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Nice Mobile Services do not Fly. Observations of Mobile Services and the Finnish Consumers

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However beautiful the strategy, you should occasionally look at the results.

- Sir Winston Churchill

Abstract

When the short message service (SMS), was first initiated in 1992 nobody could foresee its tremendous popularity. Simple in design, easy to adapt and effortless to employ it rapidly became a profitable, matchless, globally used mobile service – referred to as a "killer application". Ever since the quest for the next mobile service "killer application" has continued. Year after year the mobile service market(s) produce(s) new services and applications that due to complexity or lack of relevance fail to meet the consumers' expectations. In this paper we will discuss three mobile services that commonly have been described as promising and innovative: mobile games, mobile television and snapshots with mobile phones, in an attempt to understand their potential for becoming successful services. We will study the Finnish mobile services market from two different viewpoints: on the one hand what Finnish experts and professionals on mobile commerce think the consumers want, and on the other hand, what the consumers actually use and will use in the future. In his way we will show some identifiable reasons for the discrepancies between mobile services offered and mobile services actually used. The analysis is based on our 2004-5 consumer surveys of mobile services combined with some insights from our 2004-5 Finnish expert studies on mobile commerce.

Keywords: *mobile, service, Finland*

1. Introduction

There has been a lot of discussion why certain mobile services have not been successful in the European markets, even if the devices making them possible are finding their way to consumers. Also many of these services seem to be mere extensions of the original services than true innovations. Even the successful innovations are sometimes developed more by accident than by design, for example SMS was intended as a new kind of pager, not as the communication means it is today.

Here we will concentrate on the Finnish market, generally seen (at least outside Finland) as a technologically advanced market with a population ready and willing to adapt to new services. As we have found in our empirical studies (cf. Carlsson et al 2005, 2006), there is a supply-demand mismatch for mobile services in Finland; even in Japan and Korea, considered forerunners in adoption rates of mobile services, rather basic services such as messaging and ring tones have been most successful (Funk, 2005; Srivastava, 2004; Kim et al., 2004). Basic services have during recent years been popular also in Europe (Carlsson et al., 2005, 2006; Mylonopoulos & Doukidis, 2003), but more advanced services have not yet found their ways into the everyday lives of consumers.

Although many promised new services have been attributed to 3G (Robins, 2003; UMTS Forum, 2003), they have in fact already reached mature stages. Even services, which rely on graphical browsing or multimedia messaging, have approached basic availability for regular users. Information services, ticketing and different forms of entertainment are maturing services which can be used over a number of mobile technologies, including SMS (Short Message Service, e.g. text messaging). Studies of the mobile Internet tend to neglect this because they do not consider SMS to be an Internet technology (cf. Ishii, 2004; Funk, 2005).

Jenson (2005) openly criticizes the mobile industry for adopting "default thinking", which leads to failed consumer products and services. He illustrates this by using an industry comment "MMS is an extension of SMS and therefore a natural progression for the industry". What is missing here is that MMS is a much more complicated service to use and most users do not see enough added values over SMS to adopt MMS; what is needed is a value adding usage context. Mobile phones with wireless data capacity are another "inbred" design. Jenson claims that the industry looked backward and saw the web. So this led to the following equation: "the Web is hot, phones are hot, and therefore web + phone have got to be hotter".

The basic challenge is to understand how and why people adopt or do not adopt mobile services. Jenson's approach suggests that the industry aims and consumer needs do not match; consumers are not part of the content/use context design process. Technology development is often seen as the key in service adoption, but as Anckar and D'Incau (2002) pointed out, more is needed. Sarker and Wells (2003) mention that there is missing a clear understanding of the motivations and circumstances which guide consumers to adopt and use mobile devices. As they realize that there cannot be any business applications unless there is (cf. Sarker and Wells, 2003, p. 36) "widespread proliferation of wireless devices and related applications, there is a clear need to comprehend how and why individuals (potential m-commerce consumers) adopt such devices". Knutsen (2005) illustrates that even if research on culture, infrastructure, inter-firm collaboration and business models may shed light on the phenomenon; the basic recurring theme suggested for further research is the value of services for the user.

