MOBILE CONTENT SERVICES MARKET IN FINLAND 2009–2014

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PREFACE

This report looks at mobile content services market in Finland with a broad scope. The market size and market drivers for mobile content services, mobile marketing, mobile browsing and mobile device base are studied in the report. Market size for mobile content services is presented for the years 2004-2014. The market data for the years 2004-2008 are actual figures based on data gathered for this report. Years 2009-2014 are forecasts based on market analysis and up-to-date information available on the market. All the market figures and other content in this report are based on analysis made by Idean Enterprises consultants and represent the views and opinions of Idean's consultants.

The report is a multi-client study commissioned by the Ministry of Transport and Communications in Finland, Elisa, TeliaSonera, Teleforum and the Finnish Communications Regulatory Authority (FICORA).

The purpose of the report is to provide an overall view on the mobile content market dynamics in Finland. The report aims to help players in the mobile content market to develop new services based on solid understanding on the market. The report is carried out as a combination of desktop and interview study in April-May 2009. Major part of the report findings are based on in-depth interviews with players in the mobile content market and other market experts and Idean's database on mobile content services. These sources have been complemented with publicly available sources. The report has been conducted and written by Kalle Snellman, Senior Manager with Idean. Santtu Toivonen, Senior Market Analyst with Idean has contributed to some sections of the report.

The author would like to thank all interviewees for devoting their time and effort in contribution to this report.

May 29th 2009, Espoo, Finland
Kalle Snellman
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INTRODUCTION

This report looks at the mobile content services market in Finland with a broad scope including analysis on mobile browsing, mobile content services, mobile marketing, mobile device base and major trends in the market. The focus is on market sizing and forecasts. The viewed period is the years 2004-2014. The years 2004-2008 represent actual figures and the years 2009-2014 are forecasts.

MOBILE content market has attracted a lot of interest among entrepreneurs, operators, major corporations and media during the past good ten years. The development of mobile handsets, software and networks has continuously opened new opportunities. There seems to be no stop for the innovations and new market opportunities. However, monetizing many of these new opportunities has been challenging, as for most of all other online services.

A significant market for mobile content has emerged during the past ten years. Together with operators there are hundreds of companies and other actors in the mobile content market. However, it is fair to state that the market has not exceeded the expectations set in the early days of mobile content market. On the other hand, there are several successful players in the market and one should respect success stories in this demanding business environment.

During the history of mobile content market the opportunities have been over- and underestimated. For example ringtones were generally not expected to become a notable business in the early days of the market. On the other hand, news services were generally estimated to bring major revenue streams. Both of these beliefs have been proven to fail.

It is difficult to predict the future in this dynamic market environment. This report aims to give a solid ground for understanding the dynamics in the Finnish mobile content market.

Report objectives and contents

The report objective is to draw a general view to the mobile content market development in 2004-2008 and to anticipate the future developments until 2014. Mobile content services are first studied as a whole and then divided into information and entertainment services. Some of the key service areas among information and entertainment services are also analyzed separately.

The focus of the analysis is on premium priced mobile content services. Typically most of these services are purchased trough mobile operators billing mechanisms. There are some exceptions to this, such as some of the mobile navigation services. These services were previously sold mostly as boxed software in retail

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stores. Today the majority of these services are sold over mobile networks. Credit card payments of mobile content with a mobile phone are also included in the mobile content market figures. Today these represent a small fraction of the total market revenue. In the future their impact is forecast to grow.

The market definition for mobile content market has been slightly modified. Mobile marketing related communication was previously included in the mobile content services market. In this report these services are analyzed in the mobile marketing chapter. This has reduced the mobile content market retrospectively by one to two percent.

Conduct of the research

This report is a multiclient study commissioned by the Ministry of Transport and Communications in Finland, Elisa, TeliaSonera, Teleforum and the Finnish Communications Regulatory Authority (FICORA).

The research has been conducted as a combination of desk-top and interview study. The report has been written by Idean Enterprises consultant Kalle Snellman in May 2009.

The most significant sources for the report are interviews conducted in April and May 2009. Altogether 20 interviews were made for the study, including mobile operator, content provider and other market expert interviews. This data has been supplemented by using other relevant sources, including information published by content market players, authorities, research institutes and media.

The analysis in the report is based on systematic market research since the year 2000. Major part of the market figures for the years 2004-2007 are based on interviews made for the earlier reports in the series.

SUMMARY

The revenue of mobile content market totaled 69 million euro in 2008, which is equal to the previous year. The mobile content market consists of dozens of service categories with different market maturity stages and growth rates. Therefore it would not be fair to conclude that the market has saturated as a whole. The market growth is expected to remain moderate in the coming few years but to accelerate in the long run. Mobile advertising market is still in its infancy. However, mobile customer relation communication has become a significant market.

AMONG ALL all mobile content services, largest service categories by revenue included directory services, ringtones, public transport and chat & communities. Services that were growing and had a significant positive impact on the total market revenue in 2008 include directory services, public transport tickets, vehicle registry inquiries and mobile auctions. The market value of these services increased in 2008 due to the growing use of these services and the increased prices for some of these services.

On the other hand, the demand for many entertainment service categories has saturated. These include services such as ringtones, pictures and chat. The demand for ringtones and pictures peaked in 2006 and then started to significantly decrease after that. The market for these services would probably have decreased even more sharply had the entertainment service providers not have shifted the focus of the business model toward a subscription-based model. Previously, a great majority of these services were sold as pay per download. In 2008, a majority of these services were subscription services.

The share of information services of the total mobile content market continued to grow in 2008. The information services represented 56% of the total market value.

The biggest disappointments compared to expectations have been seen with mobile television and music services. Mobile television is currently commercially insignificant as well as full tract music sales to mobile phones. The future for these services is still open, however, and we will most likely see new attempts to increase the sales for these services.

The continuous growth of the content services market ended radically in 2007. The market revenue decreased by nine per cent mainly due to declining revenue for many entertainment services and mobile navigation services in general. Mobile navigation market dynamics changed thoroughly when Nokia started to offer free-of-charge one-year navigation subscriptions as a part of a handset purchase. This resulted in a four million drop in mobile navigation market revenue in 2007 compared to 2006. Prior to Nokia's market entrance, the mobile navigation sales were successfully dominated by dedicated software companies.

Application stores, public transport, music and games are expected to be growth drivers for mobile content market in the coming years. The rebirth of application stores is currently the most significant trend in the content business. These stores are set up by major global companies and their impact in the market is still speculative. If they succeed, they might change the market dynamics for many of the content service fields in the long run. Their impact in the market revenue in Finland was insignificant in 2008 and it is anticipated to remain moderate in 2009. However, they may have an accelerating significance in the years beyond 2009.

Over a million Finns accessed the mobile internet in 2008

The overall mobile internet usage has exploded during the past couple of years. The growth has been driven by many simultaneous developments, including upgrading the mobile device base with newer models, the improved mobile networks and the increasing amount of mobile-dedicated internet sites. Yet this has not migrated into growth in the mobile content market revenue.

In 2008, over one million Finns accessed internet with their

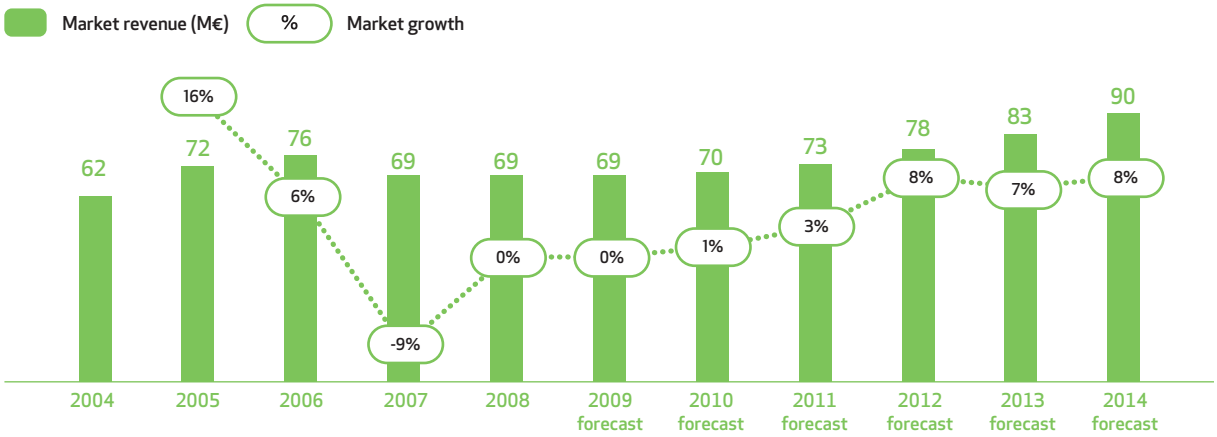


Figure 1 | Mobile content service market revenue in Finland 2004–2014

Source: Idean, 2009

mobile phones. Generally the top list of mobile-accessed sites corresponds with the list of most popular regular internet sites. News sites are among the most popular sites in both mobile and regular browsing. Social media and adult entertainment sites are also among the most popular mobile sites.

Mobile marketing waiting for its time

The mobile advertising market is still in its infancy in Finland. However, when looking at it in a broader scope, the mobile channel has been adopted within marketers in a large extent. The expenditure on mobile advertising was approximately two million euro, whereas that on other customer relation communication was roughly 10 million euro in 2008. The expenditure on advertising consisted mainly of SMS marketing and mobile banners in mobile sites, while other mobile advertising forms are still rather insignificant. Customer relation communication expenditure consisted of various forms of external and internal communication mainly via SMS.

Mobile device base is upgrading

The mobile device base has a strong influence on mobile content service uptake and development. The device base is developing continuously and today there are more mobile devices with advanced features than ever before. Smart phone penetration has increased and there were around 1.2 million smart phones in the Finnish mobile networks at the end of 2008. At the same time, the features in other devices have developed and the line between smart phones and other phones has become blurred.

KEY TRENDS AND HEADLINES IN THE MOBILE CONTENT SERVICES

Mobile content services have aroused broad interest for over a decade. Mobile device, network and internet technology developments have continuously opened new business opportunities. Currently the most topical issues in the industry include application stores, billing methods and the increasing use of free mobile content.

THE FOLLOWING TRENDS and headlines are expected to impact the future of the mobile content market in the following years. The nature of some of these issues is global and some are more local. However, all of these issues are expected to influence the Finnish mobile content market one way or another.

1 Global application stores attempt to change market dynamics

The nature of business is shifting increasingly towards global business as major global device manufacturers, software companies and internet players introduce their application stores. A majority of the applications will remain to be developed by small companies, but the application store providers attempt to become the chosen distribution channels for mobile content applications. In a way they are looking for a gate keeper position for the mobile content.

Download stores are connected to a broader phenomenon where major internet players are looking for ways to gain and lock customers for themselves. Email, photo and other services along with download stores belong to the services for gaining and locking customers. It seems like their strategy is to lock customers to their services and only then to look for business opportunities.

It is expected that application stores will compete with the current mobile content market players, at least indirectly. On the other hand, the current market players may also become application providers in these application stores.

Apple's App Store, launched in summer 2008, has set the standards and expectations for the application stores. The next upgrade of the App Store software is anticipated to support 3rd party billing within the application, which enables billing for the service usage after the downloading. Currently the application stores are provided by major device manufacturers, such as Apple and Nokia. In the long run we will see more download stores assuming that this business will become lucrative.

Apple's success with the application store is not to be underestimated and there is a great potential for all application stores. However, in the European market all the application stores will face a mature mobile content market and their potential may easily be overestimated. On the other hand, downloaded applications may also in the long run be challenged by the development of mobile browsers, which will allow more integration with the mobile devices operating systems.

2 Several billing methods are in use

Traditionally the premium mobile content has been billed via the mobile phone bill. Lately new billing methods have emerged for mobile content and it is anticipated that an increasing amount of mobile services will be billed through credit card and bank payments. One example is Apple's App Store where content is purchased through the iTunes account. Typically this is based on credit card or PayPal. Also Nokia has provided credit card as an option for shopping maps content.

Also credit card companies are introducing new technologies primarily to enhance the security of online payments. For example Visa is currently testing a new kind of a credit card that has a small screen and a numeric keypad. Also MasterCard has recently announced that it will launch a service in the U.S. allowing customers to send and receive funds by text messages, the mobile browser, mobile apps, or over the internet from a PC. It will initially only work with a prepaid Mastercard from Bancorp, but the company says it plans to get other issuers on board.

