invites end-customers to interact

through: games, ring-tone and icon offers, joining clubs, registering for tokens, additional contests or competitions. Interaction loops multiple times.

This classification seems fairly common. One element one can emphasize is that they make a distinction between single-response and multiple-response campaigns. They mainly differ from one another by the creative design's development as well as the relationship management's complexity. Moreover they point out that, within push promotion, mobile phones are used as primary channel and the interaction is initiated by sending a message to a customer. Therefore an opt-in database is necessary. On the contrary, within pull campaigns, the mobile device is used as a response channel and the information is displayed through a traditional medium.

4. The Mobile Marketing Association [Mobile Marketing Association, 2000] presents four manners to conduct advertising campaigns when using mobile messaging, namely:

- SMS-1-Way: promotional code in text
- SMS-2-Way: user is requested to respond from the device
- *SMS-call*: user is requested to respond by calling a phone number
- *SMS-pull*: user initiates a call to a special phone number and hangs up; dialing the number makes a system request to deliver a text message

Their first two categories seem to correspond to the description of push, respectively pull campaigns. Then they give two additional examples that the author of this present report do not consider as being relevant on their own. There could be many more examples of this type and therefore their classification is non exhaustive. Furthermore these illustrations are already inserted within pull campaigns.

5. A Swisscom Mobile's executive [Andrist, 2003] introduces four concepts when talking about Mobile Marketing.

- Once and free: Advertising / Public Relations / Sales Promotion
- With subscription and free: Advertising / Public Relations / Sales Promotion
- Once and charges: Premium Info / Revenues' growth / Contribution to the campaign's costs
- With subscription and charges: Premium Info / Revenues' growth / Contribution to the campaign's costs

He chose to differentiate between the kind of Mobile Messaging campaigns according to, on the one hand, the frequency and, on the other hand, the price of the services. In order to properly analyze them, one can focus on the two main axes within this taxonomy.

First of all, when considering the *price of the service* it is possibly imaginable that when a customer pays for a service, it means he is really interested in it. Consequently the targeting is then easier and the adaptation of the content will be more precise. On the other hand, since the service is not free, the quality and relevance of content required by the end-customer will be all the higher.

Secondly, when a company interacts only once with a customer, this requires few specifications; the content's development is fairly standard. On the contrary, when managing an interactive and lasting relationship, the content has to be adapted to this dialog. This means the company needs to be careful not to repeat twice the same pieces of information. They have to take into account the diverse answers of the customer. This is, therefore, more demanding.

The author points out a really interesting aspect when including the price of the services in his classification.

6. Another Swisscom Mobile's executive [Schehrer, 2003] used this twofold classification in a "Themengruppe" about Mobile Marketing conducted in June 2003.

- *Pure Mobile Direct Marketing campaigns*: relatively quick implementation; no media breakdown (=No Medienbruch)
- *Cross-Media campaigns*: connection to call centers, ideal combination with the Internet; push with traditional media; response via SMS; direct interaction and more efficiency

This taxonomy seems fairly similar to a push vs. pull one. The use of mobile phones as a primary channel is a characteristic of push promotion. As far as cross-media campaigns are concerned, they correspond to pull promotion as the mobile device is utilized as a response channel in the latter form of advertising. Therefore this does not bring any new element to the analysis, but it does not bring a contradiction, either.

Using the diverse classifications and elements of analysis depicted above, a broader taxonomy can be drawn namely:

Figure 2: Taxonomy of the different types of Mobile Messaging campaigns



- **Push**: mobile phones are used as a primary channel; the interaction is initiated by sending an SMS to an end-customer; therefore an opt-in from the consumer is required; it may invite or require an answer from the user; this type of campaigns is used when targeting a large number of customers. This strategy is particularly useful when building a relationship with the latter.
- **Pull**: opposite to push campaigns, mobile phones are used as a feed-back channel, while the main information is displayed via other media such as TV, Radio, the Internet...; this form of promotion is mainly used when a small set of consumers is targeted;
- **Fund Raising**: this is a way to invite customers to donate to charity through premium-priced SMS.
- **Single-response**: this is the simplest format of campaigns as it does not require to take into account the answers given by the customers; one do not need to be careful not to repeat the same information twice, either.
- **Multiple-response**: this may require the customer's subscription (either free or chargeable). This requires a complicated relationship management as well as a more complete creative design. This could be used when aiming at creating and maintaining brand loyalty.
- **Free**: it is mainly used within a framework of advertising, public relations or sales promotion. People may not be really interested in one's content due to its being free. Therefore the privacy and spam concerns must be kept in mind.
- **Charges**: this allows a better targeting but requires at the same time information of higher quality and of higher relevance. This enables to increase the company's revenues and to partly contribute to the cost of the campaign.

# 2.3 Mobile Marketing in the Marketing Mix

In the following section of the work, the authors first of all describe the different aspects of the Marketing Mix in general and how it is possible to introduce mobile technologies within this framework. In a second part the aim of the paper is to explain in more details how a Mobile Marketing campaign is developed and what aims marketing managers should be aware of when conducting the latter type of campaigns.

Thirdly the diverse impacts of Mobile Marketing on Customer Relationship Management (CRM) are discussed. The latter includes a description of One-to-One marketing as well as an analysis of the customer importance in the marketing management of today.

At last but not least a differentiation is made between Mobile Marketing as a personal communications tool and as a mass medium.

### 2.3.1 Marketing Mix

The objective is to enlighten the position of Mobile Marketing, especially Mobile Messaging Marketing, within the Marketing Mix framework. Therefore, a definition is borrowed from QuickMBA, online knowledge resource for business administration [QuickMBA, 2004]. According to them, the major marketing management decisions can be classified in one of the following four categories, known as the **4 P's of marketing** or the **Marketing Mix**. They are the variables that marketing managers can control in order to best satisfy customers in the target marketplace.

- *Product* physical product or service offered to the consumer, the former also referring to any services or conveniences that are part of the offering. Product decisions include aspects such as function, appearance, packaging, service, warranty, etc.
- *Price* Pricing decisions should take into account profit margins and the probable pricing response of competitors. Pricing includes not only the list price, but also discounts, financing, and other options such as leasing.
- *Place (distribution)* Place (or placement) decisions are those associated with channels of distribution that serve as the means for getting the product to the target customers. The distribution system performs transactional, logistical, and facilitating functions. Distribution decisions include market coverage, channel member selection, logistics, and levels of service.
- Promotion Promotion decisions are those related to communicating and selling to potential consumers. Since these costs can be large in proportion to the product price, a break-even analysis should be performed when making promotion decisions. It is useful to know the value of a customer in order to determine whether additional customers are worth the cost of acquiring them. Promotion decisions involve advertising, public relations, media types, etc.

The firm attempts to generate a positive response in the target market place by blending these four Marketing Mix variables in an optimal manner.

Product	Price	Place	Promotion
Functionality	List price	Channel members	Advertising
Appearance	Discounts	Channel motivation	Personal selling
Quality	Allowances	Market coverage	Public relations
Packaging	Financing	Locations	Message
Brand	Leasing options	Logistics	Media
Warranty		Service levels	Budget
Service/Support			

Table 1: The 4 P's

Note: bold writing has been used for elements especially influenced by Mobile Marketing, according to the studies and literature available.

To see more precisely where Mobile Marketing is situated within the Marketing Mix, this general chart could be linked to the report entitled: "*The Marketer's guide to SMS*" [Forrester Research, 2002], especially to the part called "What Marketing Goals Can SMS Accomplish?". The six goals most cited by the respondents (early adopters of SMS Marketing) were: sales/promotions, customer retention, brand awareness, customer acquisition, gathering of customer data and leading of generation.

Besides, they state SMS can help spread shrinking marketing **budgets** further by displacing highercost return paths and delivering fewer messages to better-targeted customers. That is why "marketing directors should spread the SMS gospel by treating the medium as a **standard element** of the Marketing Mix - and requiring staff to include SMS alternatives complete with cost-benefit analysis in new campaign plans".

While many authors consider Mobile Marketing a part of **Promotion** (just one P of the Marketing Mix), the experts from Berlecon Research [Berlecon Research, 2003] see it integrated in all four P's. One can only agree by looking back to the chart above and going through the examples below, that a mobile device is not just a new communication channel; especially today, when people feel already overwhelmed by commercials (explicit or hidden). Mobile has to offer **more** than traditional marketing tools do: without value added to the product or service, it is unlikely to gain new customers.

Berlecon Research's examples of Mobile Marketing within the Marketing Mix:

Product

- additional services free of charge,
- new, mobile products with costs

Price

• distribution of mobile price-policy instruments (discounts...)

Place

• combination of sales-policy instruments and mobile transaction function

Promotion

- mobile advertising
- offer or sponsoring of mobile services
- use of mobile response channels

The key idea within the literature is that Mobile Marketing should be integrated in a correct and careful manner into the overall marketing strategy (Marketing Mix).

# 2.3.2 Mobile Marketing activities, aims and options

In addition to the 4 P's of the Marketing Mix, the implementation of Mobile Marketing measures requires activities in four different areas [Berlecon Research, 2003]:

- *planning and conception*: goal definition, integration into the media mix, choice of suitable commercial objects, target group delimitation, formulation
- *target group addressing*: creation of value added and relevance, content- and entertainmentservices offer, personalized addressing
- *technical execution*: carrying out of messaging communication, application and response channel construction, databases conversion and integration,
- evaluation and analysis: evaluation of response data, success control.

According to FirstPartner [FirstPartner Research and Marketing, 2003], the three basic aims involved in delivering a mobile campaign (same principles of any other traditional campaign format) are:

1. Capture the end-customers' attention,

2. Create familiarity with the brand,

3. Convert the end-customer from consideration to purchase.

The latter should be taken into account while implementing and managing a Mobile Marketing campaign during all 4 stages below (based on a typical SMS Marketing campaign). These stages are rather similar to the 4 activities cited by Berlecon Research above.

- 1. Concept: target audience identification, message definition, integration planning
- 2. Creative: campaign designs, application design, construction
- 3. Delivery: aggregation, network transmission

4. Analysis: response rates, response profiles, feedback and improvement

The details of the first stage show again the importance of an integration process:

The first step to undertake a Mobile Marketing campaign is to develop and incorporate a concept into the overall marketing/campaign strategy. The Mobile Marketing concept will define what end-customer segment should be targeted, what message should be conveyed and how the mobile campaign will be integrated with other media and other communications.

Incorporating mobile campaigns into an overall marketing strategy examines the **options** of either undertaking a new series of campaigns **solely** based on the mobile channel, or **adding** mobile channel elements to existing campaigns on other channels or a **combination** of both [FirstPartner Research and Marketing, 2003].

In most cases, the mobile channel is used complementing the traditional media (like TV, radio, poster or on-packaging information). On the other hand, according to Dickinger et al. [Dickinger et al., 2004] the mobile channel needs other media's support. This idea has been stated as a result of a qualitative research based among others on interviews with experts. They consider the 160 characters too limiting to use mobile as the main media in a campaign. However, mobile device works very effectively as a **response-channel**, according to studies conducted so far.

# 2.3.3 Impact of Mobile Marketing on the relationship with customers

### 2.3.3.1 One-to-One Marketing

Mobile Marketing brings up also new issues in the relationship between businesses and customers. As Dr. Nils Hafner [Hafner, 2004] citing Don Peppers, Peppers & Rogers enlightens: "CRM or One-to-One Marketing is about treating different customers differently." He draws a scheme of Customer Relationship Management (CRM) development from **mass** through **direct** to **one-to-one** marketing.

<u>Traditional marketing (mass marketing)</u> supported by none or little market research, is focusing on **products** and short-term, using few sales-oriented campaigns with **anonymous** customer addressing of large reach.

One step further is situated the <u>Direct marketing</u> issued from segment analysis based on demographic criteria, focusing on customers **group** and short-term. Market segmentation and profile of customers' categories enables more campaigns of smaller reach.

Finally, Hafner defines the <u>Dialog (one-to-one) marketing</u> as supported by focused reach, aimed at the **individual customer**. Many **unique** campaigns with direct, individual customers addressing are used. At the end, customers' behavior analysis and individual profiles can be formulated.

A broader picture of the development in the marketing area since 1950 is given by Ocean seven consulting [Ocean seven consulting, 2004]. The following chart depicts the marketing landscape and trends and the evolution from one-way to **two-way** marketing communication. This leads to blurring the limits of passive and interactive media.

# Figure 3: Marketing Landscape and Trends



Source: Ocean seven consulting

### 2.3.3.2 Customer Importance

Importance of the customer is clearly represented in the last stage of a Mobile Marketing campaign: analysis, as defined by FirstPartner [FirstPartner Research & Marketing, 2003]. They state in fact that the major benefit from running a Mobile Marketing campaign is the level of **end-consumer intelligence** that can be acquired.

This idea is also implicitly supported by Forrester Research's report [Forrester Research, 2002]. In fact, half of the goals achievable by SMS most cited by the respondents are related directly to customer. They are: customer retention, customer acquisition and gathering of customer data. This illustrates the growing possibilities of advanced technologies leading to a better understanding of the customer.

Another advantage quoted by FirstPartner is that unlike other interactive mechanisms such as the Internet or mailings, the data captured from a Mobile Marketing campaign correlates, **more closely**, the time of response to a campaign with the time of consideration or purchase of a product, allowing deeper insight into customer behavior.

