

Mobile Television: Is It Just A Hype Or A Real Consumer Need?

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Abstract

Mobile media are not a new phenomenon. In the media history consumers always searched for the possibility to kill time while they are mobile and certain products and devices were used for this purpose (printed media, portable radio, MP3, game consoles, etc.). But in the case of television mobility is not usual at all. Due to the technological deployment television services offered on mobile phones are already available, but the market potential is uncertain. There are different technologies and mobile operators try to find the business models that best fit these technologies. The supply chain of mobile television involves market players of different markets (e.g. content production, broadcasting, mobile market). The way and level of vertical integration depends on the ability of these companies to exploit their core competences. The real question is if the consumers really need mobile television services or it is only just a new revenue-generating service pushed by the operators. Several findings of the pilot projects are available and there are some really surprising results. The main aim of the paper is to give an overview about the potential market demand for mobile television services. Even if it is a new service, some speculative predictions can be made based on the current media consumption patterns. Although the business models and the technological background are also crucial, the real question is who, when, and where will watch television on mobile devices and which genres/programs will be the most popular.

Keywords: mobile television, media consumption, business model

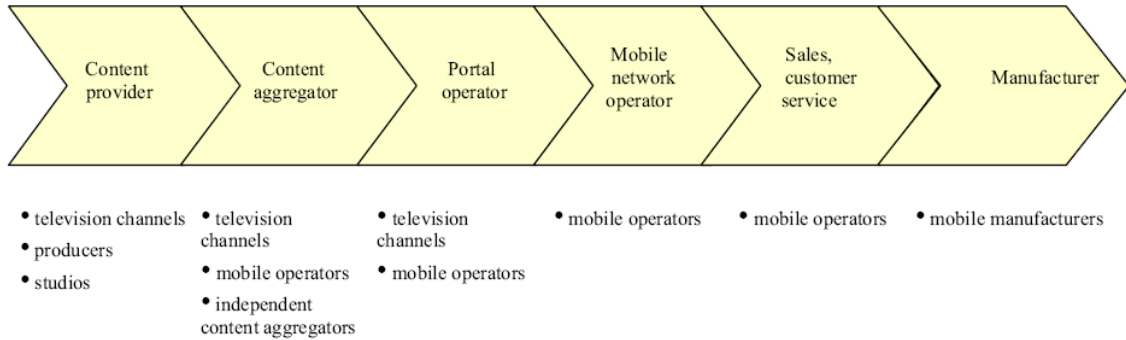
Consumers often expect a kind of mobility from the media products: newspapers and other printed media are evidently suitable for mobile usage, but the portability is also a characteristic of radios and other electronic equipments. In the case of television this feature is not so evident. Until the last years mobile television was only a dream of heavy-user television fans, but it seemed to be unfeasible. With the diffusion of third generation mobile services (e.g. UMTS) and with the introduction of mobile broadcasting technologies the mobile television is not a futuristic vision any more.

1. Business models and pricing strategies

Mobile television services can be offered by different technologies. The first mobile television services were introduced on the 3G systems, the bandwidth is high enough even for video content. Based on a unicast technology it is a highly personalized service, the subscriber can watch any kind of content at any time, but the prices are high. This kind of point-to-point communication form is costly, since sometimes the same

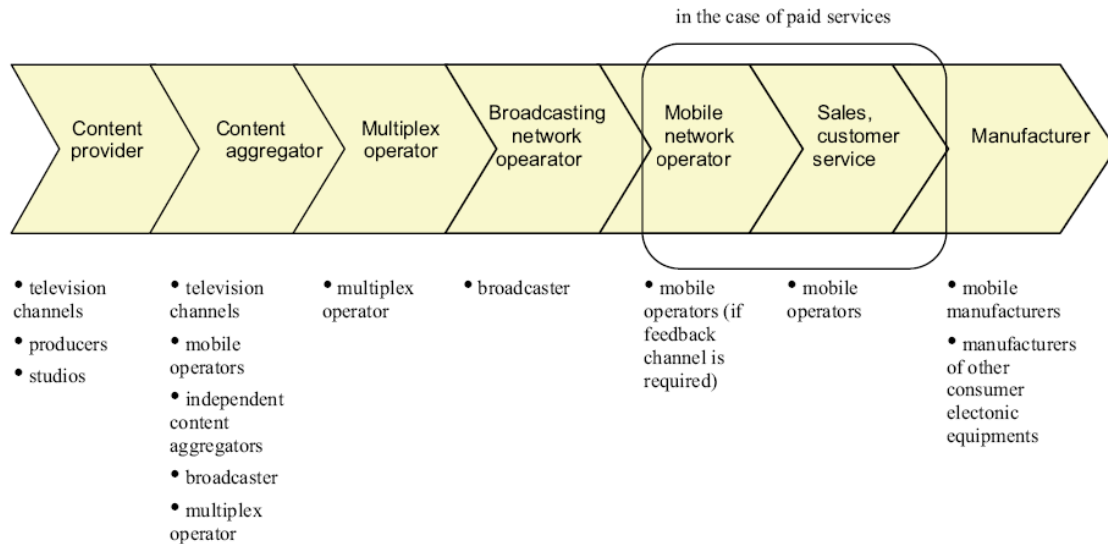
content is sent to many phones in the very same cell. Economies of scale cannot be realized in this case, and capacity planning is problematic.