Yet none of the currently available credit card or bank payment methods make it easy to conduct mobile purchases and the mobile phone bill will remain to be the most convenient payment method for many services. However, operators are criticized for their billing service margins compared to those of credit card companies.

3 Need for IP-based billing method is immense

WAP billing has decreased as more mobile users enter WAP sites through an internet APN with their mobiles. Currently there is no way to charge for content if the mobile user is browsing WAP sites through an internet APN, because an internet APN allows WAP browsing but not WAP billing. This is anticipated to change when Finnish operators introduce an IP-based billing method. The mobile operators have not announced any details of such plans but they are generally assumed to be working on such developments.

4 New Directive on Payment Services (PSD) may bring challenges for some premium services

The Directive on Payment Services (PSD) provides the legal foundation for the creation of an EU-wide single market for payments. The PSD aims at establishing a modern and comprehensive set of rules applicable to all payment services within the European Union. The target is to make cross-border payments as easy, efficient and secure as 'national' payments within a Member State. The PSD also seeks to improve competition by opening up payment markets for new entrants, thus fostering greater efficiency and cost reduction. At the same time the Directive provides the necessary legal platform for the Single Euro Payments Area.

In practical terms the directive would determine how the money is transferred between a consumer and a service provider. It aims to cover bank transfers, direct debits, bank and credit card payments as well as some mobile phone payments. It could mean that mobile operators need to change their practices so that they comply with banking legislation, to some extent. The new legislation should become effective by the beginning of November 2009.

The consequences of the new legislation are still under speculation. National implementation may vary from one country to another. According to current assumptions the implementation of the legislation will be stricter in Finland than in many other countries. The legislation is a threat especially for mobile payments for non-mobile related goods, whereas most of the other mobile content services are not covered by the legislation. In the worst case, the sales of mobile phone billed goods, such as tickets and soda cans, would cease.

5 Mobile marketing is still in development phase

Mobile marketing has probably been one of the most discussed and hyped mobile phenomena during the past ten years. A market for mobile marketing has emerged but the scale of the business has fallen short of expectations. The attitudes among advertisers are generally favorable towards mobile marketing, but there is a lack of know-how on implementation and purchasing of mobile marketing. On the other hand, the opportunities for mobile marketing are increasing as marketers look for alternatives for mass marketing methods.

6 Culture of "Free" clashes with mobile premium services

Internet users are used to free content, which is a challenge for premium mobile content as the boundaries between desktop and mobile browsing get more blurred. It will be increasingly challenging to charge for mobile content in environments where most of the other content is provided for free. In Finland and abroad most of the media companies, which run the majority of popular mobile sites, have adopted free of charge strategies for most of their content.

7 Mobile browsing has exploded

Mobile phone browsing has increased notably during the past couple of years. This development has been driven by new devices which make it easier and more comfortable to browse the internet. At the same time internet content providers have developed mobile-optimized sites.

Interestingly enough, the increased mobile internet usage has not shifted into a growing use of premium content services. Most of the mobile internet browsing is focused on free of charge services, such as news services.

8 Location-based services have not shifted into significant business, yet.

Location-based services have been one of the hyped business areas along with mobile marketing. However, they have not turned into a significant business yet. It is anticipated that the importance of location-aware services will increase and location-based services will become an important driver for mobile content services in the long run.

9 Software design has become a key driver for mobile devices

Traditionally hardware design has been a major driver for the mobile phone sales. Since the introduction of iPhone, the focus has shifted increasingly towards software. There have been several major changes in the mobile platform market in the past couple of years, including Google's introduction of Android and Symbian's switch to open source. All these news indicate that the mobile software is gaining importance. Mobile device market is clearly moving towards a direction where choosing the software is becoming more important than hardware.

10 Self regulation is active in Finland

The Finnish mobile industry has a self regulation body that consists of mobile content market players, mobile operators and other interest groups. Officially the body started to operate in the spring of 2008. The body aims at securing healthy market conditions and growth opportunities for the market. During its first year it has intervened into unhealthy marketing and subscription service practices provided by a couple of mobile content market players.

MOBILE BROWSING IS BECOMING MAINSTREAM

Mobile content usage has exploded during the past couple of years and mobile internet has suddenly become a mass market. This is largely enabled by new mobile devices that make mobile browsing easy and comfortable. At the same time the number of mobile-optimized internet sites has increased. In 2008, over a million Finns accessed the internet with their mobile phones.

IDEAN estimates that over a million out of total 4.6 million Finnish mobile phone users browsed the internet with their mobile phone in 2008. Mobile browsing has become an option for an increasing amount of mobile phone users due to developments in the mobile phone base. The growth in mobile browsing is expected to continue in the following years.

News and social media most accessed with mobile

There is very little public data available on mobile internet browsing. In May 2009, the Helsinki University of Technology published research statistics based on traffic measurements in Finnish operators' networks. The traffic measurements for mobile phones were carried out at an operator internet APN, which means in practical terms that most of the browsing at WAP sites was excluded from the figures. Thereby this list is to be considered as indicative.

Generally the top list of mobile-accessed sites corresponds with the list of most popular regular internet sites. News sites are among the most popular sites in both mobile and regular browsing. Social media and adult entertainment sites are also among the most popular mobile sites.

This list is not relevant regarding the sales of mobile content since mobile browsing via WAP APN was excluded. There are some WAP sites in the list, but currently the billing for the WAP services would only be possible if WAP sites would be accessed via WAP APN.

Helsingin Sanomat has published mobile user figures for its mobile-optimized sites. In April 2009, the Helsingin Sanomat mobile site collected over 70,000 unique visitors and

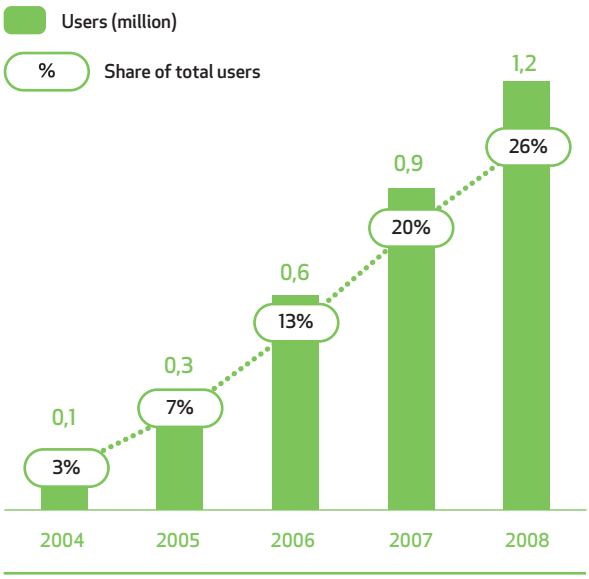


Figure 2 | Mobile internet users in Finland 2004–2008

Source: Idean, 2009

approximately 320,000 page downloads per a week. Taloussanomat and Digitoday followed with 17,000 and 11,000 unique weekly visitors. These figures are still rather lame compared to visitors in their regular websites. For example, Helsingin Sanomat was accessed by approximately 1,100,000 weekly users and Taloussanomat around 430,000 weekly users in May 2009. The mobile use is growing whereas regular website surfing is rather stable.

Mobile browsing*	Mobile browsing on mobile-optimized sites*	Regular web sites (week 19/2009)
Ilta-sanomat	nokia.mobi	Ilta-Sanomat
Kauppalehti	m.facebook.com	MTV3
Mtv3	m.hs.fi	Suomi24.fi
Suomi24	yle.mobi	YLE
tube8.com	m.youtube.com	Helsingin Sanomat
irc-galleria	foreca.mobi	MSN/Windows Live Messenger
Facebook	wap.jamba	MSN.fi
Sihteeriopisto	m.volvooceanrace.com	Windows Live Hotmail
hs.fi	wap.sp.fi	IRC-Galleria
Flickr	ovi.mobi	NettiX
Ilmatieteenlaitos	wap.aftonbladet.se	Eniro.fi
Wikimedia	m.espn.go.com	Telkku.com
Blogger	m.ebay.com	Plaza
	m.note.nokia.com	Kauppalehti.fi
	wap.eniro.fi	Huuto.net
	wap.veikkaus.fi	Taloussanomat
	020202.mobi	Etuovi.com
	wap.weatherproof.fi	Oikotie.fi
		Kaksplus
		Ilta-Sanomat

Table 1 | Most visited internet sites

* Measured by the amount of internet traffic in the autumn 2008. Traffic measurement was carried out via an operator internet APN, thus WAP browsing via WAP APN is excluded. Also operator sites are excluded. Sources: Helsinki University of Technology, TNS-Gallup, Idean, 2009

Free browsing challenges premium services

Media consumption in the regular internet environment has been mostly free of charge from users' point of view. Typically the news sites have an advertisement-based business model. Lately there have been signs which indicate that this approach is reconsidered by some major international media companies. Until very recently, the internet has not posed a real threat to the traditional media business models based on printed materials and delivery. The internet has been considered as an additional channel with its own business models. Suddenly internet has started to affect their traditional business and major media players are currently considering ways to consolidate internet business models with their traditional business. Several newspapers in the US have changed their approach to free content and have lately started to charge for their internet content. These players represent only a small fraction of all media companies in the US, however.

It is difficult to anticipate how media companies will approach these challenges in Finland. Nonetheless, they are faced with a growing problem if media consumption continues to migrate into advertisement-based digital channels and if the revenue streams from printed products start to decrease. Therefore all kind of micropayment and other new business model considerations are interesting for media companies.

The growing traffic in mobile news sites indicates that the mobile channel is gaining importance and may become one of the key channels for media companies in the future.

Data traffic is exploding

The data traffic in mobile networks has increased substantially during the past years. Finnish Communications Regulatory Authority (FICORA) has published figures that show how rapidly the data traffic has increased in mobile networks. A total of 4,200 terabits of data was transferred in mobile networks in 2008, representing a 740% growth over the previous year.

It should be noted that a majority of the data traffic is generated by other devices than mobile phones. The increase is mainly due to increased data traffic through laptops and netbooks. It is estimated that less than one percent of the total traffic was generated by Symbian phones in 2008. The share of Symbian phones of the total device base in the Finnish networks was 18% in 2008. This indicates the difference between mobile and desktop use. Mobile phones are used primarily for light browsing.

Mobile experience will start to drive internet development

So far the mobile browsing experience has been imitating the desktop browsing experience and mobile sites have been copies of their parent websites. However, the nature of mobile browsing differs from desktop browsing in many ways. Quite often mobile browsing is used to fill otherwise empty moments, where the user may even have a better chance to concentrate on the content. Media companies have even got customer feedback where customers wish to read longer news articles than provided today. On the other hand, the nature of desktop browsing may often be less casual and more related to conducting some particular tasks.

Mobile is social by its nature, considering the original communication purpose of mobile phone. Mobiles are also identifiable and provide a much more personal relationship with the device and customization. All these features sum up into something quite different from desktop browsing.

On the other hand, mobile browsing also has many limitations related to small screens, difficulties in typing, different devices and browsers. One particular challenge in mobile internet browsing is currently a lack of tools to identify users for analytical purposes.

In the long run the importance of the mobile channel is growing, assuming that the mobile usage continues to grow. This will lead into increased focus on this channel and we may even see that the mobile browsing experience starts to drive the whole internet experience.

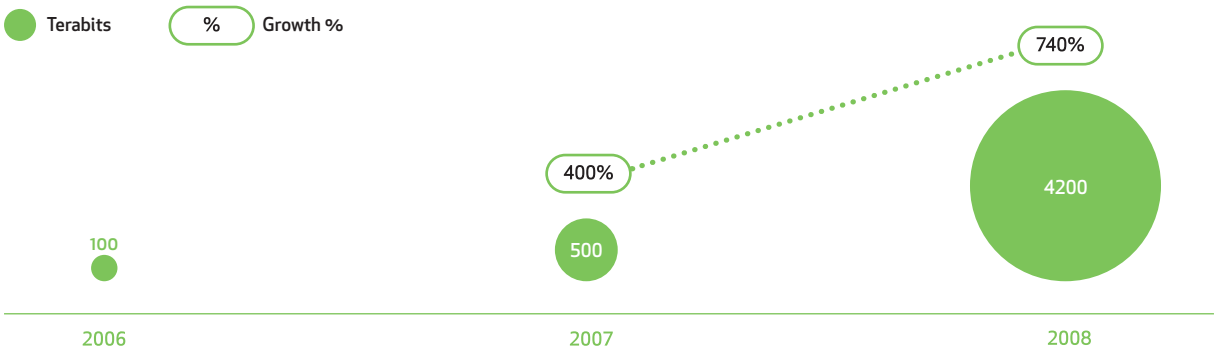


Figure 3 | Data traffic in the Finnish mobile networks 2006 –2008

Source: Ficora, 2009

MOBILE CONTENT SERVICES

MOBILE CONTENT SERVICES

The market value of mobile content services was approximately 69 million euro in 2008, which equal to the previous year. The share of information services continued to grow and they represented 56% of the total market value. Largest mobile content service categories included directory services, ringtones, public transport and chat & communities.