However, within this framework of customer importance, one can also find **privacy** issues that will be discussed later. Due to spam problems already encountered with the Internet, consumers are hesitant to disclose personal information to companies. As Dickinger et al. [Dickinger et al., 2004] imply, it is much harder to change mobile number than to get a new e-mail address hosted by free Web-based services such as *Yahoo* or *Hotmail*. Therefore, it is understandable that consumers protect themselves.

One of the challenges might be to send relevant messages to the right customer (targeting) and at the right time. The customer might be more demanding vis-à-vis Mobile Marketing than towards traditional advertising because he or she perceives it more personally. That is probably why the consulting companies emphasize the need for segmentation, targeting before and for analysis after the campaign. They mention also the importance of leaving time and other resources for control and adjustments during the campaign. This leads to another interesting issue of Mobile Marketing: personal vs. mass communications.

### 2.3.4 Personal vs. Mass communications

A mobile phone is a personal device which, at the same time, can also be considered as a **mass medium** (definition of mass medium: the means of communication that reaches large numbers of people in a short time, such as television, newspapers, magazines, and radio). Maybe that is the reason why opportunities and risks of Mobile Marketing stand so close to each other. Therefore it is widely recommended to acquire a good knowledge about technical possibilities and usable instruments as well as to be very **sensitive** in dealing with customers.

According to Berlecon Research [Berlecon Research, 2003], by the end of 2002, the **penetration** rate of mobile (the number of participants in relation to the population in Germany) was about 72%. Therefore, marketing campaigns through mobile end-devices promise a very large **reach**, at the first sight.

On the other hand, mobile communication enables a **personalized consumer addressing**. One always carries his/her mobile phone with him/her and does not lend it without hesitation. Most people give their mobile number only to close friends or business partners. Furthermore, there are personal data saved through the SIM card in the mobile phone. Eventually, many owners fashion their device with individual logos and ring-tones and use it as their personal phone book. Therefore, the ways to personalized consumer addressing seem **even broader than via the Internet**.

Furthermore, the mobile enables time- and place-independent as well as time-and place-dependent dispatch of messages. Unlike the Internet, mobile messages can reach the receivers anytime, any place. In addition, within the framework of **LBS**, time-and/or place-dependent messages can be sent.

Moreover, mobile communication allows an immediate **interactivity**. With a mobile end-device, the receiver can react immediately anytime, anywhere to advertising messages and interact with the advertiser. This comes back to the two-way communication's argument used by Ocean seven consulting [Ocean seven consulting, 2004] which is getting more and more common these days.

# 2.4 Design aspects of Mobile Marketing

Having defined, classified Mobile Marketing and established its place within the Marketing Mix, the paper will concentrate on the design aspects of a successful Mobile Marketing strategy. The goal is to put together experts' advice concerning this topic and highlight new contributions of specific authors that go beyond the general recommendations to finally formulate a broader set of rules.

Through a literature review the following ten sources describing design aspects of Mobile Marketing have been gathered: Enpocket Insight's report *Consumer preferences for SMS marketing in the UK* [Enpocket, 2002], *Permission-based Mobile Advertising* [Barwise and Strong, 2002], *M-Commerce at Helsana Insurance: Mobile Premium Calculator* [Reichold et al., 2003], *An Investigation and Conceptual Model of SMS Marketing* [Dickinger et al., 2004], *The Future of Wireless Advertising* [Carat Interactive, 2002], *The Transition from E- to M-Business Chances and Challenges for Enterprises* [Stanoevska-Slabeva, 2004], *Mobile Permission Marketing: Framing the Market Inquiry* [Kavassalis et al., 2003], *Mobile Direkt Marketing - Hype oder Hoffnung* [Schehrer, 2003], *Beitrag von Mobile Marketing zur Etablierung einer professionellen Kundenbeziehung* [Hafner, 2004], *Wie kann man mit Mobile Marketing Geld verdienen?* [Andrist, 2003].

By analyzing the diverse arguments, the authors have decided to distinguish four categories of recommendations: strategy, technical, content and personal aspects. In the following section each of them will be explained in detail.

# 2.4.1 Strategy aspects

# 2.4.1.1 Make or buy?

Maybe the first question every company considering the use of Mobile Marketing should answer is: Do we have the skills needed to introduce Mobile Marketing? In the case of Helsana Insurance, the company decided to outsource the project management and the technical implementation which enables cost- and time-savings. Andrist states it depends on the firm's own skills and the complexity of the solution. He also mentions the difference in price.

# 2.4.1.2 Integration into the Marketing Mix

As described in the previous part of this report, the integration of Mobile Marketing into the overall marketing strategy is a crucial point which has to be considered from the very beginning. It can be an additional channel meant to extend the presence of a corporation. Stanoevska-Slabeva underlines the need to carefully design the relationship among such applications and to define cross-media communication and marketing strategy.

# 2.4.1.3 New skills for marketing teams

Several authors point out that marketing teams have to acquire new skills. Kavassalis et al. implies that the special characteristics of Mobile Marketing require a complex management marketing strategy and that the competences for continuously acquiring broader permission are not trivial.

Hafner seems to be more concerned about the competence within the process and the competences with the technologies.

Barwise and Strong believe that mobile is a very different medium for marketing people used to working with mass media, where providing repeated opportunities to see each advert is central to campaign planning. On the contrary in the case of Mobile Marketing content should not be repeated, as we will see later on.

# 2.4.2 Technical aspects

As the global strategy is in place, it is time to discuss the technical aspects of Mobile Marketing.

# 2.4.2.1 Trusted source like operators

Enpocket claims that SMS advertising is considered as acceptable when delivered by a trusted source. Consumers have the strongest relationship via their mobile phone with their carrier/operator. They trust the latter most strongly to control and deliver SMS marketing. Following

this idea, one could argue that the mobile operators have a high potential of succeeding with their own campaigns. They also have a chance to make themselves useful when the customer really needs high quality services. For example: when a person wins a prize, he/she is happy that the messages got through without delays.

# 2.4.2.2 Quality / Volume / Frequency

According to Enpocket, the desired frequency of messaging is about 2-3 per week. However, users are happy to receive marketing messages at a higher frequency as long as the relevance to them is maintained. There is still a general fear that SMS marketing becomes comparable to e-mail marketing with high levels of unsolicited messaging at frequencies that irritate consumers.

Barwise and Strong also state that when the messages arrive too frequently, they might become irritant and trigger a "delete on receipt" reaction. One should also consider that the device itself has a limit: the message memory. Another drawback of an increasing volume of messages is that fewer are read thoroughly, which might worsen the campaign results (even when a company did everything right).

Employing a pull strategy (only requested messages) might be a hint if the company does not want the customer to feel irritated by huge amounts of SMS. However, a firm can not stop other organizations from sending messages to the customers, so this tactic solves the problem only partially.

In brief a general recommendation for the companies willing to use Mobile Messaging Marketing is to send fewer but more relevant messages.

# 2.4.2.3 Time transmission

Another important aspect is the messages' time of transmission. The general framework given by Dickinger et al. is 9.00 to 19.30, for students not before noon.

Time is also important with LBS and different quizzes, competitions or couponing: clients should receive the message when in front of the shop and not half an hour later.

### 2.4.2.4 No duplication

Two authors highlight that a company should avoid sending a similar message twice to the same customer. Indeed as Barwise and Strong bring up, it is comparable to telling someone the same joke twice; a company attempts to build a personal relationship with the customer, therefore the conversation needs to be managed. This includes having enough creativity to bring new ideas at any time and an excellent database management to know which SMS has been sent when and to whom. The customer will, on the contrary; feel irritated if he does not have the sensation this relationship is unique.

### 2.4.2.5 Technical limits

Companies when launching this type of strategies should not forget to consider the practical limitations of SMS such as content restrictions (160 characters), small screens and low resolutions. Even though MMS technologies are likely to overcome this problem, this is important to mention once again that consumer penetration is still fairly low at the moment.

Other drawbacks of mobile technology are the limited memory capacity, as well as the periods when the device is turned off. These might cause that message arrives too late. At last batteries have a limited duration, which could also be a hindrance.

# 2.4.3 Content aspects

As far as the substance is concerned, the different authors recommend that the latter should be either entertaining or at least interesting for the customer. Companies should manage to create authenticity in their messages. Another important element to pinpoint is the necessity to use catchy key words that are easily reproduced and remembered by users.

One of the crucial aspects in the content's development is its relevance. Indeed almost every author brings up the fact that the accuracy of the communication is highly important as it can help building a deeper relationship with the customer on the long haul; moreover Dickinger et al. highlight that there

should be a link between the information required by the user and the advertisement. This is furthermore considered as a key success factor according to Kavassalis et al.

Thirdly one can consider the standard of copy: broadly it should remain concise, entertaining and informative. Another point mentioned by Dickinger et al. is that the language used in the message needs to be clearly understood by the company's target. Due to the communication size's limitation it must be creative and use the 160 characters effectively.

Then if a procedure of feed-back is required, three out of the ten authors mention that this has to be user-friendly; this means easy to use, including messages to guide the customer. Moreover it is possible to make use of pre-populated fields and limit the content to a few pertinent questions.

At last but not least messages have to be personalized. According to Stanoevska-Slabeva, this element needs to be considered as a key success factor, mainly due to the personal nature of mobile phones. However, Dickinger et al. bring up the necessity to make a trade-off between the degree of personalization and the degree of control granted to the customer; this highlights privacy concerns that will be described in the next section.

To summarize, a key word could be **KISS** which means Keep It Simple Stupid. However companies have to make sure of bringing relevant, required, informative or entertaining content to the customers; messages have to be personalized, but not too close either.

# 2.4.4 Privacy aspects

The central feature of this part is permission-based marketing. This means that companies have to ask for customers' permission mainly when considering push campaigns, where the initial message is sent through the mobile phone by the company to the user. This means having opt-in procedures instead of opt-out systems; this could for example be in the form of a simple registration process. Moreover this helps to demonstrate the seriousness of the company while making sure of avoiding the negative results of customers' fear of spam.

Another element that should not be forgotten is the presence of clear opt-out procedures at any time; this means guiding the customer to show him how to use this procedure. Privacy concerns are a very important element that no company should put aside; indeed customers are afraid that as the email spam phenomenon, Mobile Marketing will be synonymous with mobile spam. Therefore in order to build brand loyalty and brand positive awareness, it is extremely valuable to take this issue into account.

This topic will be described more comprehensively later in the text during the exposition of social issues.

# 3. Analysis of Mobile Marketing Environment

The following analysis is based on three components: market, actors and issues.

Market represents the demand side of the environment, for that reason the structure of this part is to first state the importance of SMS and mobile services in the actual mobile marketplace. Then the aim is to describe and illustrate various applications of Mobile Marketing, which sometimes have only been mentioned above in the text. Two other sections present on the one hand the concept of customers' mobility and, on the other hand, the adoption rate of Mobile Marketing.

The second section first describes the conception of a Mobile Marketing campaign. Then, our work focuses on the supply side's description; this implies illustrating not only the different actors present along the Mobile Marketing value chain but also other important players such as regulation authorities. Finally, the diverse value propositions and interactions between players are highlighted and conceptualized on a figure.

The last element consists in proposing issues found in different areas of Mobile Marketing. First of all, privacy issues are exposed after having presented the concept and its consequences. Then several technological issues are treated before shifting to economic and geographic problems.

# 3.1 Market

The importance of SMS has been constantly growing for several years within Europe as the two following tables demonstrate it. The SMS marketplace seems, however, to presently reach its

point of saturation and the volume of sent SMS is going to decrease until 2007; this does not yet mean that Mobile Marketing has also reached its rupture point. Indeed, new technologies and services slowly come on the marketplace, thus providing further opportunities.

Table 2: Evolution of SMS Revenues in Western Europe.

Type of revenues	2002	2007
Part of Mobile Data Services	14% (mostly	26%
	SMS)	
Part of Voice Revenues	86%	74%
Total of Revenues in Mia of €	112	137

Note: The most important mobile data service is **presently** SMS and should contribute to 82% of total revenues of mobile data services in 2003 according to Idate.

Source: Idate, 2003

Table 3: Number of SMS sent by subscriber per month

Country	2002	2003	2007	
France	32.2	38.9	35.5	
Germany	59.4	60.3	47.5	
Italy	39.9	49.6	48.2	
Spain	62.5	63.2	56.3	
UK	44.7	49.3	48.8	

Source: Gartner 2003

# 3.1.1 Applications

In the first part of the report we concentrated on application of Mobile Marketing as a mass media channel. However, several others applications are available. The latter have only been mentioned in the "*state of the art*" and are presented here. Mobile Marketing covers a broad set of services such as Mobile couponing, information services, entertainment, location based services (LBS), Mobile Customer Relationship Management (CRM), branding ... [Dickinger et al., 2004]. Each of these applications is illustrated either by figures or by an example.