The present study is more an explorative than a validating/verifying study, which is why we will use a simple theoretical framework. We have chosen to apply the *Braudel Rule* (cf. section 4) as a theoretical framework to find out why and how mobile services can make sense as a basis for viable business. The paper is structured as follows: in section 2 we will give a brief summary of the Finnish mobile services market and contrast it with

some material from other markets; in section 3 we will work through and compare the results of the 2004 and 2005 Finnish consumer surveys on mobile services and compare the results with the expert surveys carried out the same years; in section 4 we will use the results from the empirical studies to discuss the future potential of three mobile value services – mobile games, mobile television and snapshots with mobile phones; section 5 is a summary and offers some conclusions.

2. The Finnish Mobile Services Markets

Advances in mobile technology are enablers for mobile services and we may expect that the emergency of these advances will drive both the materialization and the acceptance of new and/or enhanced mobile services. The mobile communication market in Finland has experienced quite a rapid growth over the last decade in terms of subscribers, mobile devices and mobile services. The number of mobile phone subscribers was in 2005 around 5.4 million and exceeds by far the number of fixed-lines and the penetration rate of mobile phones is more than 100 per cent. The mobile phones with GPRS, WAP, MMS and Java features was 1.8 million units by the end of 2004, representing around one third of the total mobile phone subscriptions in Finland. About 75% of the phones had features required for using new mobile services, such as WAP or MMS services (cf. Ministry of Transport and Communications Finland, 2005; The Association of Electronic Wholesalers, 2005). The technologically advanced mobile phones encourage users to try out new services, but the adoption rate of mobile services has not progressed as expected (Carlsson et al., 2005). Though the market shows positive signs of growth, the consumers are not willing to pay for the available mobile services (Rantanen, 2006; Carlsson et al. 2005, 2006): a recurring theme in our consumer surveys has been that both the start-up costs and the costs of using the services have been too high. This at a time when the network operators are involved in a long and taxing price war for both voice and SMS services, which now is restructuring the supplier market.

Mobile phones with an integrated camera has become very popular in a short time and were approximately 620 000 at the end of 2004, which corresponds to 12% of all mobile phone subscriptions. The installed base of smart phones was over 200 000 units, representing a 4% penetration compared to all subscriptions.

The future of mobile telephony relies very much on services. The total value of the Finnish mobile services market in year 2004 was 247 million euros (a growth of 11 per cent from 2003). When categorizing the mobile services in person to person messaging (PPM), content services and data services it was found that all three categories grew in 2004. The PPM was the largest category by revenue, representing 64 per cent of the total mobile services market value, and the market grew despite the declining average prices per message as the volume growth outpaced the average price decline in 2004.

Mobile data services show the strongest growth of the service categories in 2004. The market value grew 26 per cent to 21 million euros.

Nevertheless, the emerging mobile services are not even close to the SMS. Citizens (5.3 million people) sent 2241 million text messages in 2004 (an average of 37 text messages per month per person) with a market value of 203 M€. In comparison, there were 7.4 million MMS messages representing a market value of 1.7 M€. It appears that acquired habits have a strong influence on the medium of choice and that new mobile services have to gain the same status in order to make a breakthrough.

In 2004 the value of the content service market was 67 million euros a 16 per cent increase over 2003 with ring tones, directory services and chat services the largest revenue providers. The market value for premium voice services was 120 million with directory services and taxi orders the most used services..

Mobile services development in Finland has slackened compared to many other countries and the optimistic and experimental mood five years ago has changed to more conservative market operations. There are fewer risks taken with developing and launching new services. As an example, Finland was among the last countries to launch 3G-services among West-European countries, although Finland was known as a pioneering country for mobile services in 2000-2002 (Ishii, 2004; Ministry of Transport and Communications Finland, 2004). The World Cellular Information Service reported in February 2006 that the fastest growth in mobile data services is found in Asia (Indonesia, Japan and Korea) and that Europe is lagging in producing value adding data services.