THE MARKET GROWTH for mobile content has stagnated and even decreased during the past couple of years. There are sharp differences in business dynamics between different content services. The market includes several service categories that grow fast and in a healthy way, but also many categories with decreasing demand. All in all, there is currently a lack of major new services that would drive the market growth. Therefore the market growth for the next couple of years is expected to remain rather modest.

Services that were growing and had a major impact on the total market revenue in 2008 include directory services, public transport tickets, vehicle registry inquiries and mobile auctions. The market value of these services increased in 2008 due to the growing use of these services and by increased prices for some of these services.

On the other hand, the demand for many entertainment service categories has saturated. Ringtones, pictures and chat services are among them. The demand for ringtones and pictures has decreased notably since 2006. The market for these services would probably have decreased even more sharply had the entertainment service providers not have introduced a subscription-based business model to these services. Previously, a great majority of these services were sold as pay per download. In 2008 a majority of these services were sold as a part of subscription services.

Also the mobile navigation services were among services that had a significant negative effect on the total market revenue development. This was mainly due to the free-of-charge navigation subscriptions services in many of Nokia's handset models. Many of these free subscriptions are soon expiring and the users will need to purchase a license to extend the use of the services. Thus this is potentially a growth area in the coming years.

Traditionally local mobile content market players have been active in developing new services and have continuously introduced new services. This dynamic approach is less common today and only few mobile content market players are investing in the development of new premium content services. This trend has been especially strong in entertainment services. Finland is not the only country hampered by the slowdown of service development.

There are several crucial issues that impact the future of the mobile content service market. There is no question about the increasing mobile content usage in the future. More and more services will be accessed with mobile devices. However, this will not automatically turn into market revenue. Crucial issues include questions regarding billing mechanisms, application stores, free content in the internet and content provider business strategies.

Global device manufacturers and other internet players seem to be the most active players today. These players are opening application stores, which attract software developers and content owners into their ecosystems. If the application stores succeed in making a commercial breakthrough, they may become gatekeepers for many mobile content categories.

Application stores, such as Apple's App Store, have attracted a lot of media attention since summer 2008. The idea of an ap-

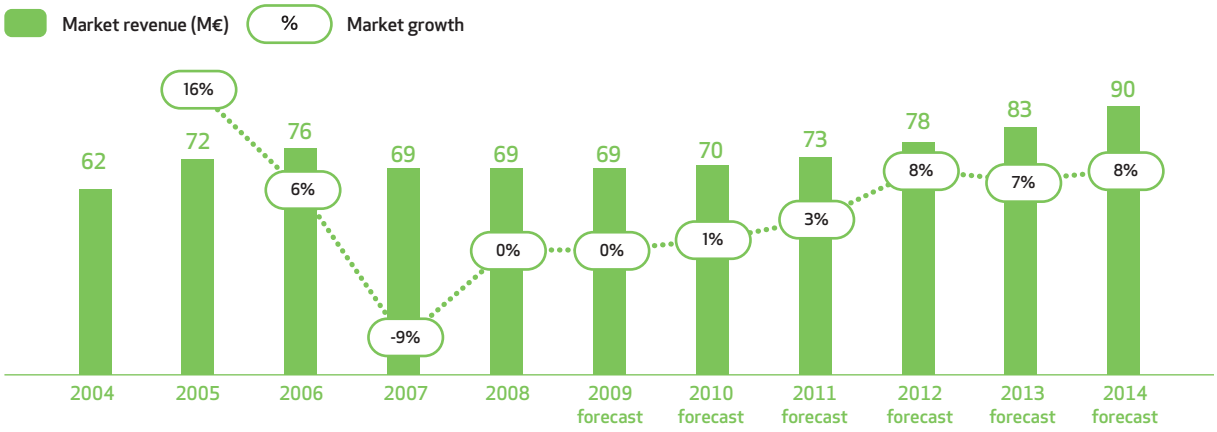


Figure 4 | Mobile content service market revenue in Finland 2004-2014

Source: Idean, 2009

plication store is not new as such. Mobile portals could be seen as application stores. The new application stores are more connected to particular mobile platforms. After the launch of Apple's App Store, for example Google, RIM and Microsoft have launched similar services. Nokia is expected to launch its service in May 2009. Typically these services have a sort of a "walled garden" approach, which means that the applications are available only for devices with the company's operating system. In other words, applications in Apple's store are available only for Apple's devices. So far these stores have not had a major impact on Finland due to low number of devices compatible with the stores.

The growth of mobile application stores is limited by the base of compatible devices. In Finland this is especially true for the mobile platforms of Apple, Microsoft and Google due to their weak market position in Finland. Nokia's mobile handsets are well represented in Finland, however. Nokia has informed that its application store will provide applications for both Series 40 and S60 handsets. It is nonetheless assumed that the very latest and upcoming mobile handset models are best fitted to application stores content.

It is interesting how Apple has managed to create a walled garden inside mobile operators' networks around the world. This has happened with the help of operators. iPhone undoubtedly brings data revenue for the operator, but it bypasses the mobile content channels from mobile operators' point of view. iPhone users buy their content through an iTunes account instead of mobile operator billing channels.

Idean estimates that the mobile content sales through iPhone and App Store were insignificant in Finland in 2008 compared to the total mobile content market value.

iPhone is making the barriers between mobile and desktop content business less clear. iPhone is just another device for accessing iTunes content.

69 million euro market

The total market value of premium mobile content services was 69 million euro in 2008. The market value consists mainly of services paid, delivered and billed through mobile phone networks. There are some exceptions, such as mobile navigation and online gaming services.

The market for premium mobile content decreased in 2007 for the first time since the birth of the market. There are several reasons for the market drop. Most notable was the dropping mobile navigation application sales. In 2006 the sales of mobile navigation applications was close to six million euro, whereas in 2007 the sales dropped to some two million euro. The business environment changed radically when the mobile navigation service was included in the price of many of Nokia's mobile phones. Another reason for the decrease was the dropping demand for some of the key content service areas and the problems with WAP billing.

Content sales through the WAP channel are hampered by difficulties in WAP billing. New mobile phones make it easy to browse the internet and many users choose an internet APN instead of a WAP APN when browsing. An internet APN allows WAP browsing but not WAP billing.

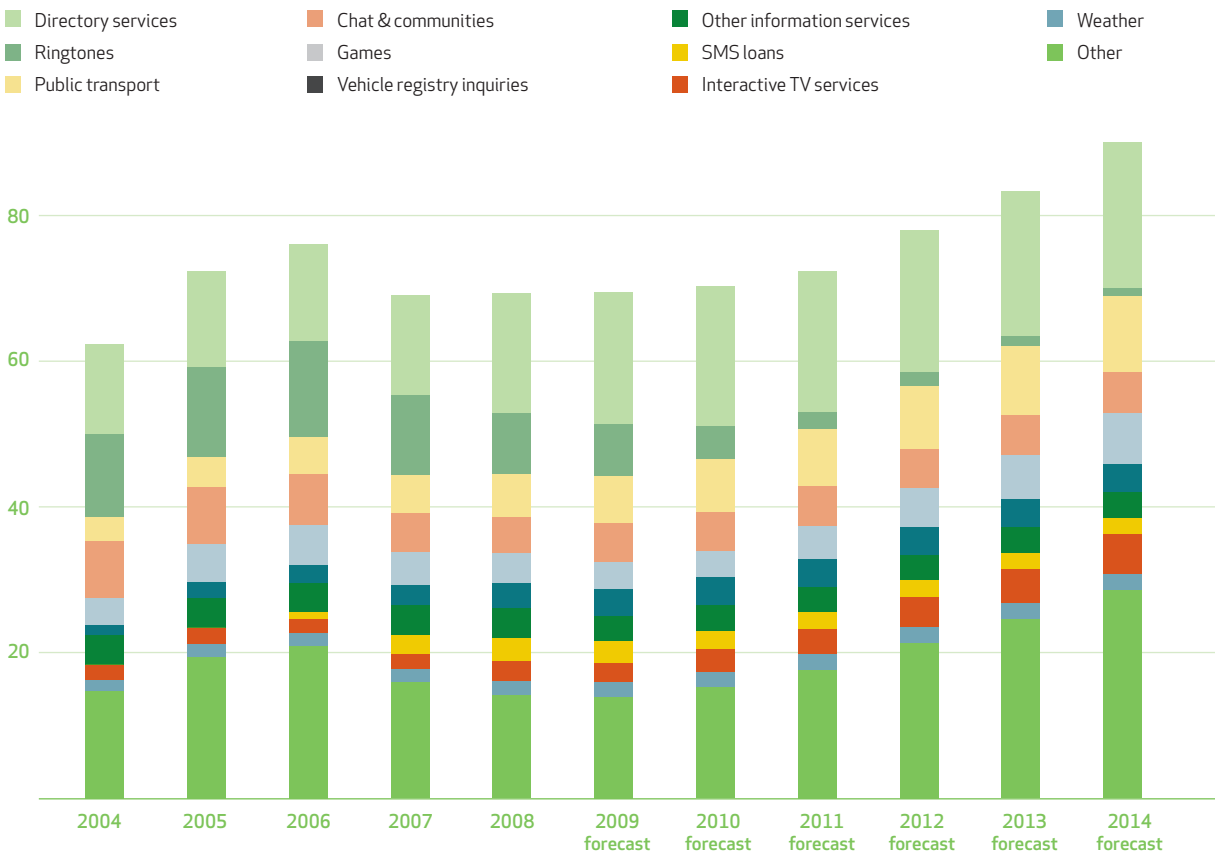


Figure 5 | Mobile content service market revenue by services in Finland 2004–2014 (M€) *Source: Idean, 2009*

WAP sales have dropped also due to subscription sales in entertainment services. Previously a major part of the entertainment services were sold through the WAP channel. In 2008, only a small share of these services was sold through this channel.

The most fundamental change in the entertainment services market during the past couple of years has been the shift from the pay per download business model to the subscriber model. Today most of the ringtones, pictures and games are sold as a part of a monthly subscription compared to the single downloads in the first half of this decade. This change can be seen as an essential shift as the sales of single downloads has dropped dramatically especially among entertainment services.

Another change has been seen in the mobile device base development. At the same time, new billing models have been seen emerging as services such as Apples Appstore have become available.

Top five services take over half of the total market

Top five mobile content services generated 57% of the total market revenue in 2008. Directory services continue to drive the market. Directory services accounted for almost one quarter of the total mobile content market in 2008. Ringtones remained as the second largest service category despite their dropping demand. Public transport has climbed to the third place. The popularity of mobile public transport tickets has increased steadily during the history of the mobile ticket provision. Chat & communities were the fourth largest service category in 2008. This market has suffered from reduced airtime on TV channels and difficulties in WAP billing. Fifth largest category is mobile gaming, which is also among the services that have suffered from lower demand.

Vehicle registry inquiries, SMS loans, interactive TV services, online gambling and weather are among service categories that grew in 2008.

From service provider's point of view, the barring categories for short messaging services limit the market growth for mobile premium services. SMS services are classified in different numbering categories due to the nature of the services. For example, adult entertainment services are provided in the SMS number range where the first three digits are 179. Mobile phone subscription owners may prevent the use of one or more numbering categories in a subscription. In practical terms many parents have restricted the use of premium services from their children's subscriptions and many companies restrict their employees from using premium services. The numbering of short message services refers to the numbers by means of which text messages are routed from mobile phones to short message service providers.

New services in 2007-2008

During the past few years there have only been few new service categories that have an impact on the premium mobile content service market. Mobile quizzes and mobile loans have been the most significant new revenue sources in the market. Yet these services have relatively low significance for the total market value.

Also directory service providers have introduced new services and these services have been strongly promoted in various advertising channels, including mobile ones. Moreover, some new weather services have been introduced.