**Mobile couponing** offers organizations the possibility to provide targeted advertising and deliver time and location-sensitive promotions. One of the main benefits for customers is the possibility to take advantage of the discount immediately. Customers can select the type of promotions they want to receive according to their interests. To be able to use the discount, users have to bring their mobile devices with them to show the coupon to a salesperson of the store. We can also imagine a "click-to-buy" model, in which a simple click allows you to purchase the promoted product. [Kalakota and Robinson, 2001]

### Illustration 1: s.Oliver

Mindmatics, a leading German provider of full-service Mobile Marketing, used Gavitec's stand-alone solution – EXIO<sup>™</sup> – to realize a successful mobile couponing campaign for the German casual-clothing retailer s.Oliver





18-24, 10719 Berlin alty ex 11.02.02 16:00 18:11.02.02 17:00



Campaign: More than 100,000 registered members from

Mindmatics' MisterAdGood database received a mobile discount voucher as an encrypted Data Matrix code in a picture message (SMS) to their mobile phone, enabling them to receive 5 Euros off their purchase price with the mobile coupon in 14 s.Oliver retail stores throughout Germany.

**Technology**: Using Smart Messaging (e.g. Nokia Picture SMS), MMS or EMS technology, the mobile coupons were sent as a unique and encrypted twodimensional code on the user's mobile phone. Information like store name, voucher and amount were not only encrypted in the Data Matrix code but also displayed on the phone screen to inform the mobile phone's user. To support this special time-limited marketing campaign, the 2d code also contained an

in Munich.

expiration date.



**Coupon redemption**: Directly at the Point-of-Sale, customers could print and convert their SMS coupon into a real paper-based discount voucher. Installed in the s.Oliver retail outlets, the EXIO scanners were used to scan the SMS coupon directly from the phone's screen. Using the built-in GSM-module, the EXIO scanner verifies the validity of the coupon using a central database to ensure a voucher is redeemed only once and – in case of a valid coupon – prints out a unique paper voucher.

### Source: [Gavitec, 2004]

Referring to the classification presented in the state of the art, this is a push single response. Indeed no use is made of other media to pass on the information. They use an opt-in database to select the customers and send them directly the voucher.

Second, **information services** represent one of the most accepted mobile services. Examples of these are news, events listings, weather forecasts, directory enquiries, speed trap and traffic alerts, price comparison, horoscopes ...

Content can be accessed either in a pull or in a push manner. It can make customers' life more efficient, in the sense that information is directly delivered to users. The latter do not have to switch on the TV or visit a Web Site; the information is available wherever they are. The personal characteristics of the devices enable a direct, live and individual connection to consumers. However to meet customers' needs, content relevance and personalization are key aspects. The information must indeed be based on users' profile and interests especially as far as push services is concerned [Sadeh, 2002].

#### Illustration 2: Vindigo Traffic™

At the end of August ATX Group and Vindigo Studios have announced the launch of a personalized, real-time traffic service that delivers congestion alerts and color maps directly to mobile phones; the latter will be present on the US marketplace.

Vindigo Traffic<sup>™</sup> is a fully customizable service that includes automated text alerts and continuously updated information. The subscription service also features estimated wait-time for traffic jams and interactive color maps with flags marking delays caused by construction or accidents.

Vindigo Traffic also offers an automatic text alert functionality. Subscribers can set the service to notify them via SMS with real-time information on traffic delays depending on their individual preferences. These options include customized routes, multiple market-specific 'hot spots', and time of day.

"When you're mobile, it's critical to have up-to-the-minute traffic information," said Jason Devitt, chief executive officer of Vindigo Studios. "And it's not always convenient to wait for the next traffic report. Like our other products, Vindigo Traffic provides all the information that people need, when they need it. In this case, it's before they start to commute or even when they're stuck in traffic."

"The ability to deliver timely traffic alerts is crucial," emphasized Ron West, vice president, Sales & Marketing, ATX. "We've had several years experience delivering real-time traffic reports to vehicles and we've discovered that service use is more episodic than routine. People know their commutes, and what they can expect on a daily basis. Alerts help most when the unexpected happens; informing users of only what impacts them. The result is personalized, actionable information - in advance."

Steve Millstein, ATX president & CEO, said the project with Vindigo demonstrates ATX's ability to leverage the development work in traffic applications that ATX has conducted for the automotive telematics industry and extend its benefits to wireless devices.

#### Source: [Telematic Update, 2004]

The latter is a push campaign for which the customer pays a charge. This is generally a single response relationship. Once again no other media is used to inform about the campaign. However we could also imagine they make use of both types of campaigns because the customer needs to

get information about the service offered. Nevertheless the clients are chosen from a opt-in database.

The third kind of services is **entertainment**. For example it encloses music downloads, network games, jokes, gambling, short videos ... This allows companies to take advantage of the customers' periods of killing time, waiting for the bus, for instance. The latter sort of services is not particularly time or location sensitive, even though some latest games that are multiplayer involve location data. This represents a profitable way to attract and keep customers, thus increasing customer loyalty and added value. Entertainment provides an efficient means of engaging a relationship with users and, at the same time, creating brand recognition and awareness [May, 2001].

Figures 1: Wireless Mobile entertainment Industry Market Research, data & statistics

Downloadable games will replace ring tones as the service that drives Western Europe's growth in mobile content and entertainment service revenue over the next three years. Ring tones, logos and other personalization services have formed the backbone of mobile content and entertainment services to date with an estimated market value of  $\in$  1.2 billion across Western Europe in 2002. However, growth in the personalization market is slowing rapidly; take-up rates are still rising, but prices have been falling.

The market for downloadable games, on the other hand, is just taking off. Most of the  $\leq 255$  million in mobile games service revenue generated in Western Europe in 2002 will be from simple text-based games such as quizzes, but future growth will be mainly from downloadable games. Analyses forecast that mobile service revenue from games will increase more than ten-fold to reach over  $\leq 3$  billion in 2005.

The introduction of mobile handsets such as the Nokia 7650 and 7210, the Samsung S100 and the Sony Ericsson T68i, which have color screens and Java capabilities, enable graphical games and other rich content to be downloaded to phones. Such handsets have only been launched in Western Europe during the past six months, but are expected to penetrate the market quickly, with 60% of all handsets in circulation in Western Europe being Java-enabled by the end of 2005. In Japan, NTT DoCoMo launched its i *f* ¿ppli Java-based games and information services in January 2001, and by the end of October 2002, 43% of its 35.2 million i-mode subscribers were also using i *f* ¿ppli.

mobile content and entertainment services over the next few years include content messaging based on recently launched multimedia messaging services (MMS) and



cross-media services such at submitting votes to TV programs or radio stations. However, several factors must come together to enable the potential growth in this market to be realized. Two of the biggest factors currently constraining growth are the lack of interoperability and the absence of a common standard for digital rights management (DRM). Although most MMS interoperability issues are likely to be addressed during the first quarter of 2003, the resolution of DRM is likely to take longer, with companies either accepting that users can distribute content among each other, or implementing interim solutions.

Source: [GII, 2003]

Illustration 3: Olympic Games via 3G Handsets

Telia's 3.7 million plus mobile customers will be able to experience this summer's Olympic Games directly via their mobile handsets. As the exclusive mobile operator in Sweden, Telia can offer its

Graph: Forecast revenue from mobile games services in Western Europe, 2002-2007

subscribers video content from the Olympic Games in Athens. Mobile users will be able to choose from a host of Olympic services, irrespective of whether they have a GSM or 3G handset.

In an agreement with Sveriges Television (SVT), which owns the broadcasting rights in Sweden for the Athens Olympics, Telia has been granted sole rights to offer SVT material from the summer Olympic Games via mobiles.

"The IOC, International Olympic Committee, has given us the opportunity to offer Olympic Games rights to mobile services too. We are delighted to be working with Telia, who are probably the first and only mobile operator in the world that can now offer its customers video content from the Olympic Games in Athens on their mobiles," says Remy Nilson, Head of Sport at Sveriges Television.

Source: [3G, 2004]

This seems to be a pull campaign for which customers need to subscribe and pay a fee. This is a single response relationship with the company; hence easier for organizations to introduce.

The authors now want to illustrate **location based services**, applications can be found in various areas such as travel information, shopping, entertainment, event information and so on. Governments could also use location data to enhance public safety.

In order to better understand how it works, the diverse ways of locating user is described here. Location can be identified differently according to the technology used. One is by utilizing a GPS system which makes use of satellites to locate the devices. Location can be extremely precise; nevertheless, for example, this technology cannot be used indoor. Users can also be positioned by network operators when using a mobile phone. The advantage needs no extra equipment and no further investments from operators. Finally customers can be identified while using WLAN or technology such as Bluetooth and infrared. However the latter system requires a dense network of access points. [Kaasinen, 2002]

More mobile people become, more significant the development of location-aware services. This will thus allow a careful transition towards context-aware services that not only consider the present location of users but also their activity and preferences at the moment. The latter types of services are more complex as location is often not sufficient to identify the context.

Table 4: The mobile marketplace: time- and position-critical services

Time sensitive	Low	<ul> <li>Online games</li> <li>Share trading/monitoring</li> <li>Sport news</li> <li>e-mail</li> <li>Chat</li> </ul>	<ul> <li>Road map, directions</li> <li>Local weather information</li> <li>Booking</li> <li>Video communication</li> <li>Communication with home</li> <li>Electronic wallet</li> <li>Location of relatives</li> </ul>
	High	<ul> <li>Price comparisons</li> <li>Browsing</li> <li>e-commerce</li> <li>Information retrieval</li> </ul>	<ul> <li>Local telephone directories</li> <li>Local entertainment guides</li> </ul>
		Low	High
	Locati	on sensitive	

Source: [Lindgren et al., 2002]

### Illustration 4:

Imagine you are a tourist arriving in a new city; thanks to the identification of your location and context of activity, your mobile phone will inform you of the main sightseeing, of the hotels and restaurants that corresponded to your preferences. Then you decide to go shopping and when entering the shop, it will announce you the latest discounts and offers.

**Mobile Customer Relationship Management** is next. It can be defined as a business strategy and management approach for an integrated and active management of relationship with customers [Stanoevska-Slabeva, 2004]. This encompasses for example the delivery of free newsletters, pictures, ring tones, bonus points ... Mobile operators already make use of this kind of CRM by sending information about the discounts and offers available at the moment.

The aim of CRM is to identify, acquire and/or retain most valuable customers and develop products and services that fulfill their wishes [Akhgar et al., 2002]. Organizations utilize their customer knowledge to build profiles and target their customers more efficiently. Thanks to mobile devices, interactions between companies and customers are easier and faster, but this implies managing this relationship. Moreover, as in the information services, it is essential to deliver relevant and personalized content.

The following application is use of Mobile Marketing as a branding tool. It is indeed well known that brand is a critical asset for organizations. The latter plays the role, between other things, of a quality certification, a facilitator of customer's choice, trust and loyalty enhancer. Enpocket conducted a survey, whose results were taken from a 5000 telephone interviews with users either at home or on their mobile phone [Enpocket, 2002]. Interviewees were chosen accordingly to a guotas system including age, gender, geography and social grade. Then post campaign interviews were undertaken after users had been sent campaigns from a selection of over 150. Findings show that 12% of people recall the brand as far as the average campaign is concerned (a single SMS). It rises to 53% of spontaneous brand awareness for the best campaign. They emphasize the fact that this is extremely higher than TV and radio brand awareness (50% and respectively 130%). Another element they pinpoint is that 18% of customers affirm they feel more positive about the brand as a result of the campaign versus 4% of users that state, in the contrary, they feel less positive. However to moderate these figures, it is necessary to mention this is still the starting point of Mobile Marketing and that people might remember brand and campaigns more easily due to the novelty of the phenomenon. Moreover social desirability and lack of motivation to answer should also be accounted for. At last, interviewees were not chosen using a random system which risk introducing biases in the results.

The focus has been put on the Person-to-Person area of Mobile Marketing applications. However, as Stanoevska-Slabeva [Stanoevska-Slabeva, 2004] mentions, with the development of ubiquitous computing, it might be possible to extend communication towards consumers to products and intelligent customer environments. She quotes the example of an advertisement poster including a RFID tag allowing communicating various further pieces of information to the user.

# 3.1.2 Concept of personal mobility

After having discussed the different services offered by text messaging and Mobile Marketing, the report will now describe consumers' characteristics.

Mobility, individualization, globalization, diversity and higher ambitions level, time-effectiveness, relevance and convenience are the main trends that characterize the modern social world. People grow up within this environment and have requirements in line with the latter trends. In particular, one of the driving forces of M-Commerce developments is **mobility**. This encompasses not only geographic or physical mobility but also social mobility. *Physical mobility* first appeared with the internationalization and globalization of organizations due particularly to the introduction of Internet. The latter network allowed communicating worldwide while staying at work or at home. People also started to be attracted by the world's diversity and start traveling and working all around the globe. *Social mobility* means that the individual of today plays several roles at a time and keeps switching from one of them to another. Society expects the individual to be more and more flexible, conducting people to lose their bearings and finally their identities.

Modern man switches between three facets of Homo Consumentus [Lindgren et al., 2002]. The first one is *Homo Consumentus Politicus*, meaning that consumerism represents an important aspect of our lives. People become more and more often aware of their power as customers. Contemporary life is governed by the slogan "the customer is king". The second is *Homo Consumentus Ludens*: playing has been proved to be an important part of human life. However we play rationally and have higher expectations concerning the relevance of the content accordingly to the role played at the moment. Finally, the *Homo Consumentus Effectivicus* constantly look for simplifying his life and to gain timeeffectiveness; therefore technology is seen as an empowering factor. Customers' needs and preferences, however, are getting more sophisticated; their requirement in term of quality, relevance and convenience are always higher.