3. The 2005 Finnish Consumer Survey on Mobile Services

3.1 Sample Profile

The 2005 Finnish consumer survey on mobile services was conducted during mid-April – mid-June 2005. The target group consisted of 1000 habitants of mainland Finland together with the residents in the archipelago region. A random sampling was used to select the survey participants whose prerequisite was to be between the ages of 16-64 and have Finnish or Swedish as their mother tongue. All in all 462 filled-in questionnaires were returned by regular mail, and therefore resulting in a 46.2% response rate.

Slightly over half of the respondents were females (56.8%) and those between 36-50 years of age formed the largest age group (36.8%). Most of the survey participants had vocational school as their highest level of education (24.2%), an annual income between €20 000 – 30 000 (30.2%) and belonged to the socio-economic group of manual workers (33.9%). A total of 94.6% of the respondents had a mobile phone in use and contradictory to the results of our previous consumer surveys in 2002-4, it was in a majority of cases (52.1%) a more advanced type of mobile phone, a device that at a minimum had a GPRS (general packet radio system) -functionality.

3.2 What the Finnish Consumers and Experts Say about the Mobile Services

Finnish Consumers

Even though a majority of the studied consumers in 2005 had a mobile phone in hand that was technically equipped for the use of more sophisticated mobile services like MMS (multimedia messaging service) and mobile Internet, the most popular services utilized on a regular basis were the simple ones: SMS (92.8%) and search services (37.0%); the search service is like requesting a phone number by either sending a text message or employing a WAP (wireless application protocol) service (cf. Table 1).

Table 1: Current and future use of mobile services by Finnish consumer in 2005 compared with the results from Finnish consumer survey 2004.

Services	Regular use (%)	Only tried (%)	Aggregate 2005 (%)	Aggregate 2004 (%)	Would use in future 2005 (%)	Would use in future 2004 (%)
SMS	92.8	3.5	96.3	96.1	89.9	86.7
Search services (address, tel.)	37.0	29.5	66.5	62.8	62.0	59.2
Ring tones	12.8	45.0	57.8	57.6	39.2	36.4
Icons, logos or (wallpapers)*	11.1	42.8	53.9	58.2	36.0	35.2
MMS	21.0	18.9	39.9	18.2	56.9	46.2
News and weather	12.0	19.9	31.9	24.7	32.7	23.2
Reading/sending mobile e-mail	16.4	13.0	29.4	22.6	55.6	49.3
Internet surfing/browsing	11.8	13.7	25.5	20.3	31.6	29.1
Humorous messages	5.2	17.3	22.5	24.6	11.1	15.2
Checking flight/train timetables	6.4	12.3	18.7	13.2	45.5	45.5
Payment (micro, midi)	8.7	14.4	23.1	14.8	35.8	29.5
Routine m-banking	6.6	9.2	15.8	12.0	32.1	40.0
Games	3.3	12.5	15.8	8.0	8.4	6.1
Buying and downloading music	5.0	12.5	17.5	14.3	22.0	17.7
Event specific services	5.2	10.2	15.4	12.0	14.0	9.6
Shopping	5.0	11.3	16.3	11.9	20.4	18.4
Reservation of a movie, etc. tickets	5.9	7.7	13.6	13.6	37.9	36.6
LBS (restaurant, hotel, etc.)	5.4	7.3	12.7	8.4	48.7	43.4
Chat	2.8	7.1	9.9	6.8	6.4	3.3
Health care services	6.6	5.9	12.5	8.0	31.7	26.5
Video calls	6.6	3.8	10.4	-	23.6	-
Checking stock rates	3.5	2.4	5.9	3.7	10.4	8.6
Hotel presentation a/o making a reservation	3.3	5.2	8.5	6.8	33.4	31.6
Insurance services (info search)	4.0	3.5	7.5	4.2	23.2	21.2
Wireless alerting/security system	7.5	2.6	10.1	6.3	45.0	40.1
Mobile TV	3.5	4.7	8.2	-	15.4	-
Making a reservation a/o buying flight/train tickets	5.0	5.0	10.0	7.6	38.7	39.5
Locating family members	5.7	3.3	9.0	5.2	38.5	36.8
Lotto, tote etc.	3.8	3.3	7.1	4.3	22.6	21.8
Adult entertainment	1.9	3.1	5.0	3.7	3.6	2.1