The focus on mobile content service development has been on free-of-charge services in Finland. Many media companies have introduced new mobile sites for their news services. It seems that their strategy is to offer news for free and to base their business model on advertising.

Market players

The market for mobile content is dominated by a few large players followed by dozens of other service providers. The operator's role is mainly in the delivery and billing services, less in service provision. Fonecta was the largest service provider by revenue in 2008, followed by HKL, Zed, MTV3, Aspiro and Jamba. Together these six players represented over a half of the total market revenue in the mobile content service market.

Market players in the premium content services market can be divided into three groups. One is international players focused on mobile content. The second group is domestic players focused on mobile content. The third group consists of mobile units in large organizations, such as MTV3, Fonecta and Ilmatieteenlaitos.

> Top five mobile content services generated 57% of the total market revenue in 2008. Directory services continue to drive the market.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Directory services	12	13	13	14	17	18	19	19	20	20	20
Ringtones	11	12	13	11	8	7	5	2	2	1	1
Public transport	3	4	5	5	6	7	7	8	9	10	10
Chat & communities	8	8	7	5	5	5	5	5	5	5	5
Games	4	5	5	5	4	4	4	5	5	6	7
Vehicle registry inquiries	1	2	3	3	3	4	4	4	4	4	4
SMS loans	0	0	1	3	3	3	3	2	2	2	2
Interactive TV services	2	2	2	2	3	3	3	4	4	5	5
Pictures	6	5	5	3	2	1	1	0	0	0	0
Weather	2	2	2	2	2	2	2	2	2	2	2
Other	12	18	20	16	16	16	18	21	24	28	32
Total	62	72	76	69	69	69	70	73	78	83	90

Table 2 | Mobile information service revenue by services 2004-2014, M€

Source: Idean, 2009

INFORMATION SERVICES

Information services grew to 39 million euro in 2008, which is 9% more than in the previous year. The top five information services included directory services, public transport, vehicle registry inquiries and SMS loans. The share of information services from the total content services has increased consistently and it is also forecast to grow in the coming years. The demand for information services is forecast to remain healthy.

THE DEMAND for the information services has remained healthy despite the drop in the total market revenue in 2007. The drop was caused mainly by decreasing demand on navigation services. Also the revenue for news services decreased slightly in 2007. Otherwise all other services in the top ten information services have been increasing throughout 2007 and 2008.

The demand for information services has been much more consistent than for the entertainment services. Many information service providers have also been able to raise their service charges. Due to the healthy demand, information service providers are better able to promote their services and develop new service concepts. Most of these services are provided by commercial market players, although some of the content might be produced by public authorities.

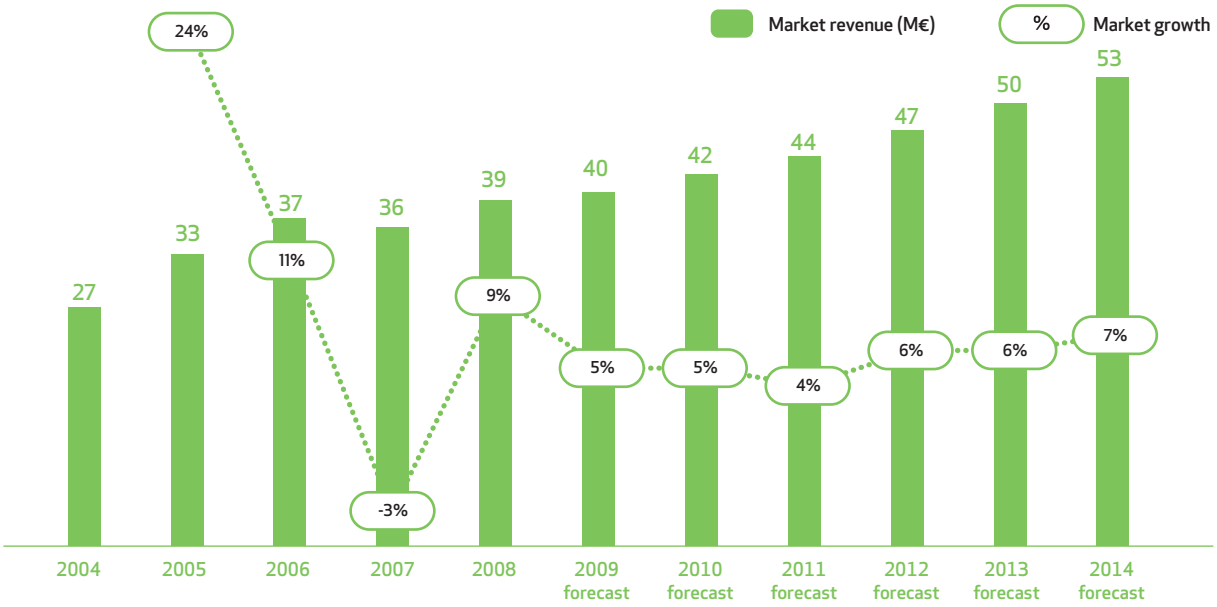


Figure 6 | Mobile information service market revenue in Finland 2004–2014

Source: Idean, 2009

Figure 7 | Mobile information service market revenue by services in Finland 2004–2014 (M€) *Source: Idean, 2009*

Demand focused on few services

Directory services represented over 40% of the total mobile information service market value. Other significant service categories included public transport tickets, vehicle registry inquiries and SMS loans. Together these services represented 75% of the total market. This shows how concentrated the demand is on mobile content services.

In spite of the general market growth, the revenue of some of the information services has decreased. For example, a majority of news services and mobile banking services have become free of charge. These services, especially news services, are among the most used services. News service providers have generally adopted the mobile advertising business model instead of charging for the services. There are still some premium price news services. Their impact on the total market value is insignificant, however.

In the future, the demand for information services is expected to remain healthy. Directory services are forecast to remain the largest service category, although there are no major growth expectations for directory services in the coming years.

Figure 8 | Share of mobile information services of the total content market revenue in Finland 2004–2014
Source: Idean, 2009

INFORMATION SERVICES

Mobile directory services

Directory services are the largest among all premium mobile content service categories. In 2008, the market value increased by 20% to 17 million euro. Directory services are among the few services that have enabled their content providers to collect funds for the active development of new services in the local market.

THE MARKET market for mobile directory services has enjoyed continuous growth since the birth of the mobile content market. Year 2008 was a successful year for directory services due to the rise in service charges and a slight increase in the use of services. Moreover, the service providers have successfully introduced some new service concepts during the past years.

The directory services are used for searching contact information. They also include some map and routing services. The most significant service by revenue is the SMS-based directory service which brings a majority of the market revenue. This service has been available since the beginning of the premium content service market. The demand for directory services has been stable due to many reasons, including the lack of an extensive printed source for mobile phone numbers.

Currently the most promoted and fastest growing directory services are downloadable directory service applications. Typically these applications are optimized for smart phones, especially for the latest versions. This limits market growth to some extent, although the number of smart phones has increased substantially during the past years. On the other hand, smart phone users are among the most active mobile content users.

The barring categories for short messaging services have a limiting effect on the uptake of mobile directory services. According to the market players, there is an increasing amount of barring in the business user segment.

Finland is an exception with regard to the directory service regulation, together with some other countries. Therefore the directory service market is a rather unique phenomenon in international comparison.

In the future, the use of directory services is expected to saturate and the market growth to stabilize. There are still many opportunities especially relating to mobile advertising and location-based services.

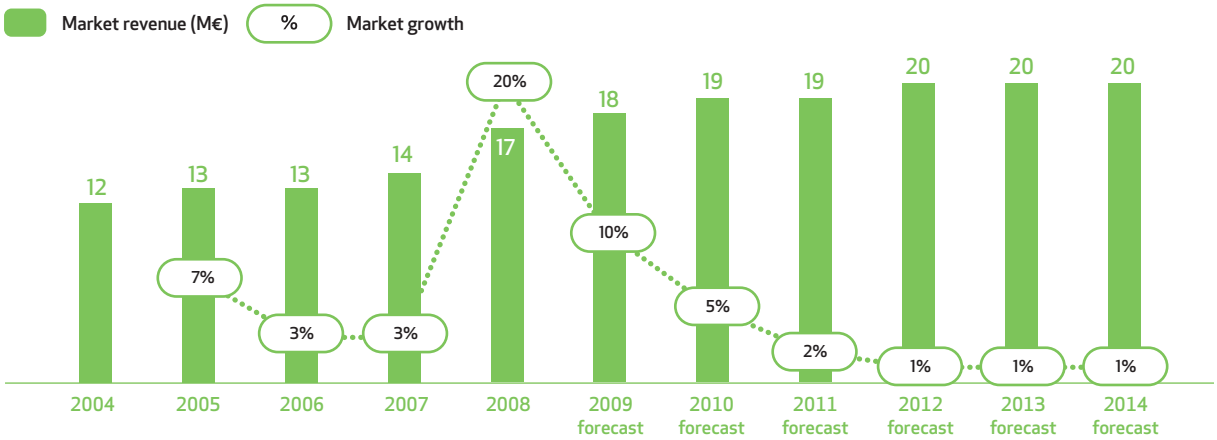


Figure 9 | Mobile directory service market revenue in Finland 2004–2014

Source: Idean, 2009

INFORMATION SERVICES

Public transport

Mobile transport tickets have been among the steadily growing mobile content service categories. In 2008 the market revenue was close to six million euro, representing a 12% growth over 2007. Currently, Helsinki City Transport generates a majority of the public transport ticket traffic. In the future mobile public transport tickets are also expected to spread in other regions and companies.

THE SMS-BASED mobile transport ticket was introduced by Helsinki City Transport in 2001 in the Helsinki district. Since the introduction, the use of mobile tickets has increased steadily. The price of the mobile transport ticket is equal to the price of a paper ticket. In the beginning the use was restricted to tram, metro and ferry transport. Later it has been spread to also cover bus and local train traffic. The total accumulated number of mobile tickets sold exceeded 10 million in 2007. In the same year some 20 per cent of all single tickets by Helsinki City Transport were SMS tickets. The SMS ticket is well suited for fixed-price local traffic tickets. It is claimed that the SMS ticket has reduced stowaway travelling in the Helsinki region.

The mobile transport ticket is one of the services which are threatened by changes in the legislation. The new directive on payment services covers payments for non-mobile-related goods and the mobile transport ticket could be one of the services affected by the changes. On the other hand, there is a chance that the mobile transport ticket could be considered as an exception among mobile payments. Nevertheless, the consequences of the new legislation are still under speculation.

The success of the SMS ticket has demonstrated the demand for mobile transport tickets. In the long run, new micropayment technologies could replace SMS tickets. This could enhance the use of mobile transport tickets and even replace the use of other traditional transport ticket forms. All in all, there is a natural demand for mobile transport tickets.

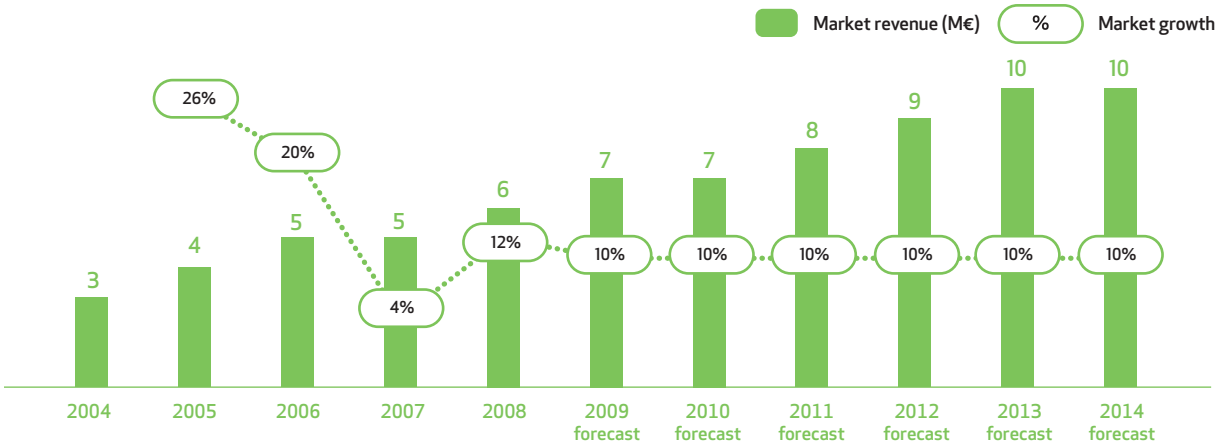


Figure 10 | Mobile public transport ticket service market revenue in Finland 2004–2014 *Source: Idean, 2009*

INFORMATION SERVICES

Weather services

Weather services have been one of the few service areas that have enjoyed continuous growth since the early days of mobile premium services market. The growth has been stable but moderate. In 2008 the sales of weather services amounted approximately two million euro, which is 11% more than in the previous year.