# 3.1.3 Customers' adoption

This part focus on the adoption as well as the responsiveness of end-users towards the applications described above.

Considering the usage and popularity of SMS throughout Europe, it is the favorite tool to introduce Mobile Marketing campaigns. According to FirstPartner [FirstPartner, 2003], 15 Mio of the 1.6 Bio SMS sent in the UK in July 2003 were related to marketing activities.

Furthermore the Mobile Marketing Association [MMA, 2003] gives some figures about the importance of the phenomenon. They quote that eMarketer reported 39% of mobile phone users in Asia have received SMS messages from advertisers, 36% in Europe and 8% in the USA. Moreover, 65% of US consumers were willing to give personally identifiable information in exchange of relevant Mobile Marketing.

Concerning customer adoption and their willingness to pay, we can say it mainly depends on the kind of services offered. For example a higher willingness to pay seems fairly relevant for services using very sensitive personal data such as bank account numbers. On the other hand, for services such as SMS, customers often think they are too expensive. According to a survey conducted by the Journal du Net, 64.7% of the respondents (872 votes) believe SMS cost is too high. In France the Telecommunications Regulation Authority (ART) might impose a price cut of SMS sent from a mobile phone at the beginning of year 2005 [Journal Du Net, 2004]. With a price per SMS of  $\in 0.15$ , France is nevertheless still in the average price since the charges go from  $\in 0.12$  to  $\in 0.19$ .

When analyzing the acceptance of SMS advertising, Enpocket [Enpocket, 2002] found through their survey on SMS advertising in the UK that customers are more likely to accept SMS advertising coming from carrier and portal rather than text messaging advertisements coming from brands directly.

Moreover they found out that SMS advertising acceptance come in third position after TV and radio. Surprisingly permission-based Mobile Marketing through carrier/portal is the least unacceptable form of communication, even before Radio and TV. Indeed 9% of the respondents find the former kind of advertisements unacceptable whereas respectively 11% and 12% of consumers find radio and TV undesirable.

This enhances the fact that people seem to accept this way of communication as far as it comes from a trusted source such as mobile operators. Another key aspect that comes out is the necessity to conduct a permission-based Mobile Marketing in order to satisfy consumers. When asked how many messages they wanted to receive from diverse advertisers, 38% answered 2-3 per week. Moreover people are willing to receive advertisement but only when content is in line with their personal preferences.

Even though the latter results were found on the UK marketplace, this could give an idea of the importance of the Mobile Marketing phenomenon within Europe. Hence, there is an opportunity of further developments for Mobile Marketing as a mass media communication tool but also as a one-to-one marketing enhancer so long as marketers take some crucial elements into account as it has been mentioned before.

Mobile Marketing acceptance is indeed an important element, but an even more essential aspect is the understanding of customers' reactions to this kind of communication. In another Enpocket report [Enpocket, 2003], the following results are presented: First of all, on 94% of occasions, messages are at least read by the recipients, whereas 23% showed or forwarded the message to a friend. This seems to be extremely interesting for marketers if they manage to produce these kinds of viral effect, which increase the value added for the organization.

They considered, furthermore, the diverse actions undertaken by customers after having read the message. On average 15% of respondents respond in some way to the campaigns:

- 8% on average replied to the message
- 6% visited a website
- 4% visited a store
- 4% bought the advertised product.

If one compares response rates driven by SMS advertising with other communication tools, SMS is higher than every other media as it can be seen below.

# Table 5: Response rate comparison

SMS (Enpocket)	15%
Direct mail (DMIS survey, 2000)	5.2%
Direct mail (Gartner, 2002)	1.0%
Email (Doubleclick, 2002)	6.1%
Email (Gartner, 2002)	1.0%

Source: [Enpocket, 2003]

The various results seem to prove that SMS are a more effective direct marketing channel than other media. It can be an opportunity for marketers to take advantage of the characteristics of mobile devices to create a personal and relevant relationship with customers. However this channel is still fairly new and this is likely that efficiency will decrease as people get used to it.

As it was described before the SMS marketplace appear to reach its point of saturation: predictions for 2007 show that the amount of SMS sent across Europe will decrease compared to 2003. On the other hand, new applications and developments come slowly on the marketplace; the latter allow seeing future opportunities for Mobile Marketing through devices at the cutting edge of technology. Furthermore applications could be imagined not only in the Person-to-Person area but also in the Person-to-Machine and Machine-to-Machine world. They are mainly enhanced by the developments of ubiquitous computing.

# 3.2 Actors

The conception of a Mobile Marketing campaign requires several activities already mentioned in the "State of the art". In the present section the authors first go back to the latter operations and analyze them more thoroughly. This includes describing each of them and concretely illustrating the process with the help of two campaigns developed respectively for Mc Donald's and for Cadbury. (See annex 7.1 for two other Mobile Marketing campaigns)

Then the aim is to assess, depending on the activity, the actors taking part in the process. This will be supplemented either by figures that depict their importance on the Mobile Marketing marketplace or by a concrete illustration.

At last, for each actor, we highlight the diverse operations they are likely to undertake, hence representing their value proposition as well as a part of the interactions that could happen between players.

# 3.2.1 Conception of Mobile Marketing campaigns

The four stages of a Mobile Marketing campaign's development are namely: concept, creative, delivery and finally analysis. The following table taken from a FirstPartner's report [FirstPartner, 2003] clarifies the four stages and the activities they include; besides the descriptions given underneath the table are based on the same Mobile Marketing Primer.

Type of activities	
Concept	<ul> <li>Target audience identification</li> </ul>
	<ul> <li>Message definition</li> </ul>
	<ul> <li>Integration planning</li> </ul>
Creative	Campaign design
	Application design
	Build
Delivery	Aggregation
	Network transmission
Analysis	Response rate
	Response profile
	<ul> <li>Feed-back and improvement</li> </ul>

Table 6: Mobile Marketing campaign stages

In the first place the goal is to develop a **concept** in line with the global campaign strategy but, on a greater scale, corresponding to the overall marketing and corporate strategies. This encompasses

Source: [FirstPartner, 2003]

identifying target segments; the latter should derive from the organization's positioning. Then a message is to be chosen; the latter symbolizes the product or service's image the company wants to deliver to the end customer. It naturally stems from the positioning and from the target. This does not only mean conceptualizing a message, but also choosing the *type of campaigns*. For example, referring to the taxonomy we have drawn in the second section, will the company rather go for a push campaign, in which mobile devices are used as a primary channel or a pull campaign, in which mobile phones are considered as a feed-back channel? ; does it prefer single or multiple interactions with customers? ; will the participation be free or chargeable? Moreover the *number of communication channels* need to be defined: is the mobile channel the only one to be used? Or does the company choose to integrate the mobile medium to existing campaigns to enter the wireless world? Furthermore after having decided on an integrated marketing, the *type of communication channels* needs to be elected: is it more effective to deliver the information through TV, radio and/or print...

The **creative** work is the next step of the process. As we can see in the table above, this does not only mean producing the *campaign design* but also the *application design*. In the contrary to traditional channels, mobile campaigns face some further limitations due to the restricted capabilities of mobile phones, notably the 160-character limited size of SMS, the restricted configuration that does not allow inserting complex graphics and pictures should absolutely be kept in mind when conceiving a campaign.

The design should also be in line with the previous decisions; content has to be consistent with the type and number of interactions chosen. For example if the company selects a multiple-response campaign, the precedent communications as well as the answers need to be monitored and analyzed to develop an adequate message. This also involves introducing applications and software that enable this relationship.

Once both designs have been imagined, this is essential to *build* the drafted infrastructure to launch the project. This necessitates, among other things, to develop the campaign specific copy; the latter is adapted to the characteristics of the mobile channel. The company is forced to obtain a mobile numbers database corresponding to the selected target audience while paying attention to the data protection regulations. Moreover the conception of the software and applications platforms takes place at this moment to allow the company to handle the active relationship with the end-customer. Moreover the latter stage includes introducing either short codes or mobile numbers to receive responses.

**Delivery** across all mobile networks comes next. This requires the use of an SMS-Gateway since the number of SMS sent, received and processed is large. As SMS is a store-and-forward service, this means that text messages are not sent directly to the recipient but through an SMS center. The latter connects to the network's routing information devices through the signaling channel. The technical conditions may slightly vary depending on the technology used [Kavassalis et al, 2003]. Content can either be sent through the diverse networks separately or be aggregated before transmitting it through all mobile networks.

The last stages are **measurement** and **analysis**. This can be extremely valuable to analyze the customer knowledge gathered by the company through the campaign. Since users generally bring their mobile devices everywhere with them, this enables a rapid interaction. Consequently these data provide a closer link between response time and purchase time than data collected through traditional campaigns; thus it enables a more consistent understanding of customer behavior.

### Illustration 5: Mc Donald's: "Finding Nemo"

It was an integrated campaign, more precisely a pull campaign. Indeed, mobile phones were used as a feed-back channel and the primary communication was done through diverse media such as TV, Radio, Outdoor advertisement and Public Relations. Moreover, as Disney/Pixar's was strongly promoting their movie, that came to have a positive effect on Mc Donald's campaign. The following market leaders supported the campaign: Disney/Pixar's, Vodafone and Nokia.



12snap was the leading agency; they created, planned and operated the campaign.

The campaign's theme was the successful animated movie "Finding Nemo" while the movie was on. This was a mobile on-pack campaign launched in 2003 by Mc Donald's simultaneously in three European countries: Germany, Austria and Italy. It took place in almost every restaurant in the latter countries.

In Germany, for example, there were 22 Mio of 0.5-liter or 0.4-liter soft drinks cup that contained an 8-digit code that allows the consumer to receive a mobile extra. First, the customer had to introduce in a text message the 8-digit code, for example KXGJJTSR, then send it to the number 77444 to receive the extra.

There were 70 different extras: ring tones, black-and-white logos, colorful wallpapers, Handy movies in the form of an animated MMS, Mobile voice greeting cards to be forwarded to friends, Mailbox announcement, Finding-Nemo game, Java Handy games, greeting postcards in which users can add pictures or their own content to send to friends.



The response rate exceeded by far Mc Donald's expectations: altogether almost 2 Mio of Handy extras were delivered.

To have a look at the show case, you can visit <u>http://www.12snap.de/</u>.

### Illustration 6: Cadbury: 'Text'n'Win'

#### **Objectives:**

Cadbury were faced with the problem of teenagers spending pocket money on mobile phone cards instead of Crunchies and Fuse bars. Cadbury needed to drive sales, rejuvenate the brand amongst younger audiences and accumulate intelligence about chocolate eating behavior in an effort to reinvigorate sales and better target consumers.

### Solution:

Flytxt and Triangle Communications developed a major competition to run on chocolate wrappers, inviting consumers to 'Txt'n'Win'. Cadbury's launched this first SMS based on-pack promotion on 65 million chocolate. Consumers were invited to 'Text'n'Win' when they bought any of the 10 leading Cadbury brands including Crunchie, Caramel, Time Out and Cadbury's Dairy Milk. Each bar of Cadbury's had a unique code which consumers sent in by SMS to see if they won a prize. There was more than £1m in prizes to be won across the ten participating brands. Prizes include 100 chances to win £5,000 cash and many more opportunities to win the following prizes: widescreen TVs, Sony Playstation 2s, DVD Players, Palm Pilots and CD compilations. The promotion was groundbreaking, and it is still the biggest SMS based sales promotion campaign ever carried out.

#### Results:

Cadbury received more than 5 million messages from the 'Text'n'Win' game. This equates to a response rate of 8%. The campaign gave Cadbury crucial and revealing data on consumer behavior. The intelligence gathered allowed Cadbury to learn when people are most likely to eat chocolate and... if there really is a special Friday feeling about Crunchies. Cadbury enjoyed a strong Christmas and Dairy Milk increased its market share. The final three months of the year saw chocolate sales volumes return to growth. Shares in the group rose by 5%, as investors were

impressed with earnings per share rise of 16%. The group saw turnover rise by 21% to  $\pounds 5.52$  billion.

### Client testimonial:

Before the campaign was launched a spokesperson for Cadbury commented:

"This campaign has the potential to be one of the most successful we have ever run. It's been very well received by our trade customers, as its both fun and easy to enter. We're confident that Txt'n'Win' will enhance our reputation as the creators of the most innovative promotional marketing campaigns in our market."

At the time of Cadbury's full year results, John Sunderland, the Group's CEO commented about the 'Text'n'Win' campaign: "It gave sales a big lift at a time when the confectionary market has been pretty flat."

Awards: Nº 1 Wireless Marketing Campaign', Campaign

Source: [Flytxt, 2004]

### 3.2.2 Actors along the Mobile Marketing value chain

To carry on the actors' analysis, players involved in the process will now be described and illustrated. We have chosen to classify them according to the operations they take part in. On the figure below the operational value chain of the Mobile Marketing environment is represented. This means that players such as regulation authorities and device manufacturers are not directly included but can however have a significant impact on Mobile advertising development.