Consumer survey 2005 Finland n=418-426 (current use) and n=396-421 (future use)

Consumer survey 2004 Finland n=419-438 (current use) and n=407-427 (future use)

** = wallpapers were not included in the group of icons and logos in 2004.*

It is interesting to note the differences in consumer response (cf. Table 1) when compared with what the experts believe that the consumer response will be (cf. Table 2). It appears

that in the Finnish mobile services market the prevailing ideology has been to push services to the market in the hope that the consumers can be activated/trained/persuaded to adopt the services before they have to be withdrawn because of a lack of cash flow. As this policy is driven by the experts, who appear not to be concerned with the actual consumer demand, at least a partial explanation can be found for the slow uptake on mobile services.

The mobile services the respondents had been most curious to try were ring tones (45.0%) and icons, logos or wallpapers (42.8%), which all are also accessible by SMS. The mobile services the consumers would be most willing to try in the future were MMS (56.9%), Mobile email (55.6%), Location based services (48.7%) and Checking timetables (45.5%). Datamonitor in February 2006 predicts that mobile email will be the next fast growth service: there are now 650 million corporate mailboxes in use worldwide of which Datamonitor claims that 35% could be mobilised (Eazel, 2006; Cellular News, 2006).

Similar results to the ones shown above have been obtained in previously conducted surveys by the National Consumer Research Centre (NCRC) in Finland. In 2003 and 2004 some 1000 panellists of NCRC listed the mobile services they use on a regular basis as well as the ones they just have tried. In both years the communication service SMS was the most commonly employed mobile service; 97.1% in 2003 and 96.4% in 2004, respectively (Hyvönen and Repo, 2005).

Finnish Experts

The expert surveys in Finland have been carried out annually since 2001. The primary goal when the series was started was to get insights into the actual status of mCommerce and its progress.

Table 2: The likelihood of firms achieving a satisfactory level of revenue for the listed mobile services in the next 18 months. Estimation done by Finnish mobile service industry experts in 2004-5.

Services	Mean 2005	Mean 2004	Services	Mean 2005	Mean 2004
SMS	4.10	4.13	Chat	3.19	2.93
Search services (address, tel.)	3.95	3.80	Mobile e-mail	3.10	3.00
Adult content	3.86	3.67	Event-specific services	3.00	2.73
Games	3.67	3.87	LBS (e.g. locating a restaurant)	3.00	2.73
Downloading/purchasing music	3.67	3.93	Lotto, pool betting etc.	2.90	3.20
Ring tones	3.52	3.80	Mobile surfing/browsing	2.86	2.87
Mobile payment (micro/midi)	3.48	3.60	Brokerage services (e.g. stock rates)	2.76	2.67
Ticketing (e.g. movie tickets)	3.48	3.47	Shopping	2.59	2.53
Weather services	3.43	3.40	MMS	2.52	2.80
Flight/train timetables via e.g. SMS, WAP [2005]	3.40	x	m-Banking services (routine)	2.52	2.80
Icons, logos a/o wallpapers	3.33	3.60	Mobile TV	2.36	2.60
Hotel info a/o room reservation via e.g. SMS, WAP [2005]	3.32	x	Mobile video call	2.05	2.13
News services	3.19	3.33	Flight time tables, check-in, hotel reservation [2004]	x	3.33

The Finnish expert survey 2005 n=22, The Finnish expert survey 2004 n=15

A 5-point scale was used where 5=Very good and 1=Poor

The target group was set to include (i) 50 industry experts and decision makers from companies that were offering m-commerce products/services, and (ii) managers of companies providing consulting, financing and/or infrastructure for mCommerce since they were seen to have sufficient expertise and knowledge. The expert surveys have been carried out with web questionnaires; the potential respondents were contacted via e-mail and/or by phone. In order to increase the response rate and as a token of appreciation, summary reports of the results were made available for the respondents.