THE DEMAND for weather services is volatile and varies by season and year. Typically summer is the best selling season for weather services. Moreover, a fickle weather evokes more weather service sales than a consistent weather. Therefore a consistent good weather during summer could mean weak sales in weather services.

A major part of weather forecasts are available for free for users in many online sites. Therefore it is interesting that there is a healthy demand for premium services. The weather service providers have successfully profiled new services for different market segments and successfully attracted paying users to them. It has required constant work on new concepts. Lately one of the interesting new features has been location-based weather forecasts. Weather forecasts are among the still few services that have started to utilize location information in their services.

The main part of the most attractive weather services are based on browsing and the weather services have suffered from the lack of an IP billing method, among many other WAP-based services. Weather service providers claim that their revenue could increase even more sharply were there sufficient methods for billing for browsed content. Currently the billing is limited to those users that exploit browsing-based services via a WAP APN instead of an internet APN.

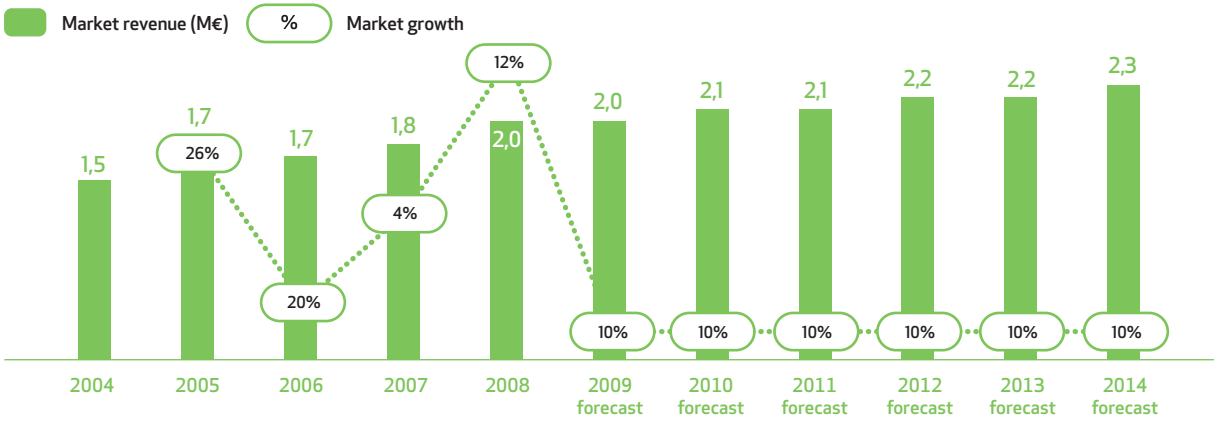


Figure 11 | Mobile weather services market revenue in Finland 2004–2014

Source: Idean, 2009

INFORMATION SERVICES

Mobile TV

Mobile TV has been one of the most speculated mobile opportunities during the past years. Great expectations were set for the market growth, but so far the market is still waiting for a commercial breakthrough. There are several different approaches towards mobile TV technology and business, yet none of these alternatives has proven to be commercially successful and speculation on the optimal approach is continuing. Currently the market is not commercially significant.

TECHNICALLY SPEAKING, there are many ways to deliver mobile television to the end users. There are two main technological approaches towards mobile TV. One is based on broadcasting networks and the other on mobile networks. Both of these network alternatives offer possibilities for several service types.

Mobile TV can be delivered by using the multicast, unicast or download method. In the multicast method the same content is simultaneously delivered to all customers, similarly to traditional television broadcasting. The unicast method is a one-to-one connection between a client and a server.

So far the major commercial efforts in Finland have been seen in multicasting TV services for mobiles over broadcast and mobile networks. Digita, a radio and television service distributor in Finland, has built a mobile television broadcasting network based on DVB-H technology. Currently the network covers some 40% of the total population in Finland. The network covers the major cities in Finland and some urban areas around them.

The DVB-H-based business has been hampered by a low device base of DVB-H handsets. Idean estimates that there were some 15,000 DVB-H handsets in Finland at the end of 2008. Nokia, as the leading mobile phone brand in Finland, has released only few DVB-H-capable models so far. Some new models are expected to hit the market soon, but there are no signs of DVB-H becoming a standard feature in all mobiles in the near future. Therefore the DVB-H market growth will remain limited by the device base development.

There are also other commercial issues that have impacted the DVB-H market development. TV broadcasters have not broadly started to broadcast their content in the DVB-H network and there are currently only few TV channels available in the network.

Mobile operators have provided TV services trough 3G network during the past couple of years, but they have closed or are about to close these services in the spring 2009. These services have failed to acquire relevant amount of users.

Other mobile TV services include different unicast services over mobile networks for the end users. For example YLE is providing its TV content for mobile phones. These contents are free of charge for the customers excluding the data charges to mobile operators. Also some commercial market players are providing mobile TV viewing possibilities as a part of their other TV subscription services.

The discussion has often concerned the mobile television technology issues. Such as should the TV content be broadcasted over mobile television dedicated network or mobile networks. At least equally important questions are weather mobile television should have a broadcast approach or more linear approach that could enable video on demand. However, even more important could be the issues regarding general viewing habits and how they could be addressed in a mobile space.

The commercial future of mobile television is still blurred

The market for mobile TV in Finland is currently in semi commercial mode. Mobile broadcast television network based on DVB-H is not charging end-users for viewing the mobile television. Also other forms of mobile TV are commercially insignificant.

There is a growing speculation weather multicast television approach will ever come commercially viable. Skeptics say that the consumers are not willing to pay separately for broadcasted mobile television and the Finnish market is too small for advertising based mobile broadcasting television. Moreover, the changes in TV consumption are breaking traditional TV viewing habits anyway. All TV viewing will become less favorable for broadcast approach as internet will start to migrate with television. The major drivers for TV viewing habit changes include consumption fragmentation into various TV channels, time shift, increasing use of web TV, new devices and technology shift (analogue - digital TV).

According to Statistics Finland there were approximately 60 000 subscribers for IPTV in February 2009. At the same time there were 365 000 households where home computer was used for TV viewing. These figures indicate the changes in how TV is perceived in general. The television viewing experience continues to fragment as viewers turn to alternative platforms that impact how, when and where they consume programming.

Despite the slow start for mobile television there is still trust on the commercial future for mobile TV. There is a strong belief that video on demand –type of approach could be viable in mobile environment. This is the direction where regular TV viewing is moving anyway. New sophisticated devices and standards are among drivers for mobile video on demand services.

ENTERTAINMENT SERVICES

The revenue of the mobile entertainment market has been decreasing since 2006 due to declining demand of some of the most popular content services. In 2008, the market revenue was 31 million euro, representing a 8% decrease in comparison to the previous year. The development of the mobile entertainment market has been disappointing against expectations. Especially mobile music and gaming services have failed to fulfill expectations.

THE MOBILE ENTERTAINMENT business has suffered from saturation in some of the key content categories. Especially the demand for ringtones and picture services has dropped. However, ringtones were still the largest single content service area in 2008, followed by chat & communities and games.

In the coming years chat & communities are expected to exceed the value of the ringtone market and to become the largest entertainment service category. However, the revenue for chat & community services is not expected to grow significantly and the lead position will be due to declining demand for the other major services.

In the long run, the mobile entertainment business will return to the path of growth, driven by music, games, interactive TV services and application stores. It is assumed that music services will start to grow as new services are introduced and the music services develop. Mobile gaming will benefit from developments in mobile device technologies and new concepts will emerge. The new concepts may exploit multiplayer and location-aware functionalities in the future. The mobile aspect will continue to spread in new television concepts and new forms of participation will develop. Mobile application stores are expected to accelerate the growth of mobile entertainment.

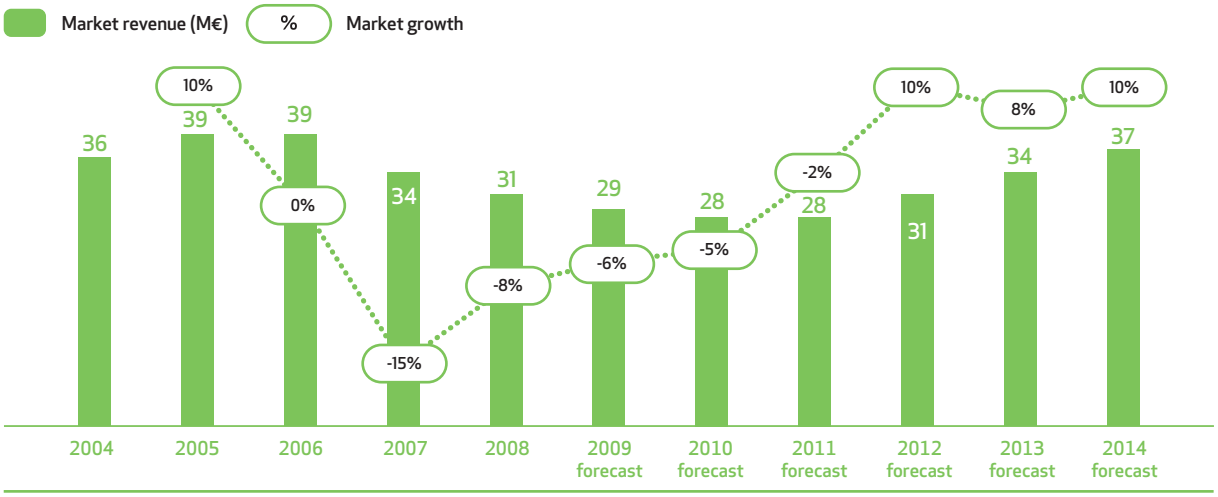


Figure 12 | Mobile entertainment service market revenue in Finland 2004–2014

Source: Idean, 2009

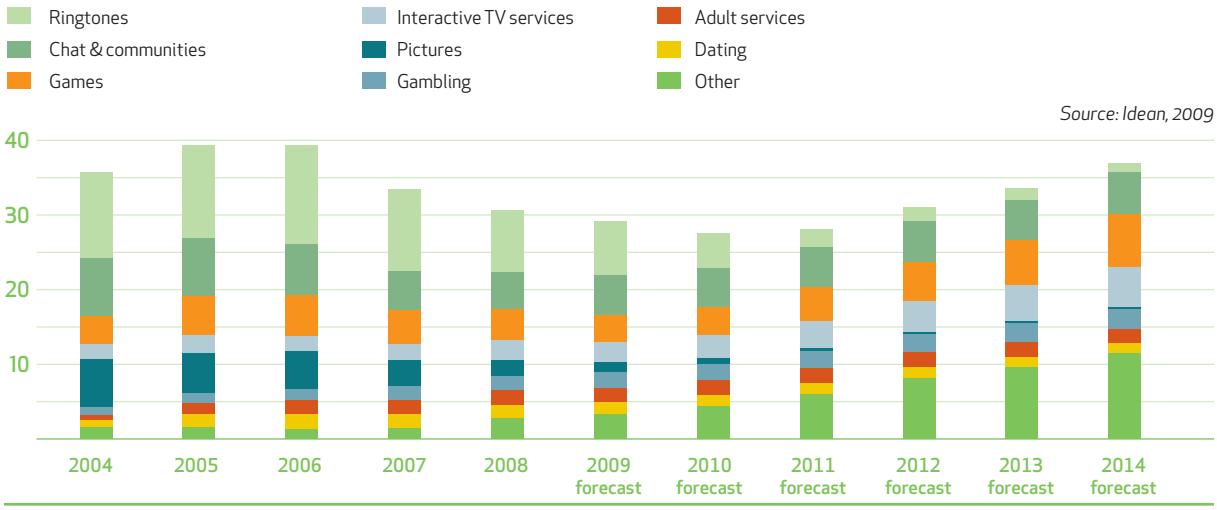


Figure 13 | Mobile entertainment service market revenue by services in Finland 2004–2014 (M€)

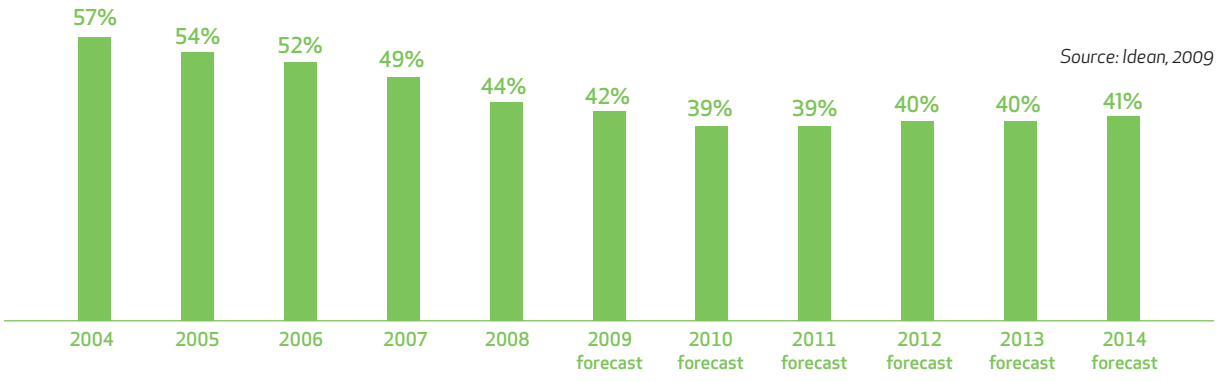


Figure 14 | Share of mobile entertainment services of the total content market revenue in 2004–2014

Entertainment service providers

Entertainment service providers have typically focused on providing ringtones, games and pictures. Other services have only had minor impact on their revenue. The drop in the demand has been painful for these players.