Source: adapted from [FirstPartner, 2003]

### 3.2.2.1 Mobile Marketing customers

They are brand names in various fields namely: Fast Moving Consumer Goods (FMCG) industries, music and film distributors, radio-TV and press groups, government agencies (B2B market)

[Kavassalis et al., 2003]. They want to introduce integrated marketing strategies that include the Mobile medium. As we have seen several times already, the mobile channel provides the opportunity to create an interactive one-to-one relationship with mass customers.

Illustration 7: Helsana and Progrès Caisse Maladie

**Company**. The Helsana Insurances (Helsana) is the largest health insurance provider in Switzerland with more than 1.4 million customers and 2,335 employees. It offers various kinds of health insurance services. The yearly premium yield sums up to CHF 3.8 billion (US\$ 2.5 billion) (2002).

Progrès Caisse Maladie (Progrès) is a cooperation partner of Helsana specializing on basic standard plans covering the mandatory requirements by Swiss legal regulations. Since 2001 Progrès offers its countrywide customers to sign up for insurance plans through the company's homepage. Progrès was able to extend its customer base from 37,500 customers in 2000 to 53'000 in 2001 and to over 104,000 customers in late 2002. With its young and modern image and offerings Progrès mainly addresses young customers. The average age of the customer base in 2001 was 29.9 years. The premium yield in 2001 was CHF 60.2 million (US\$ 43.2 million).

**Challenge**. In Switzerland insurants can switch their health insurance provider only with an effective date of December 31<sup>st</sup> and have to cancel their contract by November 30<sup>th</sup>. Thus the willingness of switching and the interest in offerings and premium calculation rises rapidly in fall. Hence providers conduct heavy marketing activities. They try to keep existing and acquire new customers. Progrès offers very affordable standard insurance plans, emphasizes the use of internet technologies and a customer call center in communication and transactions with its customers. The young target group has a high affinity to technology and appreciates the simple location and time independent communication via new technologies such as the Internet and cellular technologies. These technologies promise to have a large potential as innovative and outstanding marketing measure.

**Strategy**. The Progrès brand stands for affordable offerings for young people while the Helsana brand symbolizes safety, reliability and tradition. Progrès' strategy consists of using modern technology for addressing customers and for customer interaction. By offering self-service options processes are outsourced to the customer, reducing acquisition und service costs. Young insurants generally are hardly interested in insurance coverage but wish to have the lowest insurance premium possible. The main selection criterion is the price. A decisive factor can also be a very convenient and uncomplicated way of contract closure, such as self service via the internet.

**Project's Goals**. Customers must be able to request an individual premium offering at any time from any location by triggering the web-based premium calculator using a cellular phone. The primary goals of the project have been:

• *Innovation.* Gain experiences with mobile technologies and evaluate the potentials of the mobile channel by creating an application simple in handling for both the company and the customers.

• Support of the acquisition process. The mobile channel must be integrated in marketing activities during the peak season of switching health insurance. The new technology was supposed to create attention and raise customers' interest in the Progrès brand. Once this goal is achieved the customers follow the already existing acquisition process. The existing sales infrastructure should be extended by the mobile channel.

• Low costs. In order to realize the project in an efficient and timely manner, existing resources were supposed to be used wherever possible.

Source: [Reichold et al., 2003]

# 3.2.2.2 Agencies

Generally they are niche creative and interactive agencies, providing the concepts and ideas underlying Mobile Marketing campaigns. As one can see on figure 4, they can be of different types: either exclusively focused on the mobile channel or traditional communication and sales promotion companies that extend their framework to the mobile medium.

Another characteristic of these companies is the outsourcing of the project's technological aspects but manage the whole campaign process including the application service provider's work.

The value proposition of these agencies is their knowledge of the mobile medium that enables them to provide expertise, advice as well as creative. They take into considerations the integrated strategy of the client while developing the creative design.

Their business model is not very different from the one of a traditional agency. They charge the client for the account management and for the creative. For example, they ask for a share of the revenues generated by the campaign.

This business model works usually fairly well except that the lack of direct contact between the clients and the application service providers may prevent the latter from fulfilling the specific needs of the former [Gelende, 2003]. Moreover we previously mentioned that the agencies manage the overall process. The major problem here is that sometimes they supervise concepts and applications they do not handle.

Another element to bring up is that the creative work may also be designed in-house; the company thus decides to widen its core skills. The project may also be conducted in partnership with a specialist agency.

### Illustration 8: Carat

Carat is the largest independent media agency network in the world. To help their clients' businesses to succeed, they create integrated communications solutions. They claim to be the pioneers of unbundling and the creators of the first global process for 360° communication.

The company delivers innovative, integrated Media communications as well as advice and consultancy in order to help their customer achieve their long-term competitive advantage.

Source: [Carat, 2004]

### 3.2.2.3 Mobile Marketing agencies

These agencies are also niche players but focused exclusively on Mobile Marketing. They provide the consultancy and advisory services as well as the technology to deliver the messages, including the delivery itself.

Their unique selling proposition is the creation of both personalized products and services corresponding to the clients' requests. Moreover they take advantage of the proximity between client, creative producers and application service providers. As one can see in the Flytxt illustration below, one way to manage the different disciplines is by forming business units. This allows the separation of the diverse activities whereas the customer only has a single business partner.

Full service companies derive their revenues from the advice they provide, the licensing of technology and the messaging costs. Though these players are trying to bite off a larger piece of the pie than others, because the majority has built up their experience from a dedicated focus on mobile, they have acquired this broader range of skills and knowledge over time [Gelende, 2003].

According to Kavassalis et al., [Kavassalis et al., 2003] Mobile Marketing companies desire to establish a clear and defendable position in the industry as a new sort of e-intermediaries. Therefore they work to institute well-defined industry standards, target specific segment of the market while progressively widening their offering.

### Illustration 9: 12snap

<sup>12</sup>snap is an advertising firm focused on mobile channels. They provide campaign realisation and message delivery; moreover they develop innovative and effective marketing as well as CRM programmes. They had already worked for top global companies including McDonald's, Procter & Gamble, Coca-Cola, Budweiser, L' Oréal and Disney.

The concepts of campaign developments come mainly from one-to-one engagement with massmarket consumers. They thus take advantage of the phenomenal growth in ownership and market penetration of mobile handsets. By offering creativity and leading-edge mobile technology, 12snap tries to develop unique advertising campaigns tailored to the mobile medium.

They use various technical solutions including text/SMS, multimedia/MMS and WAP, voice and sound/IVR, mobile couponing, and location-based applications. They limit their activity to European countries and developed inbound as well as outbound campaigns. This encompasses offering to their client over 20 Mio aggregated permission-based mobile users in UK, Germany and Italy. One of the world's largest text-in promotions was launched in 2003: first on behalf of Coca-Cola in Germany, and then for Walkers snack foods in the UK. Featured on over a quarter of a billion packs, the Walkers promotion incorporated for the first time direct-to-phone text crediting. To further illustrate 12snap's success, we can mention that they won a Cannes Lion award, for their work with Sony PlayStation 2.

Source: [12snap, 2004]

#### Illustration 10: Flytxt

Flytxt is a mobile technology solutions provider within the Mobile Marketing and content industries. Their value proposition is the delivery of leading technology solutions combined with experienced strategic consultancy. Therefore they developed three distinct business units:

Flytxt Media & Entertainment: delivering mobile content solutions to media and entertainment clients

*Flytxt Mobile Marketing*: delivering Mobile Marketing solutions to Fast Moving Consumer Goods, operator, retail and leisure clients

*Flytxt Technology Solutions*: Flytxt's proprietary mobile technology platform, servicing third parties' technology requirements on a white-labeled basis.

Their clients notably include leading brands from across the media, entertainment, FMCG, retail, leisure and mobile operator sectors.

The company is owned independently and their principal investors are Herald Ventures, IVC and Mars Capital.

As one of Tornado Insider's TOP 100 European companies for 2003 for a second year running, Flytxt has achieved significant recognition for its role in advancing the industry.

Source: [Flytxt, 2004]

### 3.2.2.4 Mobile operator

Due to competitive pressure and to the declining average revenues from voice services, Mobile operators deeply wish to ensure a central position on the value chain in order to increase their revenues; that is why the latter try to deliver end-to-end services. Therefore they play various roles such as Mobile Internet service providers, Mobile content providers, Mobile portals, Mobile location broker, Mobile transaction provider... They take advantage of their existing billing relationship with the users to expand along the supply chain [Guissani, 2001].

Mobile operators are often split in three different business units: infrastructure providers or mobile networks operators; content providers and finally service providers. The first business unit's description will appear further in the section. Mobile operators indicated in the creative-and-build part of the operational value chain (Figure 4) correspond to the content provider' business unit. Their key success factor is the access control to the networks allowing them to play approximately the same role as Mobile Marketing agencies. The latter still possess a more specific expertise of the mobile device as a communication channel, but need to be careful of the operators' spread along the value chain.

Figures 2: Mobile operators in Europe

France:

Mobile Operator	N° of subscribers	Market share
France Telecom(Orange)	19,157,600	48%
SFR	14,191,700	36%
Bouygues	6,442,2000	16%
Total	39,791,500	100%

Italy:

Mobile Operator	N° of subscribers	Market share
TIM(Telecom Italia)	26,076,000	47%
Omnitel(Vodafone)	19,195,800	35%
Wind	9,587,000	17%
3	340,000	1%
Total	55,198,800	100%

UK:

Mobile Operator	N° of subscribers	Market share
Orange	13,648,000	26%
T-Mobile	13,600,000	26%
O2	13,053,000	25%
Vodafone	12,691,800	24%
3	210,000	0%
Total	712,300	100%

Source [Mobile is good, 2003]

# 3.2.2.5 Application Service Providers

They supply the Mobile Marketing industry with the necessary software and applications to run campaigns. Their value proposition consists of the offering of expertise and resources to develop and maintain applications and services. Their customers can be either Mobile Marketing players or, at a greater scale, various m-commerce actors, who do not possess a sufficient know-how in the technological area.

Examples of their offering are mobile engines, databases for opt-in list management, information systems able to deal with customers' permission data. Most of them offer technology platforms that build the necessary layers of intelligence into the campaign, hence creating different campaign mechanics, e.g. point collection, m-couponing... and reporting on campaign progress; this speeds up the development of the campaign's IT aspects and mask the complexity of the underlying technology.

A specific part of these ASP are focused on the mobile world and provide SMS Gateway services integrated in most cases with mobile campaign delivery and tracking services. By giving access to standardized and centrally hosted applications to several businesses, WASP can achieve greater economy of scale and pass them on to their customers. They usually charge on a usage basis (amount of data transmitted, a per-usage fee, number of transactions conducted over their platform) [Guissani, 2001].

Frequently they play the role of mobile aggregator thus providing a direct connection to all mobile networks operators. This makes the message delivery and receipt easier for their business customers.

# Germany:

N° of subscribers	Market share
26,300,000	42%
22,694,600	36%
8,200,000	13%
5,586,000	9%
62,780,600	100%
	26,300,000 22,694,600 8,200,000 5,586,000

Switzerland:

Mobile Operator	N° of subscribers	Market share
Swisscom	3,790,000	62%
TDC(sunrise/diAx)	1,234,000	20%
Orange	1,085,000	18%
Total	6,109,000	100%

Illustration 11: WASP: Minick

The company was founded in Zurich, Switzerland as MINICK AG. Today, MINICK is present in major European countries, partnering with more than 40 mobile network operators and serving global customers.

The company is the pioneer of interactive mobile applications, develops and operates mobile applications for network operators such as T-Mobile, Telefonica, and Swisscom, for media companies such as MTV, RTL Newmedia, Channel 4, and Universal Music, as well as for corporate clients in mobile direct and dialog marketing.

As an illustration of their work let's mention that in 2002, MINICK was called for the Big Brother UK project sponsored by O2. With a preparation lead time of 5 weeks, MINICK connected exclusive short codes on all UK networks (including Virgin), and processed 23 million messages successfully.

The company has built one of the largest premium messaging networks in Europe, and operates its own SMS and MMS centers with direct connections to the mobile networks. MINICK has offices in Germany, Spain, Sweden, Switzerland, and the UK.

As far as infrastructure and operations are concerned, MINICK operates a state-of-the-art  $365 \times 24 \times 7$  data center with a continuously growing network of live links to over 40 European mobile network operators. The customers' application services are hosted by the company, monitored by their network management system.

Source: [Minick, 2004]

### 3.2.2.6 Mobile aggregator

The latter focus on value creation by gathering content from various sources and establish a direct contact with mobile operators. Moreover they also provide a thin layer of technology to enable simplistic and typically high volume campaigns. Mobile portals, Wireless Application Service Providers as well as Mobile Network Operators may play the role of Mobile aggregator. As far as revenues are concerned, Mobile aggregators take a small margin on the network transmission costs.

Their Unique Selling Proposition is the offer of direct operator connections across many countries and continents. However, they don't offer the expert advice from a client servicing team or the level of technology that supports more sophisticated campaign mechanics. Moreover they often offer limited analysis on campaign such as the speed of campaign response as well as the number of answers across each network. Some Mobile aggregators have attempted to complement their core business by forming partnerships with creative agencies.