If we compare Table 1 with Table 2 a number of interesting observations can be made:

- On SMS: the experts believe that the saturation level has been reached; the consumers intend to increase their use of SMS – this is also shown in the volume data collected from the market
- On data services ["search services" in our survey]: both experts and consumers expect and report increasing use, which the market data shows is increasing slowly
- On ring tones, icons and logos: the experts rate these as less interesting and decreasing; the consumers display a growing demand
- On games and music: the experts believe more in these services than the consumers, but the experts downgraded them from 2004 to 2005; market data shows that the uptake is rather slow as the consumers – except for the youngest consumer group – need to find a context for using these services

- On adult content, entertainment: the experts expect these to be fast growing mobile services; the consumers rate them as of no interest, which may be a result of the fact that few survey participants will admit to have an interest in adult content (even if the survey is totally anonymous)
- On news and weather: the experts are not keen on this service but the consumers show a growing interest in the service with a very visible strengthening of the interest from 2004 to 2005 (probably caused by an increasing availability in a user-friendly form)

Here we will not go more deeply into the comparison and analysis of the cause-effect relations but it appears to be safe to conclude that (i) consumers are much more conservative than expected in adopting new mobile services, (ii) that they do not start using mobile services even if their phones have the technical capability of supporting them, and (iii) experts predict the adoption and growth of services which are not visibly relevant for the consumers.

We will in the following briefly discuss three potentially important mobile services using the empirical data as a background. The three services we selected (out of 30 services studied) have been identified as an emerging generation of (more) advanced mobile services in several studies (cf. section 4).

4. Three Mobile Value Services

The *Braudel Rule* (cf. Keen, 2001) is a useful instrument for judging if a mobile service qualifies as a mobile *value* service: it should *change the limits of the possible in the structure of everyday routines* – in which case it will be part of the everyday lives of the users and get adopted as a routine which will be sorely missed if it for some reason is no longer available. This simple idea, which is intuitively easy to support, has proved very useful for evaluating mobile services (cf. Carlsson et al (2005), (2006)).

4.1 Mobile Gaming

There is currently a great deal of variety and options for gamers: computers, consoles such as Nintendo Gamecube, MS Xbox and Xbox360, Sony Playstation, etc. and handheld gaming devices either dedicated, such as Nintendo Gameboy variants and DS, or game capable, such as mobile phones and PDAs. Positioned somewhat between these is the Nokia N-Gage, which could be described as a dedicated hand-held gaming platform with built-in phone features. The most recent trend is for multiplayer gaming, either over the Internet (Worlds of Warcraft, Runescape etc.) and Internet-capable consoles (Playstation, Xbox Live, etc.) or device-to-device gaming, as with the Gameboy. Thus we have two different gaming contexts: human(s) gaming with a device and humans gaming together. When we add the fact that most games are published to different kinds of devices, for instance game X is available for the console and for hand-held devices with a possibility to continue gaming when switching between devices, the chain starts to look complicated. Add to this the fact that mobile (phone) gaming requires that a game must be adapted to multiple phone types mainly due to differing screen features. Thus, if we want to turn mobile gaming into a mobile value service we have to cope with a number of features which are not well understood individually and even less understood in combinations. The features need to be worked out before it is possible to construct a viable business model for mobile gaming.

In our empirical studies mobile gaming did not gain much support among the general population but the number of respondents who have tried mobile games had increased

from 2004 to 2005. The experts rated games high among potential mobile services but the rating had *decreased* from 2004 to 2005. In terms of the Braudel Rule mobile gaming will change the limits of the possible for the gamers who switch from consoles to handheld devices, but it appears that the gamers still form a small minority of the general population. The N-Gage (http://www.n-gage.com/) unearthed an interesting phenomenon through the N-Gage Arena: gamers form a virtual community in which they assume artificial identities and compete to gain status among their peers. The value forming mechanisms of virtual communities are not yet well understood and it may be worthwhile to take a closer look at the *secondary* value added features which may be part of the mobile value added services.