Unfortunately the entertainment service providers have been unable to introduce any other services that would have significantly compensated for the decreasing demand in ringtones, pictures and games. The major entertainment service providers are international companies which have the main part of their concept development made outside Finland. This slackens their ability to tailor new concepts for the local market.

The entertainment service market has suffered from the lack of new commercially significant services and concept innovations. There have only been few new entertainment service categories that have had positive influence on the total market revenue. Auctions and mobile quiz services have been among them, although their impact on the total revenue has been limited.

Unlike the earlier years of the mobile entertainment market, the major entertainment service providers are international companies with headquarters and most of the service development outside Finland. These players have been hampered by the decreasing demand for traditional mobile content services also outside Finland, since the demand for these services has decreased in most of the mature markets in Western Europe. This is probably one of the reasons for decreased activity on the development of new services and service concepts.

On the other hand, the mobile content market players have been able to successfully introduce some new concepts in other countries without introducing them in Finland. The launch in Finland may have been limited by the size of the local market or some regulative issues.

ENTERTAINMENT SERVICES

Music services

The mobile music service market has traditionally been driven by ringtones, and they still represent a majority of the music service revenue. The market revenue for mobile music services was over 8 million euro in 2008. The market revenue decreased by 23% from 2007 due to decreasing ringtones revenues. Other mobile music services have failed to grow significantly and to compensate for the dropping ringtone sales.

THE ONLINE MUSIC market has become internationally significant and a majority of the music services are purchased and consumed online. The market is still considered as a growing one. On the other hand, the illegal peer-to-peer downloading is also significant in the market and has limited the market growth.

There are no signs of recovery in the ringtone market and the hopes in mobile music are set on full track sales. The business models for mobile full track sales have not settled and there is ongoing speculation over optimal models. Some of the market players believe that full track sales of mobile music will follow the same pattern as ringtones. According to these players, subscription services will be the driver for the full track music sales instead of the currently dominating pay per download model.

Lately the major news regarding online music market has concerned Swedish companies Spotify and The Pirate Bay. These companies illustrate broader trends in the online music industry. Spotify, a Swedish online music start-up company, has gathered a significant number of users in a short period of time. The company offers an online music service that streams music for end users over fixed broadband. The service is based on both an ad-supported, free-to-the-user model and a premium, paid model. The company says that it is looking forward to expand its service into mobiles during this year. Spotify's success is one of the many signs that indicate towards changes in the music content consumption habits. Subscription services have developed and are coming increasingly popular among music listeners.

Another Swedish company in headlines has been The Pirate Bay, a Swedish website that compiles links to BitTorrent files

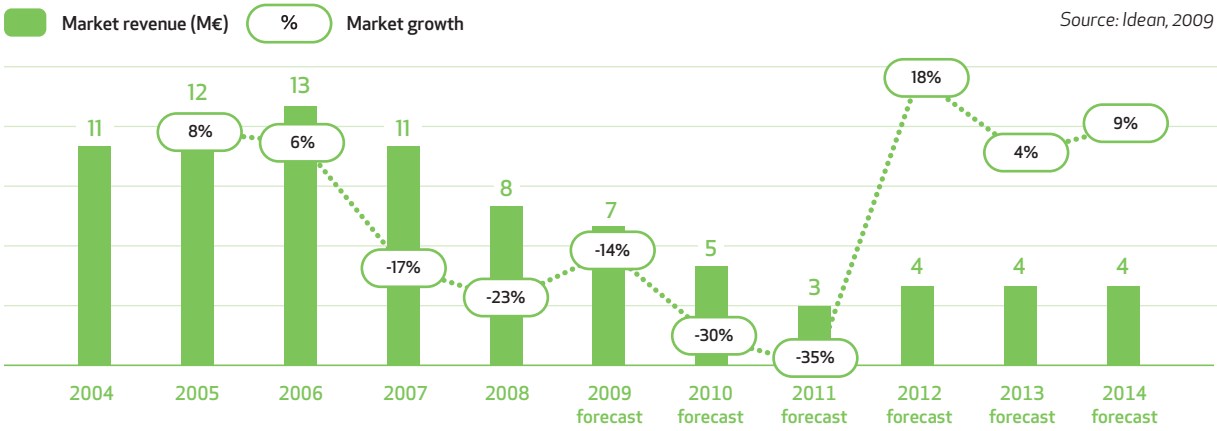


Figure 15 | Mobile music service market revenue in Finland 2004–2014 (incl. ringtones and full tracks)

– a particularly efficient form of file-sharing – from across the internet. The persons behind the company were summon to court and charged for promoting the copyright infringement of others with the torrent tracking website The Pirate Bay. The trial ended in March 2009 and the verdict was announced in April 2009. The respondents were found guilty and sentenced for prison and pay fines. The defendants have appealed the verdict. Anyway, the trial was victory for the major copy right owners and may influence also other similar services.

Ringtones follow mobile device development

The ringtone market has reflected strongly to the changes in the mobile device base. In the early days of the mobile content market there were only monophonic ringtones available since the mobile phones did not support any other formats. Soon after the introduction of polyphonic handsets the ringtone market started to be driven by polyphonic ringtones. Today both of these formats are insignificant and have been replaced by so called realtones, which are audio recordings. These upgrades have been accompanied successfully with charge raises. Other formats include music videos and playback tones.

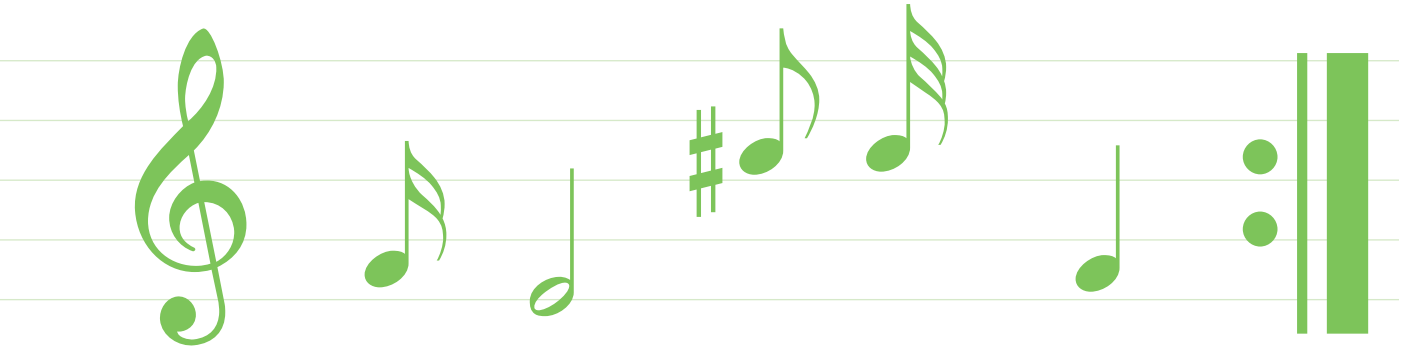
The sales volumes for ringtones started to decline already in 2004, but the market revenue continued to increase until 2006 thanks to increased unit prices. Today major part of the ringtones is sold as part of subscription services. The subscriptions allow typically also other content purchases apart of ringtones.

Subscription model has many benefits from service providers' point of view. It gives better predictability for the sales. At the same time the content providers are less dependent on media advertising and can utilize more cost efficient marketing forms. The disadvantages of subscription models have probably been shared together with other mobile content market players, including those who have not implemented any subscription model. In the early days of subscription model it was difficult to end the subscription and it is estimated that many parents have ordered barring services for their children due to unexpected subscription costs.

Music is a volume business

The Finnish mobile content market players say that the online music market is very competitive and it would be difficult to make profitable business in the market unless one has significant volumes. Consequently it seems like the most active future players in this field are large companies such as Nokia and operators. Music services provision may have also other purposes than purely music sales profit for these players. Music services may represent a way to lock customers to particular operator or mobile device brand.

All in all, music is still regarded as a potential growth market despite the dropping demand for ringtones and slow start for mobile full tracks. The business approach is generally anticipated to focus on subscription model.



ENTERTAINMENT SERVICES

Chat & communities

Chat services have been one of the major drivers for premium mobile content services since the birth of mobile content market. Lately the share of these services has decreased due to the decreasing popularity of TV chat services and the problems experienced with WAP services. The total market value for chat and community services was five million euro in 2008, which is 5% less than in the previous year.

MOST OF THE CHAT & COMMUNITY market value consists of chat services. Many social media services are also included in the market value, but so far a majority of these services has been free of charge from the user's point of view.

TV chat services have represented a majority of the chat service market revenue. TV chat services are well suited for the Finnish market size where the broadcast services receive suitable amounts of messages to be showed on a TV screen. In some other markets, similar TV chat services have failed due to overwhelming traffic that has been unsuitable for a broadcasted TV show. On the other hand, a part of the TV chat traffic in Finland is runs in Teletext TV pages instead of a broadcasted TV show.

During the past couple of years, the market revenue for TV chat services has been dropping due to reduced airtime for these services. Television broadcasters have allocated more airtime for call TV and other services in the expense of TV chat services. In 2009, broadcasters have reallocated more airtime for TV chat shows and thus the market is expected to recover to some extent.

There are several service providers in the chat & community market. However, the majority of the market revenue is collected by a couple of major players, such as MTV3 and Amli.

Idean estimates that the total active user base for these services is rather small, totaling some tens of thousands of users. However, these users are generating considerable traffic for the services.

In the long run, the chat & community service revenue growth is forecast to remain rather stable.

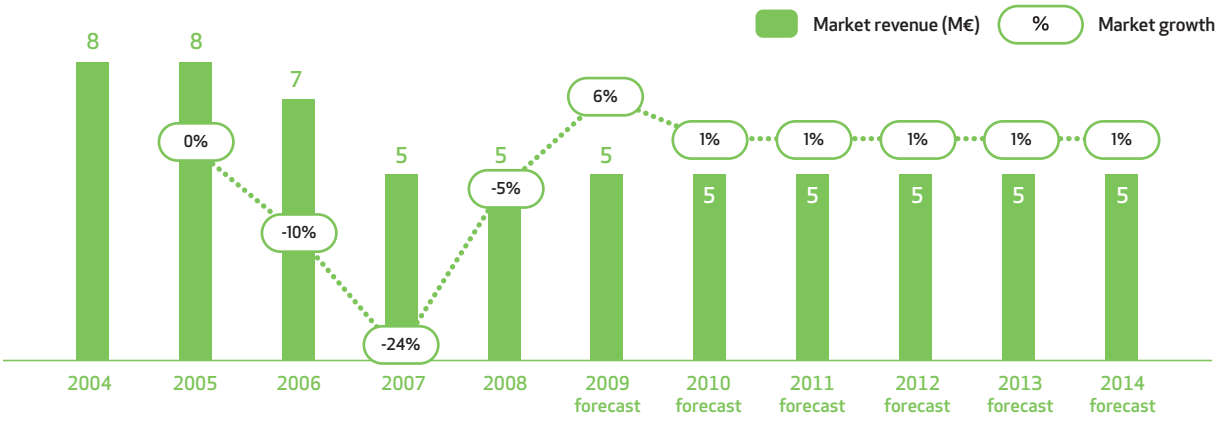


Figure 16 | Mobile chat & community service market revenue in Finland 2004–2014

Source: Idean, 2009

MOBILE MARKETING

The mobile advertising market is still in its infancy in Finland. However, when looking at it in a broader scope, the mobile channel has been adopted within marketers in a large extent. The expenditure on mobile advertising was approximately two million euro, whereas that on other customer relation communication was roughly 10 million euro in 2008. The expenditure on advertising consisted mainly of SMS marketing and mobile banners in mobile sites, while other forms of mobile advertising are still rather insignificant. Customer relation communication expenditure consisted of various forms of external and internal communication mainly via SMS.