Again the key component missing here is the communication between technical and client servicing teams. [Gelende. 2003] Aggregators are often not visible to the business customers undertaking the Mobile Marketing campaign due to the technical level of their role. This is the leading agency, for example a Mobile Marketing company such as 12snap that works in partnership with a Mobile aggregator to provide the message delivery. [FirstPartner, 2003]

Most of them extend their business to the sale of features such as short code for SMS and premium SMS. [FirstPartner, 2003]

### 3.2.2.7 Mobile networks

The core business of Mobile operators is charging customers for using their networks to send SMS, MMS messages as well as using location based services. In general the prices are volume dependent and vary slightly from operator to operator. The latter have a key position since every other player is forced to treat with them to reach the end customer. They have the power to choose the partners they want to work with and thus, exclude certain players from the value chain.

Illustration 12: Vodafone

Vodafone Group Plc provides a full range of mobile telecommunications services, including voice and data communications. Vodafone has equity interests in 28 countries and Partner Networks in a further 8 countries with almost all the Group's mobile subsidiaries operating principally under the brand name 'Vodafone'.

On 1st January 1985 the UK's first mobile call was made. This call was to mark the launch of the mobile industry and to transform the communications world. They now have a customer base of over 100 million and interests in network operators across 28 countries.

**Their vision** - is to be the world's mobile communications leader - enriching customers' lives, helping individuals, businesses and communities be more connected in a mobile world.

**Investment** - they continue to channel massive investment (currently £10 million per week) into building a network which allows you to make more calls from more places and remain assured that the quality and reliability of our service is second to none

Value for money - in the last 3 years, they have reduced costs over 5 times which equates to a typical reduction of over 50% for you our customers.

**Customer service** - from the provision of coverage and capacity to call handling and billing they claim that they remain focused on maintaining a high level of customer service.

In the near future, one will see next generation technology become widely available. They say that they are determined to remain the leading innovator in the field of mobile communications.

Source: [Vodafone, 2004]

### 3.2.2.8 Device manufacturers

They have not been directly included in the operational Mobile Marketing value chain, nevertheless device manufacturers play a central role as their design decisions determine the functionality and standards available on mobile platforms. They will enhance or on the contrary prevent the development of Mobile Marketing depending on the type of devices they conceive. They define the device memory, screen size, input capability. Besides, they choose the kind of operating systems will run the device, the mobile communications standards, location-tracking functionality, pre-loaded applications...

Competition in the mobile handset industry is extremely aggressive. The production cycles have been shortened because end customers see mobile phones as an appliance; the profit margins have also become thinner. However they still have a powerful place in the m-commerce value chain for customers have shown brand loyalty towards device manufacturers rather than towards Mobile operators. Each manufacturer tries to diversify and leverage this strong brand awareness to reach new segments of the value chain. The diversification takes place mainly in the value-added applications and platforms they offer Mobile portals, Mobile operators and content providers.

#### Illustration 13: Nokia

Nokia is the world leader in mobile communications, driving the growth and sustainability of the broader mobility industry. The company is dedicated to enhancing people's lives and productivity by providing easy-to-use and innovative products like mobile phones, and solutions for imaging, games, media, mobile network operators and businesses. Nokia is a broadly held company with listings on five major exchanges.

Some figures: Nokia reports second-quarter net sales of EUR 6 640 million, EPS EUR 0.15.

- Net sales were EUR 6.6 billion (EUR 7.0 billion in Q2 2003)
- Operating profit was EUR 907 million (EUR 818 million)
- Operating margin was 13.7% (11.7%)
- Earnings per share (diluted) were EUR 0.15 (EUR 0.13)

Net Sales by Business Group Q2 2004			
	€M	%	
Mobile phones	4167	62	
Multimedia	739	11	
Networks	1576	24	
Enterprise solutions	189	3	
Nokia Group	6640	100	

**New Organizational Structure**: Effective January 1, 2004, Nokia reorganized its structure in a move to further align the company's overall structure with its strategy. The new structure includes four business groups: *Mobile Phones; Multimedia; Networks;* and *Enterprise Solutions.* The new structure also includes three horizontal groups; *Customer and Market Operations; Technology Platforms;* and *Research, Venturing and Business Infrastructure.* 

Source: [Nokia, 2004]

### 3.2.2.9 Regulation authorities

They are the last actors presented here; as one can imagine they are neither part of the operational value nor member of the m-commerce value chain. However they play a significant role due to the fact they develop and introduce various regulations and standards which may impact the Mobile Marketing industry.

To take an example the passage from opt-out to opt-in in the European Union has an important effect on the Mobile Marketers who now have to buy opt-in database to send messages only to users that agree with it.

Another illustration is the pressure they can put on the Mobile operators to decrease their price: the Telecommunications Regulation Authority (ART) is trying to impose a price decrease of SMS in France.

# 3.2.3 Value propositions and actors' interactions

In the last part of this section, we will try to present a summary of each actor's value proposition within the Mobile Marketing process.



Figure 5: Value proposition of the different actors

The green path depicts the Mobile Marketing customer commissioning an agency to design the campaign. The latter provides its expertise, advice and creative capabilities but outsource the technological aspects to either an Application Service Providers or to a Wireless Application Service provider. After having built the necessary infrastructure, the application service provider has the choice either to contact a Mobile aggregator or directly the Mobile operators. The former will itself contact various Mobile operators to deliver the content. Once the content is in possession of the Mobile operator, it will be delivered to the end customer.

The blue path considers the brand manager's possibility of having the campaign design created inhouse. Just as with the green line, the Mobile Marketing customer has the choice to work with an Application Service provider or with a Wireless Application Providers. The blue path does not go further as the next steps are the same as with the green one.

The brown path takes into consideration the work of the customer with a full-service company, namely a Mobile Marketing agency. All the activities up to the delivery are processed by this player. Then it has the choice either to contact a Mobile aggregator or Mobile operators directly. Then this is the same activities and considerations as along the green path.

The orange path represents the collaboration between the customer and Mobile operator to conduct the whole campaign from the design to the end-customer delivery.

If we have a look at the red path, it considers the feed-back channel. The information goes back to the Mobile operator, who delivers it either to Mobile aggregators, Application Service Providers, Mobile Marketing agencies or Agencies. All these players (according to the path chosen at the beginning) will provide the necessary information to the Mobile Marketing customer to analyze and measure the campaign results.
A step further in this analysis would be to consider each arrow on its own to determine what kind of flow the latter represent. However we will not have the time to process to this study in this report but it should be considered in a future research.

#### 3.3 Issues

After the analysis of both market and actors, it is time to present issues; they are open questions undermined by the Mobile Marketing environment. We can go further by saying that issues are debatable topics about which actors have diverse positions. Then, according to the players' influence and the attention they attach to it, the situation evolves in diverse directions. [Camponovo and Pigneur, 2002]

We start by describing social issues exclusively privacy questions. The attention ascribe to privacy is more comprehensive as it is generally argued that it has a significant influence on the Mobile Marketing development. Topics such as personal identification, mobile spam are exposed; nevertheless all actors do not consider them as substantial problems. In particular, according to **the GSM Association**, this is important to note that mobile spam is still a rare phenomenon on mobile networks compared to the amount of spam on fixed networks. They believe that this is the result of the relatively high price of SMS/MMS as well as track-back and security features of mobile networks; consequently this makes it easier to reveal the origin of an unsolicited SMS. Furthermore they agree that receiving mobile spam is more intrusive than receiving a spam email. Higher degree of harmonization and consistency is needed regarding the transposition of the European directive on privacy and electronic communications. Besides, they emphasize the importance of giving balanced and correct information to consumers and businesses. Regulation authorities should clearly explain their rights and obligations under the new directive. (*Taken from the GSME Statement on spamming [GSME, 2003], see annex 7.2 for full text*)

Security has both social and technological implications and the authors have chosen to introduce this topic in the technological part of the present section. Other technology driven questions are developed such as devices, server technology, management of context and mobility and finally networks technology. Eventually we briefly talk about economic and geographic issues.

#### 3.3.1 Social Issues (Privacy)

The need for privacy stems from today's individualism as well as an urge to control our decisions and actions. Therefore the access by others to their personal information might be harmful since it decreases the control people have over their life [Camponovo and Cerutti, 2004]. Consequently one needs to protect himself against such intrusions.

On the other side, as members of diverse communities, people have to disclose information about them to build social interactions. Their willingness to reveal personal details depends on various factors notably the information sensitivity, the perceived use of information, the familiarity with stakeholders, the trust and the reputation of the other social player ... [Camponovo and Cerutti, 2004]

Privacy is commonly defined in terms of individual control over disclosure and subsequent uses of their personal information [Milne and Culnan, 2004; Olivero and Lunt, 2002; Price Waterhouse Coopers, 2003]. Charles Fried states that "*privacy is not only an absence of information about us in the minds of others, rather it is the control we have over information about ourselves*"[Fried, 1984]. The control over disclosure implies that one has the power to restrict access to data when judging it as intrusive and harmful.

Nevertheless Tavani and Moor [Tavani and Moor, 2001] argue that privacy and control are two distinct concepts more useful when treated separately. According to their theory of privacy, the latter notion is best defined in terms of restricted access rather than in terms of control. Privacy is fundamentally about protection from intrusion whereas individual control of personal data is part of the justification of privacy and plays a key role in the management of privacy. The latter goes beyond the sole individual control notably with the institution of privacy policies and laws on both national and international levels.

After having discussed the definition of privacy, we examine whether privacy concerns exist in the Mobile Marketing area and how they look like. With the fast development of mobile commerce and the Internet hype, privacy concerns have been constantly growing. Moreover as the advance of data collection and processing technologies is fast, companies can nowadays collect, store and analyze data efficiently; for example with the help of HTTP cookies. One of the main challenges is that most of

the time people are neither aware that information is gathered when they surf on the World Wide Web nor how to control this data collection. With the appearance of mobile data networks, the issue becomes even more significant and generates several new problems and questions. Camponovo and Cerutti [2004] mention four main issues: mobile spam, personal identification, location information and wireless security.

*Mobile spam* is a growing concern mainly due to the email spam is already a major problem annoying most Internet users. Consumers mainly fear to be overwhelmed with unsolicited SMS. Indeed even though a customer has opted in to receive pieces of information, this does not allow the company to overwhelm him with messages. Moreover the information needs to be highly relevant to be accepted by people. As far as control is concerned, the problem is that most websites have opt-out policies forcing consumers to opt-out to every site they surf on. As one could briefly see later on, it starts to change, notably in Europe, with the introduction in 2002 of the e-Privacy directive [European Parliament, 2002]. Finally the information collected from customers is confidential and should not be shared with other stakeholders.

*Personal identification* refers to the fact that mobile devices are extremely personal and with us anytime, anywhere. The information collected by mobile operators thanks to one's location in the network can easily be related to its person and its demographic information. As one of Enpocket's [Enpocket 2002] studies mentions, mobile users generally tend to trust mobile operators to keep their promise on privacy. Nevertheless this may not be extended to every mobile commerce service providers.

The development of improved *location* technologies raises the question of the right and legitimacy to locate a person so as to provide him with customized services. The misuse of location information can not only be present in marketing but in other areas of a human being's life. For example, the corporate willingness to monitor their employees using location information is growing stronger. Hence they would be able to control their workers' activities. The risk of intruding employees' private sphere is nonetheless present.

On the other hand, customers seem to perceive true benefits in the delivery of location based services. As a result they agree to disclose part of their private information. Hence there is a trade-off between privacy intrusion and the apparent benefits of personal data use [Kaasinen, 2003]. The advantages associated with disclosure are thus pragmatically evaluated [Olivero and Lunt, 2004]. Too many opt-in procedures for the same services might eventually bother customers. A key element in this trade-off is consumers' trust in the service providers or mobile operators. Any abuse from the supply side can drive customers to stop their relationship with the company, hence resulting in negative financial effects and might cost the organization's reputation.

The last problem, which is wireless security, is going to be enlightened later within the section of technological issues.

Price Waterhouse Coopers [PWC, 2003] on their side mention four key issues: wireless security, possibility to turn the privacy choice on and off, transparency about privacy policies in use, consolidation and agreement of key players upon privacy standards and principles.

Providing privacy protection needs to be undertaken by each stakeholders of the Mobile Marketing environment. This means that consumers should be informed and take into account the privacy statements of websites and mobile service providers they deal with. Extremely often people are either careless about privacy policies or, on the contrary, paranoid. This is the companies' role to explain to consumers in plain English what their choices in terms of privacy are [PWC, 2003].

Illustration 14: Swisscom's Privacy statement

Protecting your privacy and in particular your personal data is very important to us. This document shows how we process the data we receive through our website. In order to allow you to order, receive or modify as many of our services as possible via the Internet, we also need to record your personal data. This is necessary if we are to constantly adapt and improve the services on offer in line with your needs. We comply with the Swiss data protection and telecommunications legislation when processing personal data.

**Customer Data**: When you visit our website, we save various types of information. You enter some of the data yourself when you register for services, e.g. name, address, e-mail address or areas of interest. Other data not relating to your person are saved for the purpose of technical processes, e.g. IP addresses. You make other data known when you use certain services, e.g. when you enter competitions, forums or chat rooms, when you order goods or services or when you contact us directly. If you subscribe for our newsletter, you provide information such as your e-mail address, first name, surname, mobile phone number and desired e-mail format as part of the subscription process. Swisscom Mobile requires the data for the personalized dispatch of the information you have requested. As a subscriber you can have yourself removed from the list of subscribers at any time via the link contained in each edition of the newsletter.