However, many industry experts believe in the mobile gaming. As a typical example, Juniper Research (2005a, 2005b) predicts that the money games and mobile games will become the second most important source for data revenues (after music) worldwide by 2009. In Asia the mobile games are already a revenue generating service, which has overtaken personalization services. The literature shows (see for example Steinbock, 2003; Orange, 2006) that the adoption of a payback model that leaves a large slice of the individual purchases to the publishers is a key driver for this development. There is some further insight which is worth mentioning: the mobile game is an almost ideal digital product - it has low transaction costs (delivery via networks), its copying costs are near zero and it extends the main brand cost-effectively (see for example Shapiro and Varian, 1999 or Schwartz, 1999).

4.2 Mobile Television

The Mobile TV service is becoming visible as a new technology to be pushed to the consumer market. We tested the interest for Mobile TV in our consumer survey in 2005 (cf. Table 1) but attracted only a 15% interest to try it in the future – the main reason was probably that the concept and the technology were unknown to the consumers. Siemens in a recent study in 8 countries (February 2006[1]) found out that 59% of the respondents indicated an interest in Mobile TV but also found that in Korea the indicated interest was 90%. As usual this is not the whole truth - the high numbers of "indicated interest" is a long way from turning an offered or (in this case) proposed service into revenue generating mobile value service.

In terms of the Braudel Rule Mobile TV should be successful in changing one of our more established routines – that of watching TV – into a service (or a system of services) which will change the limits of the possible in the blissful enjoyment of being entertained by TV programs. This will probably be a tall order and there are a number of challenges to be met and overcome.

The Mobile TV device should produce an image quality which is not significantly inferior to the standard established by regular TV, even if the screen size is much smaller. The network coverage and the signal strength should be sufficiently good to give the viewer an uninterrupted service of comparable quality with regular TV. As most Mobile TV networks still are not much less than prototypes there is still some way to go before the transmission quality is sufficiently good.

Another crucial feature of Mobile TV is the programming: it is reasonable to assume that the standard TV format cannot and should not be used as such for mobile TV. The standard format is designed and implemented for a sizeable screen, today typically 32-40", for watching indoors in well-lit and quiet surroundings in a comfortable setting. The Mobile TV was announced to be planned for public transportation or otherwise on the

1 From www.digitoday.com (news_id=53397)

move, for breaks during a working day or when waiting for some activity to start during free time, when waiting in traffic lights or when there is a need to follow breaking news or the key action of some sporting event. Nevertheless, the programming format for the 500 volunteers in the Finnpilot study of Mobile TV in the summer 2005 was standard TV and it appears that the user context for Mobile TV was not thought out neither planned. In the Mobile TV setting the standard format does not work: if you want to follow a comedy or a similar program you need at least 10 minutes, which is the wrong format for Mobile TV where you share your attention with other things.

It appears that on-demand news or a non-stop loop programming with a max duration of 30-45 minutes would be better than the traditional TV format; mobile TV users could have e.g. 20 minutes time at a specific moment – then the service would be value-adding. Part of the non-stop loop programming could be to store the programs on the Mobile TV device and there is some indication that this will be one of the solutions for offering on-demand service (Seagate recently launched a 12 GB hard drive for mobile phones). Some of the ideas for mobile value services are programs which can be activated when there is time and opportunity to watch and specially designed programs (news, sports, cartoon, documentaries, etc.) where the core/key information can be absorbed in less than 10 minutes.

Mobile TV is an interesting service when travelling and the user is cut off from his/her normal TV watching routines; the value is in the potential to follow something which otherwise would be missed. Thus the Mobile TV should be made available throughout the country, which is in opposition to the present business model thinking that Mobile TV is a better business in the cities than in the country-side. The counterargument is that the opportunity to use TV services is much better in the cities and that the mobile service will be harder to position and turn into a value service.

If we return to the Braudel Rule the crucial point of success is when Mobile TV becomes a freedom for the users and becomes part of their everyday routines, a part which is important and which makes life harder if it is missing. Nevertheless, this will not happen at any price – consumers prefer affordable, fixed monthly costs which is a recurring theme in our consumer surveys. The early reports on business models promote the notion that networks would make a windfall with premium value services (but - regular consumers never buy anything at any price for very long). It might make sense to use the DVB-H (Digital Video Broadcast Handheld) only for mobile TV and to offer all support services as regular 3G or GPRS services, which will keep the costs down and will offer a good software challenge to integrate the two forms of services for various mobile devices.