MOBILE ADVERTISING has been one of the most popular topics of speculation in the mobile industry. It has been boosted with high expectations – which have not materialized so far.

Despite the slow uptake of mobile advertising, there are signs of increasing demand for mobile advertising. This is related to the currently undergoing paradigm change in advertising. Advertisers and advertisement providers are increasingly interested on methods that allow targeted advertising. At the same time the attractiveness of traditional mass marketing methods are inflating.

Yet there are also many technology-related opportunities that may boost mobile marketing in the coming years. One of them is location-aware services, which may give mobile marketing a clear advantage over other marketing forms. However, there are many integrity and other issues to be solved prior to any major uptake of the location-aware advertising.

Defining mobile marketing

In this research, the mobile marketing market has been divided into mobile advertising and customer relation communication. Mobile advertising consists mainly of SMS-based advertisement messages and mobile banners. There are a lot of other forms of mobile advertising which have not become significant so far. These include mobile marketing via MMS, Bluetooth, or infrared and marketing within games, search services or video clips.

Customer relation communication consists of various forms of information messages from companies and authorities to consumers, customers and other interest groups. For example, SMS notifications regarding a packet delivery or library book reservation are customer relation communication. In many cases there is a thin line between mobile advertising and customer relation communication.

The market value of mobile marketing consists of expenditure on mobile media. In other words, the money spent on SMS traffic and mobile banners in a mobile media space. Mobile site development and other costs related to mobile marketing are excluded from the market value.

Mobile advertising is SMS driven

The mobile advertising market totaled approximately two million euro in 2008. A majority of the revenue consisted of SMS-based marketing and the rest mainly of mobile banner advertising. It should be noted that mobile marketing is rather low-priced compared to many mainstream advertising forms. Therefore the market value does not fully correspond with the significance of mobile media as an advertisement channel.

SMS advertising for consumers is possible only if there is a marketing permit. Various market players have gathered mobile marketing permits from consumers. Some of the service providers have gathered these permit bases for reselling SMS advertising space for third parties, others are companies that own customer registries. Idean estimates that approximately one million permits altogether were gathered for mobile marketing purposes at the end of 2008. These permits are divided into several different customer bases and they are partially overlapping. Therefore a part of the consumers have given permits into two or more customer bases. There are a couple of major permit bases that have more than 200,000 permits, followed by roughly five other bases with permits from 30,000 to some 100,000. The rest of the permit bases have less permits and may not be actively in commercial use.

The growing use of mobile sites has not shifted into significant

> In 2008 altogether 100 million customer relation customer communication messages were sent to end users.

mobile advertisement business yet. On the other hand, the sales of media space for mobile sites have not been a focus area for advertisers. Only recently there has been real productization for advertisement products. There is still a lack of standardized set of metrics, offerings and reporting practices.

It is anticipated that in the future there will be many micro sites for promoting some particular purposes. These micro sites may be planned to have a limited lifespan.

Web-analytics have become increasingly important for all sorts of companies and authorities. The analytics tools are powerful tools for advertising purposes when used correctly. Mobile analytics is a business area that is estimated to grow in the future. Today the use of mobile analytics is still rather rarely utilized.

Customer relation customer communication

Customer relation communication has become a significant market during the past couple of years. The market consists of different messaging delivery services between IT systems and the end-user's mobile phone. Companies and other organizations are using gateway services for delivering messages and these gateway services are provided by few service providers and operators. The service providers act as mediators between marketers and mobile operators. They buy bulk SMS traffic from operators and sell it forward to marketers with a margin.

In 2008 altogether 100 million customer relation customer communication messages were sent to end users. These messages were sent to customers, employees and other interest groups for different purposes.

The market growth potential is estimated to be high for customer relation customer communication. There are many companies and authorities which could increase their messaging volumes considerably if they would adopt mobile messaging into their customer relationship marketing. Major grocery chains are among them.

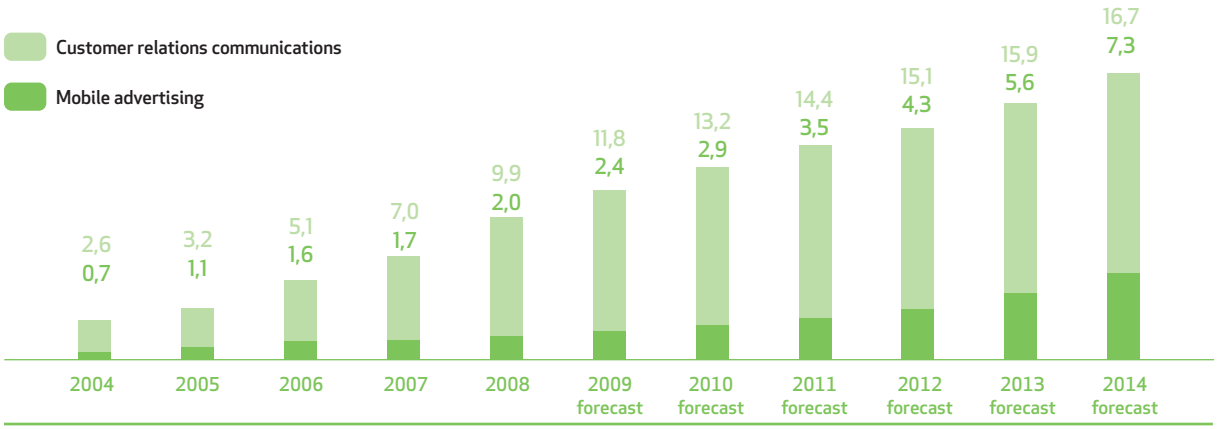


Figure 17 | Mobile marketing expenditure in Finland 2004–2014 (M€)

Source: Idean, 2009

MOBILE DEVICE BASE

Mobile device base has a strong influence in the mobile content service uptake and development. The device base is developing continuously and the amount of mobile devices with sophisticated features is increasing. Smart phone penetration has increased to around 1,2 million units by the end of 2008. At the same time the features in other devices have developed and the differences between smart phones and other phones have become blurred.

THE NUMBER of mobile subscriptions was 6,8 million in the on 2008 in Finland. In other words, there were approximately 1,3 subscriptions per inhabitant in Finland. In Idean's opinion the subscription figure is rather irrelevant from mobile content market players' point of view, since the potential customer potential cannot exceed the total number of inhabitants. Therefore Idean has estimated the number of mobile phone users in Finland and uses this figure as the basis of the analysis in this research. Idean estimates that there are approximately 4,6 million mobile phone users in Finland. This figure has not changed significantly during the past few years.

The handset population in Finland is very fragmented, there were over thousand different handset models identified in the Finnish mobile networks in 2008. The fragmentation of the mobile device population has continued to increase during the past years. Yet in international comparison the Finnish handset base is solid due to Nokia's strong market share. Some 90% of the active handsets in the Finnish mobile networks were Nokia's in 2008. Top 50 handset models represented approximately 70% of the total handset base.

Over 1,9 million mobile phones were shipped to mobile phone retailers in 2008 according to statistics by The Association of Electronics Wholesalers. Roughly a quarter of these were smart phones. The shipments illustrate the sales of mobile phone sales in Finland. During the couple of past years the shipments have stabilized to close two million handsets.

The penetration developments for some of the key mobile handset features are presented in the figure 18. The penetration is measured against the total number of mobile handset users in Finland.

Smart phones

Smart phone penetration has traditionally been an indicator for the mobile communication market maturity. High-end mobile handsets enable the provision of advanced mobile content services. In 2008 the installed base of smart phones was approximately 1,2 million units in Finland. This is a significant amount of devices and allows service development focused on the segment. There are already some mobile content services that are provided exclusively for this segment. The smart phone penetration is forecast to increase in the coming years.

Smart phone features will become standard features for most of the mobile devices towards the end of the forecast period. Thus the differences between smart phones and other phones become blurred. It is assumed that the term "smart phone" will disappear in the long run due to problems in its definition. However, today the word is still useful definition for the mobile handsets with sophisticated features.

The smart phone penetration has increased steadily during the past years. More than a half of the total installed base of mobile handsets is forecast to be smart phones by the end of 2014. A major driver for this market will be increasing amount of smart phones in lower price categories. There are already signs of increasing competition in the smart phone category. All of the mobile device manufacturers are expected to introduce smart phones in the lower price categories in the coming years.

Touch screen

Touch screen handsets have attracted plenty of media attention globally since the introduction of iPhone in 2007. However, there have been touch screen phones for a long time prior to the introduction of iPhone. Anyway, the iPhone is said to have taken

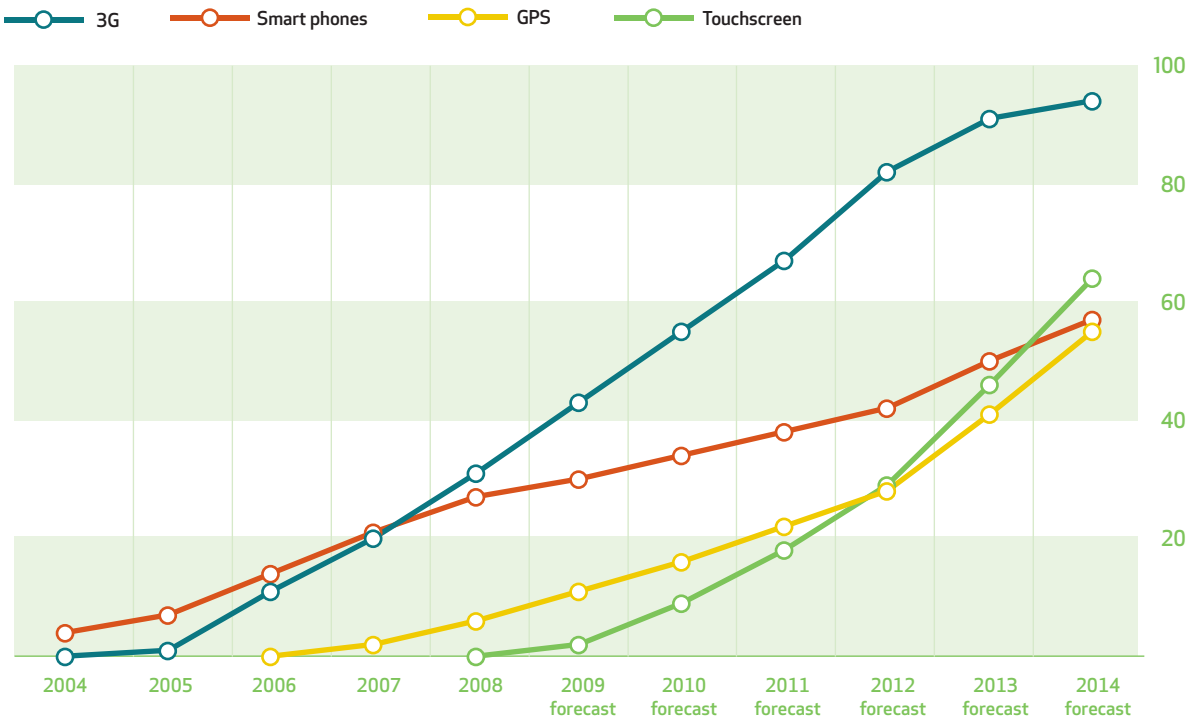


Figure 18 | Penetration of some key mobile handset features in Finland 2004–2014 (the penetration is measured against the total number of mobile handset users in Finland)

Source: Idean, 2009

mobile experience in the next level. iPhone is currently available in Finland only trough Sonera and the amount of iPhones sold is undisclosed. Sonera started to sell these devices in July 2008 as bundled with subscription. Idean estimates that the amount of iPhones grew to approximately 15,000 units by the end of 2008. Thus the number of iPhones was still insignificant compared to many other devices in Finland.