Business relations with third parties: Our website and our newsletter contain links to other websites. We have no influence over the way in which the providers of linked websites make use of the information shown on these pages. If you have any questions in this respect, please contact these other companies directly. We are not responsible for the content of these sites or for ensuring that they comply with the data protection regulations.

**Cookies**: In some cases we use "cookies". A cookie is a small file that is sent from the web server to your Internet browser and saved in your computer. This enables us to recognize you the next time you visit us. Cookies and other such technical procedures are used to enable certain processes, services and transactions, e.g. if you use a virtual shopping basket in an electronic shopping centre on the Internet. You can change the settings of your browser to either make a warning appear on the screen before a cookie is saved or to prevent cookies from being set. You are free to accept or reject the advantages of personal cookies. However, if you reject personal cookies certain services cannot be used.

**Use and forwarding of data**: We process your data for the provision of our services. As our customer, you also consent to our use of your data for marketing purposes within the Swisscom Group. . Data obtained by Swisscom Mobile from customers and newsletter subscribers will not be sold, rented or forwarded in any other way outside the Swisscom group.

Source: [Swisscom, ?]

Moreover the private sector has also efforts to make to discuss and build de facto standards for privacy. These principles should tend to be homogenous to facilitate customers' comprehension. This is a way to build trustful and transparent relationships between customers and organizations. Enforcement mechanisms should also be set up in order to enhance companies to follow these standards.

Illustration 15: Mobile Marketing Association's Code of Conduct and enforcement mechanisms

This code concerns the diverse players of the Mobile Marketing industry. The latter is broken into the Six C's of privacy:

- Choice: Mobile Marketing is acceptable only to consumers that opt-in to receive it.
- · Control: consumers who opt-in must have any easy way to opt-out of all Mobile Marketing.
- Constraint: consumers should be able to set limitations on messages received.

• *Customization*: analytical segmentation tools will help advertisers optimize message volume, ROI and **relevancy** to the consumer.

- Consideration: consumers must perceive value in any Mobile Marketing campaign.
- Confidentiality: Privacy policies must be aligned between the carrier and the brand.

In addition to the CoC, the MMA's Privacy Committee is also reviewing cutting-edge industry-wide mechanisms for enforcement. First, a certification program may be built to certify brands, carriers, advertisers, content providers and technology partners that agree to comply with the industry CoC. Second, the committee is reviewing the merits of creating national opt-in and opt-out databases for Mobile Marketing.

These national systems would give consumers a single point of access for all Mobile Marketing. From them, consumers will manage which brands they interact with, how many messages they want in a given period of time, and what interest-based information they opt-in to receive. The consumer would have complete privacy through various technology mechanisms under consideration.

Source: [MMA, 2003]

Moreover regulation authorities also have to develop laws and directive to protect consumers when dealing with their private information in order to protect their personality and other base rights.

Indeed direct marketing can sometimes take extremely assertive forms and regulations try to protect customers against these aggressive techniques. Moreover, as we have mentioned above, spam is a growing problem which strongly needs to be regulated. *Spam* can be defined as unsolicited personal commercial communications sent via electronic communications [Camponovo and Cerutti, 2004]. "*Electronic mail refers to any text, voice, sound or image message sent over a public communications network which can be stored in the network or in the recipient's terminal equipment until it is collected by the recipient.*" [European Parliament, 2002] This definition clearly encompasses email and mobile telephony networks, as enlightened by the Data Protection Working Party [Data Protection Working Party, 2004].

According to the Mobile Marketing Association [MMA, 2003], **unsolicited** messages can be defined in terms of frequency, relevance, control and confidentiality. Notably as far as the control is concerned, two systems can be found: either *opt-in* systems where the customer has to give its prior agreement to receive messages. This implies that the customer's consent has to be explicit before the sending. On the other hand *opt-out* systems refer to procedures in which the customer first receives the mail and afterwards has to explicitly oppose to the delivery of such messages. In this case, prior consent is considered as implicit and the communication is judged to be legal unless the person opts-out.

The content or purpose has usually to be **commercial** to be treated as spam. This does not mean that non commercial and unsolicited messages are not existent but European and Swiss regulations only focuses on commercial use of electronic communications.

In Europe, the European Parliament and Council set up in 2002 a new directive on Privacy and Electronic Communications (Directive 2002/58/EC). The directive's aim is notably to harmonize the conditions under which electronic communications can be used for marketing purposes. The latter has been set up to complement the Directive on electronic commerce (Directive 2000/31/EC) introduced in June 2000.

First of all, an opt-in principle was adopted as "*electronic mail for purpose of direct marketing may only be allowed in respect of subscribers who have given their prior consent*" (art. 13.1 2002/58/EC). Short message service is not explicitly mentioned as being electronic mail; however the Data Protection Working Party highlights in their "Opinion 5/2004 on unsolicited communications for marketing purposes" that the directive intended to be technology neutral. Furthermore they give an illustration of electronic mail in which they explicitly mention SMS as being electronic communications.

To the principle follows an exception mentioned in article 13.2 of the present directive. "Where a natural or legal person obtains from its customers their electronic contact details for electronic mail, in the context of the sale of a product or a service, the **same** natural or legal person may use these electronic contact details for direct marketing of its **own similar** products or services provided that customers clearly and distinctly are given the **opportunity to object**, free of charge and in an easy manner, to such use of electronic contact details when they are collected and on the occasion of each message in case the customer has not initially refused such use". The latter exception is called the soft-opt-in principle. This right is exclusively offered to the company that has collected the contact details and not to any other third party, for example a subsidiaries or a mother company would not have the right to use these details for direct marketing even if they sell similar products. Moreover the contact details have to be first acquired in the course of a customer relationship. At last but not least the regulation restrains the advertising to the marketing of similar products or services even though the concept of similarity is relatively hard to envision.

The use of traffic data to provide value added services is ruled by the article 6.3 of this directive: "For the purpose of marketing electronic communications services or for the provision of value added services, the provider of a publicly available electronic communications service may process the data referred in paragraph 1 (traffic data relating to subscribers and users) to the extent and for the duration necessary for such services or marketing, if the subscriber or user to whom the data relate has given his/her consent. Users or subscribers shall be given the possibility to withdraw their consent for the processing of traffic data at any time." Traffic based services are thus considered to be legal when the subscriber has given his/her prior consent and has the possibility to withdraw his/her approval at any time. The similar rule exists for other location data (article 9) with the exception that the service provider has the opportunity to make the data anonymous when the subscriber has not approved the processing of these data.

Illustration 16: Big fine handed for mobile spamming

A company that sent large numbers of unsolicited text messages to mobile phone users telling them they had won a mystery prize worth £500 has been fined £50,000 by the premium rate services regulator.

ICSTIS, the Independent Committee for the Supervision of Standards of Telephone Information Services, announced on Thursday that it was fining Moby Monkey, and barring it from continuing the promotion.

Over 200 people complained to ICSTIS after receiving the text message, which urged them to call a £1.50-per-minute premium rate telephone number. Those who made the call discovered, after several minutes, that the mystery prizes were holiday discount vouchers that were subject to various terms and conditions.

In its ruling, ICSTIS slammed Moby Monkey's tactics, which it said seriously breached the code of practice governing premium rate services. ICSTIS was unimpressed by the fact that children received the text message and that some mobile phone users reported receiving it repeatedly -- up to 40 times in one case.

"The use of text messaging to promote premium rate services has many obvious consumer benefits when carried out in a legitimate, responsible manner and in compliance with our Code of Practice. However, we will not hesitate to take swift action against the small minority of service providers who think that they can abuse public confidence and trust in text messaging in order to make money with no regard for consumers whatsoever," said ICSTIS director George Kidd in a statement announcing the £50,000 fine.

Moby Monkey is understood to be planning to appeal against ICSTIS's decision.

Source: [Wearden, 2002]

In Switzerland three different laws are relevant within the context of privacy and spam: the law on telecommunications (LTC), the law on unlawful competition (LCS1) and the law on data protection (LPD). At the time of redaction the protection offered against mobile spam and the problems created by the development of new technologies have not been sufficiently foreseen by authorities; thus bringing out interesting issues [Camponovo and Cerutti, 2004].

In July 2002, a project of modification concerning the law on telecommunications has been launched. Dispositions 45 a and sqq in the LTC would be added relating to the protection of user data. Moreover a new disposition 30 of the LCS1 which concentrates on advertising messages sent without the recipient's consent would be introduced.

The aim of these modifications is to align with the European legal framework by adopting an opt-in system. Three essential conditions need to be respected when an advertisement is sent:

- The recipient gives his/her prior informed and specific consent to the service provider
- The sender is explicitly mentioned in the message
- In each message the recipient has the opportunity to withdraw (opt-out) to such messages easily and free of charge.

The soft opt-in principle would also been used as in the European framework and similar conditions have been set up. [Camponovo and Cerutti, 2004]

The first pillar of personal data protection is stated in the new Swiss Federal Constitution (Art. 13 al. 2) (RS 101) which states that "*any person has the right to be protected against an abusive use of its personal data*". Then data protection is granted by three legal dispositions: the base principles are found in the Swiss Civil Code, article 28 on the personality protection and in the law on data protection (LTD) as well as in its implementing ordinance.

To complement these regulations and more specifically about massive electronic advertising, the law on telecommunications (LTC) imposes to networks operators the task of reducing the phenomenon by undertaking appropriate measures.

Location data can be used by networks operators to provide Location-Based Services with the recipient's consent. However the latter does not allow the transfer of these data to third parties.

We have just presented what is privacy, the problem stemming from the sending of unsolicited messages and the misuse of personal data. Then we have stopped on de facto standards that begin to be created in order to protect precious relationship between service providers and customers. Eventually the European and Swiss regulations have been enlightened. It is time to explicitly state

what issues are hiding behind the previous topics. In particular about what the various actors can have diverging positions.

First of all, customers clearly want their privacy and personal data to be protected but at the same time they feel tempted by the new services provided, between others, by the use of location information.

On the other hand service providers and networks operators want to maximize their profit and keep their customers as strongly as possible. Therefore they have to be conscious that a misuse of sensitive data could drive recipients to stop trusting the company and could cost them their reputation. They have the responsibility to build standards and enforcement mechanisms in order to care for these precious relationships and foster a transparent environment for customers.

As far as governments are concerned, they have to enhance security and protection of their citizens. Nevertheless it is also their duty to support the private sector so as to guarantee a flourishing economic environment. This challenge is consequently to find a utilization rate of personal data that can satisfy more or less all stakeholders of the Mobile Marketing environment and thus allows a win-win situation.

#### 3.3.2 Technological Issues

#### 3.3.2.1 Wireless security

Problems stem from the fact that mobile communications as radio transmission are more susceptible to eavesdropping. Cellular networks such as GSM and GPRS seem to be convincingly secure against interception on the wireless link [Camponovo and Cerutti, 2004]. In particular phone calls are protected by symmetric encryption based on a shared secret key stored in the SIM module and the operator's authentication center. Cryptography can be used to hide messages' content (confidentiality) and to establish the user's identity (authentication). This enables to build secure networks on top of unsecured networks [May, 2001]. Mobile commerce environment benefits from key and influent players such as mobile operators and device manufacturers. As the latter control important parts of the infrastructure, this allows them to impose security measures within the mobile commerce system. Moreover, since one of the main characteristics of mobile devices is to be personal, security features can be part of the customization of the device. On the opposite this is not likely with desktop machines as they may be used by several persons. More doubts about security could also be raised if customers have to enter their credit card numbers in the mobile device by themselves; consequently the challenge for device manufacturers is to bury security mechanisms within the device.

Even if they manage to integrate security system inside the mobile phones, another non technological issue appears: device theft. The issue arises from the always smaller size of devices and to the constant use, thus facilitating stealing or loss. The idea to turn mobile phones into wallet may be technologically brilliant; however purses are one of the first targets for burglars. A solution for hardware designers could be to introduce theft alarms and other features to prevent robberies. [May, 2001

Another problem comes out due to the store forward nature of SMS; messages are vulnerable to being corrupted due to unsecured transmission between bases stations and the wired part of the network. Messages are stored on a server before being forwarded to the receiver. There is no mandatory encryption and access protection for storage. The only way to secure the entire transmission would be end-to-end security [Consumer Affairs Victoria, Department of Justice, 2002].

Security remains an important issue particularly for mobile commerce service developers since customers are particularly sensitive about the safety of their transactions. Moreover media have played a significant role in giving the impression that all systems were vulnerable. This may be not true, but often companies do not consider end-to-end security seriously enough. This can unfortunately make the whole system vulnerable.

#### 3.3.2.2 Device Technology

One of the European Mobile marketers' major problems has been the *graphical* limitations of short message service. It was already mentioned above in the text, but it represents one of the key technological issues. This is particularly difficult to design attractive advertisement with a restriction of 160 characters; therefore most of the time Mobile Marketing is only used either as an additional communication channel or as a feed-back channel. The mobile environment is nevertheless constantly moving and developing: for example one can already see that MMS replaces SMS and enables more complex graphical designs as well as short movies ... The challenge for device manufacturers is to

adapt technology to the mobile commerce marketplace's growth. Mobile phones with higher resolutions and multicolor-displays are developed in Japan but unfortunately cannot be used in Europe by lack of common standards.