4.3 Mobile Phones with an Integrated Camera

By the end of 2004 the saturation of mobile phones with integrated camera had grown by half million units and there were around 620 000 such mobiles devices, i.e. 12% of all mobile subscriptions in Finland. At the same time smart phones had a penetration rate of 4% (Ministry of Transport and Communications Finland, 2005).

The camera phone is basically a phone equipped with a lens, the essential part of a digital camera. The quality (resolution etc.) has improved markedly, but even the best camera phones do not match the quality of snapshots with a standard digital camera in terms of resolution, usability, picture transfer capabilities and photo settings possibilities.

The camera phone nevertheless has a key advantage as it is usually available. People generally carry their mobile phones with them: as an article in the Washington Post (Nogushi, 2005) aptly illustrates, there are a number of user contexts for the camera phone: natural or man-made catastrophes are now being stored in digital form and reported first by people experiencing them (which actually is a good representation of the Braudel Rule).

As a direct competitor to the digital camera, the camera phone faces the same problems as the gaming phone at being effective and competitive for something which is a secondary task. Recent articles in the Forbes magazine (Lidor, 2005) show that there still is a problem with building a viable business model: consumers are making more photos with their camera phones but the ratio of turning them into actual printed photographs is low. Key photo market actors like Fuji and Hewlett-Packard are optimistic about this ratio changing and turning camera phones into platforms for a new (mostly MMS based) graphic and imaging industry. The problems and possibilities are the same as with mobile games: seen theoretically the snapshot taken with a camera phone is an almost ideal digital product/service. It is stored in digital form, it can be shipped to printing via a network at a very low cost, and it can be shared with friends via a network at a marginal cost.

5. Summary and Conclusions

Quite a few mobile services have been launched without success in the European markets despite the fact that advanced mobile phones - which enable the services - are both well spread and accepted among the consumers. As the resources and the work invested in the services are quite significant it is interesting to find out why some services fly and others fail.

We have tackled the issue of mobile services in three ways: (i) we have studied the Finnish mobile services market with the results of our 2004-5 consumer surveys, (ii) with insights from our 2004-5 Finnish expert studies on mobile commerce and (iii) through a discussion of three mobile services that commonly have been described as promising and innovative: mobile games, mobile television and snapshots with mobile phones.

A selection of our results shows that,

- On SMS: the experts believe that the saturation level has been reached; the consumers intend to increase their use of SMS – this is also shown in the volume data collected from the market
- On ring tones, icons and logos: the experts rate these as less interesting and decreasing; the consumers display a growing demand
- On games and music: the experts believe more in these services than the consumers, but the experts downgraded them from 2004 to 2005; market data shows that the uptake is rather slow as the consumers – except for the youngest consumer group – need to find a context for using these services

We used the *Braudel Rule* as an instrument to judge if a mobile service qualifies as a mobile *value* service: it should *change the limits of the possible in the structure of everyday routines*.

We found that the mobile game qualifies as an almost ideal digital product - it has low transaction costs, its copying costs are near zero and it extends the main brand cost-effectively. Mobile gaming satisfies the Braudel Rule for gamers and it appears that there are secondary value added features derived from the virtual community formed by the gamers.

Mobile TV should be successful in changing the limits of the possible in the blissful enjoyment of TV programs, which may be a tall order. The crucial point of success is when Mobile TV becomes a freedom for the users and becomes part of their everyday routines.

We found out that the camera phone is competing with the digital camera, which is a specialized device for specific tasks, and should be effective and competitive for something which is a secondary task. In this the camera phone has a key advantage as it is usually available.

These results show that all three services have the potential to become useful, mobile value services but that they will have to go through 2-3 more cycles of evolution before becoming full-fledged implementations of the *Braudel Rule*. Thus they merit further research and systematic empirical studies.

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