Touch screen is forecast to become a standard feature for majority of mobile handsets in the long run. Touch screen may be accompanied with a keypad in some models whereas some will have only a touch screen. Currently most of the touch screen handsets are smart phones. However, touch screen is soon expected to penetrate the lower-end device categories. This will be a major driver for the touch screen sales, especially towards the end of the forecast period.

3G

3G penetration started to boom in 2006 when handset and subscription bundling was allowed for 3G devices. At the same time the selection of 3G handset models increased. The effect of handset bundling has moderated since then, and the 3G handset sales is driven by the expansion of 3G handset selection. Today 3G handsets are available in most of the price categories excluding the very cheapest ones. Towards the end of the forecast period the 3G feature is forecast to become a standard feature in all of the handsets sold.

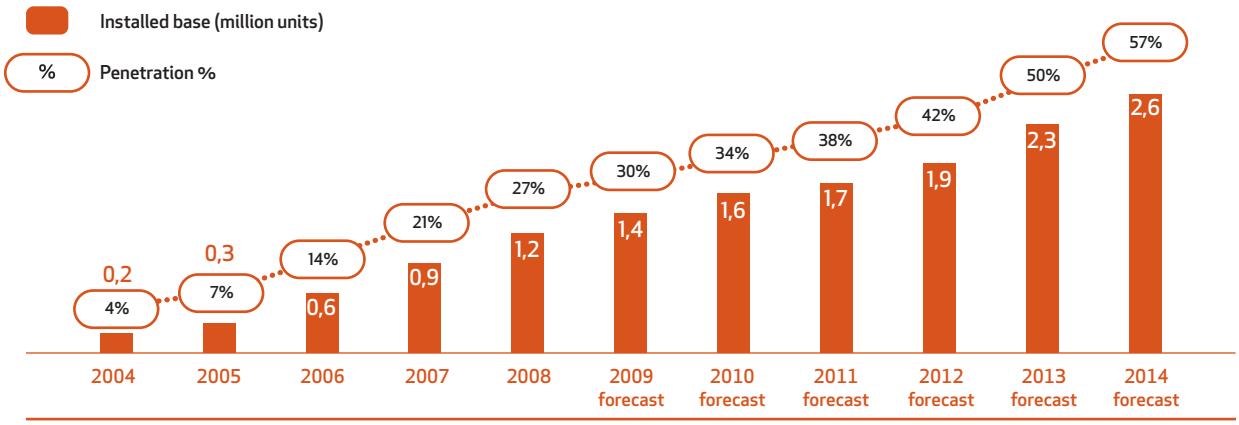


Figure 19 | Smart phone penetration in Finland 2004–2014 (the penetration is measured against the total number of mobile handset users in Finland)

Source: Idean, 2009

GPS

First mobile phones with GPS chip were introduced already several years ago, but the market for GPS handsets started to grow significantly in 2007. In 2008 the installed base of GPS handsets in the Finnish mobile networks was approximately 300,000 units. This represented 6% of the total mobile handset users in Finland. The penetration of GPS feature is expected to grow substantially during the next few years. Today the GPS is still typically a feature of a smart phone. In the long run the feature will spread into other devices and will be available in lower priced categories.

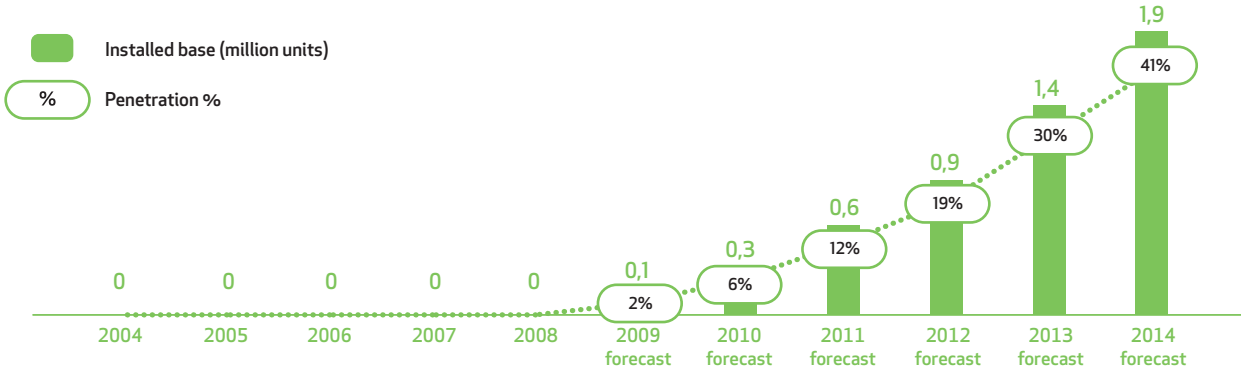


Figure 20 | Touch screen mobile handset penetration in Finland 2004–2014 (the penetration is measured against the total number of mobile handset users in Finland)

Source: Idean, 2009

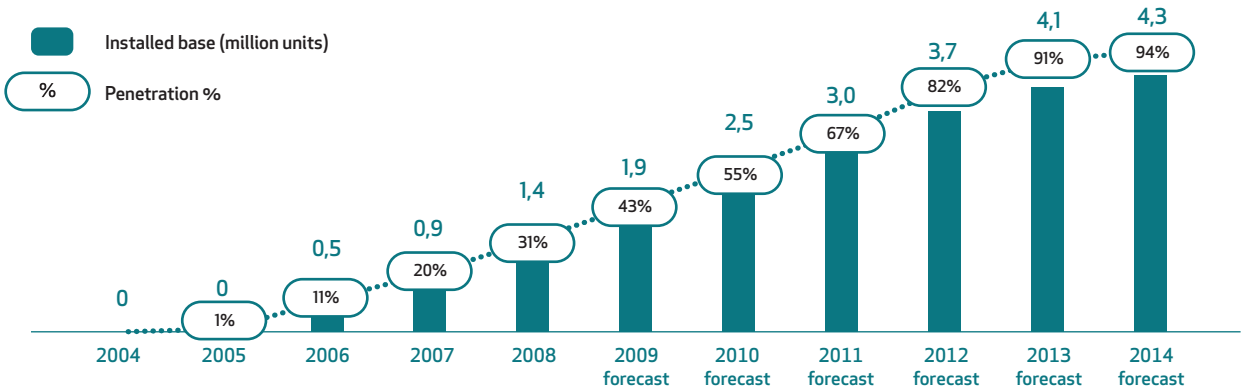


Figure 21 | 3G handset penetration in Finland 2004–2014 (the penetration is measured against the total number of mobile handset users in Finland)

Source: Idean, 2009

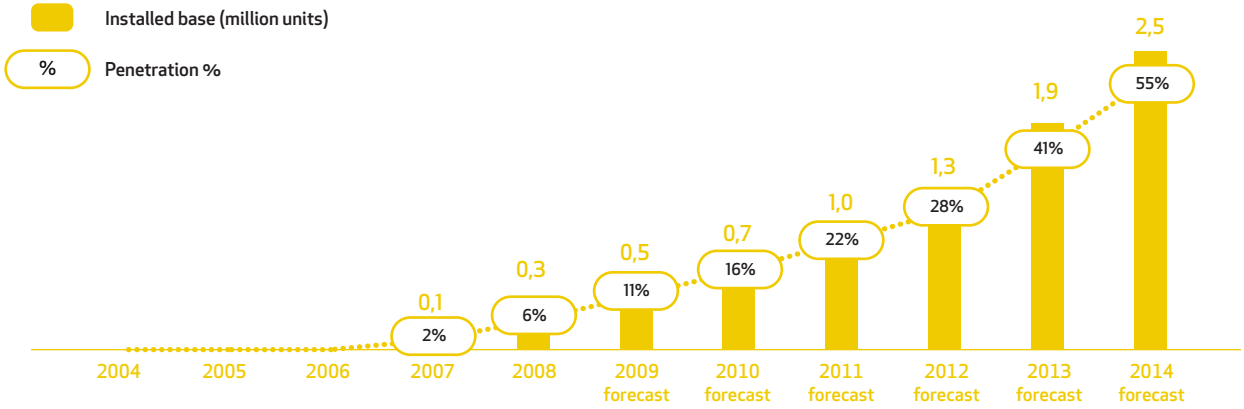


Figure 22 | GPS mobile handset penetration in Finland 2004–2014 (the penetration is measured against the total number of mobile handset users in Finland)

Source: Idean, 2009

INTERVIEWS

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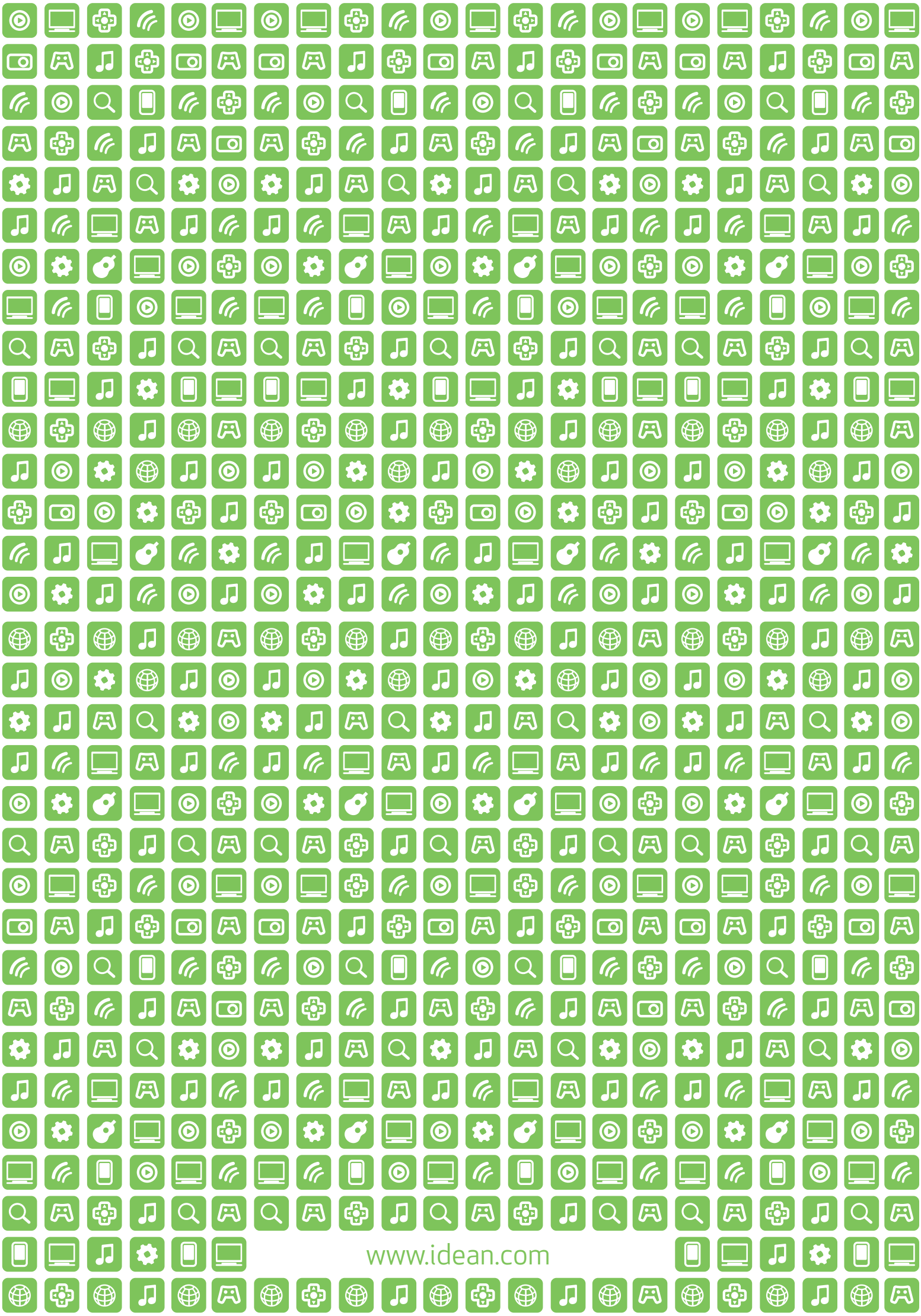
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