The issue is additionally to agree on standards which would enable interoperability and the occurrence of similar technologies everywhere around the world, making people really mobile.

Other restrictions have to be solved such as *memory* limitations, *battery* limitations which limit the use of mobile device.

Memory limits are also an essential feature for Mobile marketers, forcing them to realize that the number of SMS sent during an advertising campaign has to be taken into account. Recipient will probably be bothered if his/her mailbox is full of advertisement, instead of friend messages.

Then the drawback of colored screens and higher resolutions is certainly that the battery is more rapidly empty, compelling users to have a place to charge their device.

In the same idea, *obsolescence* is also an important topic: cells phones have become a society phenomenon and fashion items. Nowadays mobile devices play several roles in a person's life, mainly the one of personal equipment, the latter collides with the fashion and design characteristics. In particular it is annoying and risky to transfer one's personal information from the old device to the new one, particularly if the only reason for that is fashion! Progress has to be made with regard to transferring capabilities of devices assuring users not to lose all their data. For example people taking advantage of mobile portals have already a larger set of possibilities to outsource their details [May, 2001].

#### 3.3.2.3 SMS Gateways

The sending of short message service is done through the intermediary of SMS gateways. This constitutes another issue mainly in the area of location- and time-sensitive services: technical barriers in the transmission process might prohibit the expansion of the latter type of services; particularly if a message is delivered late or never goes through. This can be a serious hindrance for service providers and technology improvement could solve this kind of problems.

#### 3.3.2.4 Context and mobility management

Another issue derives from context aware services such as LBS: location is only a part of the context's definition. This means that other aspects must be considered to deliver relevant and sensible services. For example, what is called social mobility has to be taken into account. The latter concept represents the fact that nowadays everybody plays several roles in his/her life. To deliver a worthy service for users, service providers need to figure out not only the place where a customer is standing but also the role he/she is playing at the time of the service's delivery. Technological challenge here is not only to locate a consumer but to, furthermore, understand his/her behavior and tasks at a precise time. The risk of sending inadequate messages increase as the person's mobility increases. Indeed, mobility can induce changes in the validity of information, bringing out a growing demand for topical information. This forces content providers to better deal with personal mobility to guide customers in the changed situation. Expectations set for systems maintaining information pertinent are fairly high. Location based services are, thus, more complex to manage than many other types of mobile services because they are mobile from two points of view: first of all, they can be carried everywhere with a user but more importantly they are used while on the move.

#### 3.3.2.5 Network technology

Eventually the last issue the authors desire to mention is not exclusively found in the Mobile Marketing environment but seems to be an important technological topic. This has an impact on Mobile Marketers due to the importance of mobile operators and their dominance in the transmission process. The use of other network technologies such as computer-based or self-organized ones could limit the influence of mobile operators on the whole value chain. In particular, if systems such as WIFI were adopted, the use and legitimacy of SMS would be questioned. The issue for Mobile Marketers is to understand these possible technological developments and the customers' needs and behaviors. Hence they could build solutions to carry on delivering Mobile Marketing in case the SMS's rupture point has to come.

Networks operators should also take these new technologies whose consequences could be to lessen their power on the value chain. Opportunities have to be discovered and even the worst scenarios have to be envisaged.

#### 3.3.3 Economic Issues

One of the economic questions mobile operators can ask themselves related to mobile spam is to know whether an augmentation of SMS's prices would decrease mobile spam. Indeed the email spam phenomenon is so extended mainly because electronic mails are free of charge. The issue is to make out whether customers, who are the first to be annoyed by unsolicited messages, have to pay for those spammers. Moreover, short message service's prices are already judged to be too expensive: "Would people be willing to pay even more to decrease the spamming trend? " is one of the questions network operators need to answer.

Another question relating to the prices of short messages is to understand to what extent they are a hindrance for Mobile Marketing's expansion: do customers agree to pay for answering to games/advertising or to be offered mobile services? The point is to produce relevant and valuable services for customers in order to lessen their skepticism about Mobile Marketing; thus this would constitute a win-win situation, where, on the one hand, supply side actors can earn profits and, on the other hand, customers benefit from the advantages of customized and worthy services.

Once again relating to mobile operators, their principle economic problem is the development of consumers' willingness to pay for media and commerce possibilities of 3G networks. Indeed the costs to build a new infrastructure and the heavy charges of 3G spectrum highlight several issues concerning mobile commerce in general but also more specifically related to Mobile Marketing, hence placing players among the value chain in a critical position. The spectrum prices are not believed to decrease since it is a scarce resource and an addictive source of revenues for governments. Are the latter ready to destroy their national mobile marketplace by indirectly taxing it [May, 2001], are customers ready to opt in to services proposed by the intermediaries of 3G networks? , will mobile operators and service providers manage to convince their public about the necessity of these networks? are questions typically enlightened by this issue.

#### 3.3.4 Geographic Issues

The main characteristics of the Internet are the removal of geographic barriers and the globalization of marketplaces. This makes it extremely difficult for corporations and governments to block the access to sensitive information placed on the Net.

Nonetheless what makes the force of mobile operators in a certain continent or country, will not assure a success all around the world. May [2001] takes the example of the successful i-mode in Japan which cannot be run in Europe due to its use of packet-based wireless networks whereas European networks are non packet-based. Differences in regulations, customers' adoption and adopted technologies raise the question to know whether global or local companies would be advantaged in the future. Will *interoperability* be possible across countries and continents? Will have local or global companies the power and will be able to take advantage of the situation? At the moment Japan, the United States and Europe are three technological islands where interoperability is missing. Moreover regulations tend to be developed on national bases instead of international ones. For these reasons the authors believe that local Mobile Marketing companies could be in a pleasant position. One can notice that global brands build local operational units in different countries to deal with the national regulations and peculiarities.

## 4. Conclusion and future work

The aim of this report was to present and study the environment of Mobile Marketing using SMS within Europe and Switzerland. After having gone through the state of the art, we conducted an environmental analysis based on a framework composed of three elements: market, actors and issues.

In the part devoted to the market analysis, we saw that the SMS's importance has been increasing for years now. Nevertheless short message service is believed to reach its rupture point from now until 2007. At this point services such as location based services, entertainment ... become more and more present on the marketplace as individuals are getting more mobile everyday. This encompasses not only physical mobility but also social mobility. The latter underscores the fact that today's individuals play several roles at a time and continually switch from one to another.

Due to usage and popularity throughout Europe, the favorite tool to introduce Mobile Marketing campaigns. In 2003 39% of users in Asia received mobile advertising, 36% in Europe and 9% in the US.

Willingness to pay for mobile services depends on the offering and increases with the sensitivity of data.

It appears that mobile advertising is accepted more easily when delivered by a trusted party such as mobile operators. Moreover end-users accept to receive advertisements as long as the content is relevant and valuable for them.

Marketers seem to appreciate the effect of Mobile Marketing as, according to certain surveys, it produces higher response rate as other channels of communication. It is however necessary to relativize these results due to the novelty of this channel; response rate could lessen little by little.

Then we saw that Mobile Marketing campaigns are composed of four steps: concept, creative, delivery and analysis. The operational value chain represents the repartition of the players according to the task they achieve in the environment. Additionally we decided to include device manufacturers and regulation authorities, which might have a substantial influence. Eventually we presented the actors' value proposition and the interaction that link them. Four paths were identified depending on whom Mobile Marketing customers cooperate with. As for the fifth path, it represents the feed-back channel.

Privacy was the first issue to be treated: questions raised primarily concerns customers: clearly they want their personal data to be protected but at the same time they feel tempted by location-and timesensitive services. On the other hand organizations need to realize that a misuse of sensitive data could drive recipients to stop interacting with the company. They are responsible for the creation of standards and enforcement mechanisms. Governments' task is to enhance a secure environment for their citizens and to support the private sector so as to guarantee a flourishing economic atmosphere.

Considering security mechanisms we realize that the challenge for device manufacturers is to bury them as people highly fear for the security of their mobile transactions. "How do players deal with the store-forward nature of SMS" and "what they achieve to introduce end-to-end security" are problems raised within this framework.

"Will short message service be replaced by MMS due mainly to their graphical limitations?", "what can device manufacturers do to solve memory and battery limitations? " are questions, whose importance is growing with higher-resolution devices.

Can we consider what implications will have a broader adoption of systems such WIFI on the use of SMS for Mobile Marketing campaigns? The challenge for Mobile Marketers is to anticipate these changes to preserve their revenues.

Finally, national regulation and the local characteristics of mobile networks seem to place local Mobile Marketing firms in a profitable position. The question is now to know if they will take advantage of this valuable situation.

This analysis is a first step towards a thorough study of the Mobile Marketing environment. However the three elements presented before in the text are open systems and therefore interact with one another. With the help of the same model, we could go further and try to measure the influences of a factor on the others. A part of the work could be an actor/issue analysis: the construction of tables using, for each actor, his position, influence and salience about an issue is a solution [Camponovo et al., 2004].

A following stage to complement and facilitate the measurement of influences is to conduct interviews and surveys within the industry framework. The data could then be examined by means of different analyses such as position, disruption and concurrence analyses.

Thanks to the results obtained in the further steps, scenarios [Camponovo, Debetaz and Pigneur, 2004] could be created to apprehend the evolution of the Mobile Marketing environment in the future while trying to keep a methodology as systematic as possible.

# 5. Acknowledgement

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# 7. Annexes

# 7.1 Other Mobile Marketing Campaign's illustrations



Source: <u>www.12snap.com</u>

# 12snap triumph again at Cannes: 2 Lions this time for Coca-Cola's "Message in a Bottle" mobile campaign



Source: www.12snap.com

# 7.2 GSME Statement on Spamming

GSME welcomes the Commission's initiative to set-up this workshop and would like to use the opportunity to highlight the mobile operators' perspective.

First, it should be noted that spam, or unsolicited commercial communications, is still a relatively rare phenomenon on mobile networks. Although there have been cases of spamming of mobile users, it is still a minor problem in comparison to the amount of unsolicited communications sent on fixed networks every day. This is mainly due to two factors:

1) The current charging structure on mobile networks where the sender pays for sending the SMS or the MMS. In other words, there is an economic <u>disincentive</u> to unsolicited bulk messaging on mobile networks which has proven to have a deterrent effect on spammers so far.

2) Trace-back and security features of mobile networks make it easier to reveal the origin of a spam SMS or MMS than it is to follow a path of a forged IP-address.

Nevertheless, GSME recognizes that since networks and services are converging, mobile users run the risk of being increasingly exposed to spam unless relevant actions are taken. The success of mobile communications is largely due to the fact that it has the character of being a personal communications tool. As such, users generally perceive spam sent to their mobile devices far more intrusive than spam targeting personal computers. GSME member companies are committed to fight spam and to protect its customers from this nuisance.

However, in order for any measure to be effective, a higher degree of harmonization and consistency is needed as regards the transposition of the Directive, application of the new rules, and co-ordination of actions undertaken by different authorities. Where appropriate, we would like to elaborate on these points during today's sessions.

**Session on Implementation and Enforcement issues:** GSME would like to reiterate and stress the importance of balanced and correct information to European consumers and businesses on the new EU rules to fight spam. In fact, a soft opt-in regime has been adopted in Europe and this fact is nowhere to be found in the Commission's working document/issue paper.

Any awareness campaign or action by the Commission and Member States directed to the general public should not only clarify the new opt-in obligations under article 13.1, but also the rights obtained by companies to market its own products and services under article 13.2.

To achieve a truly harmonized Internal marked and a level playing field both the rights and the obligations under the Directive must be respected by Member States in the implementation process. Failing to do so will result in an ineffective legal framework. It should also be noted that any self-regulatory measure, such as codes of conduct or industry guidelines, as well as the implementation of effective filtering mechanisms will be hampered by diverging rules.

**Session on self-regulatory and technical issues:** GSME welcomes the Commission's views on various filtering and anti-spam techniques and practices. In this respect, it should be noted that effective filtering mechanisms normally entail significant financial investment which service providers need to recuperate through its commercial offers and services. While Member States and public authorities need to clarify the legal conditions for filtering software, all other aspect of filtering techniques should be left to the market players to handle. Effective filtering must be accompanied by information campaigns. Users need to be alerted and made aware of the tools that are at their disposal and how to protect themselves from spam. Mobile operators' customer support services already handle spam complaints today and some operators are considering special help lines and procedures.

**Session on awareness issues:** As already expressed, any awareness raising campaign or action by the Commission and Member States directed to the general public should not only clarify the new optin obligations under article 13.1, but also the rights obtained by companies to market own, similar products and services under article 13.2.

It is essential to stress that the soft opt-in regime gives service providers the right to use commercial communications to market similar products and services to their customers provided that they are given to opportunity to opt-out at every occasion.

Unless users and consumers are made aware of the idea behind the 'soft opt-in' regime the EU has adopted, legitimate marketing of companies' own product and services could be perceived as unsolicited communications to the detriment of European companies.

Source: European Commission Workshop on Spamming; Brussels, 16th October 2003