Fig.1: Supply chain of mobile television services offered on mobile networks



Mobile operators have a key role on this platform, even if they do not have any core competence on content providing. The network operator and the sales/customers service functions are crucial, and the mobile operators cannot be substituted. They use the frequencies and they have direct relationship with the consumers that is required for handling the billing system. They can also operate the portal (an example for that is Vodafone Live! content portal operated by the Vodafone). In this model the mobile operator has the best chance to get the central role of supply chain, the level of vertical integration depends on its market power and corporate strategy. In the case of mobile services offered on broadcasting networks the situation is different. There are several technologies based on terrestrial and satellite distribution (like DVB-H, TDMB, S-DMB, MediaFLO, ISDB-T) but there is no single global or at least European standard. Role of mobile operator is not so evident, since the mobile network itself is not required for the core service and the sales and billing functions can be also unnecessary if the business model is built on free-to-air (FTA) services. It is not clear which player of the supply chain can have a key role on the market in this case.

Fig. 2: Supply chain of mobile television services offered on broadcasting networks (DVB-H)



This technology is relatively new, the potential business models are uncertain. The *content provider centric business model* exploits the competition for the valuable rights based on the 'content is king' concept. For the content provider the lack of customer service and billing system can cause difficulties. In the *content aggregator centric business model* the content aggregator probably integrates the content provider but the lack of direct customer relationship can be problematic here, too. If the operator of an other platform (e.g. a cable operator) enters into mobile business and takes some content aggregation function, the billing problem can be somehow solved. The *multiplex operator centric business model* is maybe the most uncertain now, since the whole long-term future of the digital television market is not foreseen. In the so-called strong multiplex model (where the multiplex operator and not the regulator decides about the available content and the packaging of channels) role of the multiplex operator can be crucial. It can also build out customer relationship system. A *network operator centric business model* is also possible. It can be the broadcasting company that operates the terrestrial network, but it does not have customer service. Due to the experiences of digital terrestrial television (DVB-T) the network operator can get a role in the multiplex operation, and it strengthens its position. The mobile network operator is a less significant player, since its network is not used for content distribution. If the content services are interactive and a feedback channel is required, the mobile network operator can get a role. It is also the case with the paid services, since the conditional access system should be operated by the mobile operator. The other uncertain point of the broadcasting based mobile television is the end-device. It can be surprising, but even the evident

role of mobile phones can be questioned, since it is only one option for television viewing. Other devices (e.g. PDA, enhanced MP3, game consoles) can substitute the phones and can offer a better viewing experience for the users. The fact that phones became the part of our everyday life and usually users do not go anywhere without it definitely means a competitive advantage for this device. But the small screen is a disadvantage and just for the purposes of mobile television the size of the mobile phones should not increase again to allow larger displays (Trefzger, 2005). The battery capacity is also a problem, since video viewing requires a lot of power. In the current technological conditions there is a trade-off between the mobile television viewing and the functional advantages of phones (small size, long battery life).

It is a challenge for mobile operators and other potential market players to find a business model for mobile television services. The development of the mobile communication gave several lessons in the last decade. According to Rogers (1986) the communication industry is characterized by tool technologies. The techniques can be applied in a variety of ways to diverse situations. The popular applications are shaped by consumer habits, by re-discovering the devices themselves. The popularity of SMS in mobile telephony was a surprise both for engineers and researchers. What is more, researchers had never thought that the diffusion of mobile technology would affect the television industry through the appearance of various votes. Accordingly, even though the development of infocommunication technologies is the result of well-planned business and engineering activities, the decision whether a specific service becomes popular or not rests with the people. The introduction of UMTS and the relative failure of these services also illustrates that consumers' behaviour do not exactly follow the expectations of corporate decision makers. As Picard (2005) points out, no media or communication device can reach a 100% adoption, even the researches are based on this assumption. Evidently it changes the basic question of diffusion researches: the question is not purely the adoption rate and the speed of diffusion, but rather the practical limit of the diffusion. Corporations have long-term strategies and they make investments only in the fields that have a mass market potential. Mobile television needs a mass market even some of the contents may target only niche markets. It is not evident at all if this mass market exists. Anyway the main question is if there is a real consumer demand for mobile television services or it is rather a hype with a business failure at the end. The basic platform for mobile television services is practically the strategic decision of market players. Obviously the mobile operators want to have a key position in the supply chain with the exploitation of consumer relationship. This service can increase the ARPU (average revenue per user) and opens the market potential of media industries. For the broadcasting companies this possibility means a new distribution channel for their content and they also try to get a strategic role in the service providing. The direction and level of vertical integration depends on the ability of these companies to exploit their core competences. The regulatory background (e.g. spectrum regulation, media regulation, special

concentration rules) can also influence the strategy of the market players. There is no clear regulatory policy concerning mobile television even some national regulatory authority started investigating this field. An attractive pricing model and price level is crucial concerning the success of mobile television. The basic pricing models are the same as in the media business in general (Trefzger, 2006):

- pay-per-view (time based, volume based, event based);
- subscription;
- one time fee;
- free models.

According to the expectations the subscription can be the most popular pricing model besides the free models of course. The experiences of the pilot projects also support this assumption (Holland 2006, TNS Infratest 2006). On the infocommunication market the flat-rate pricing proved to be most successful (cable television, broadband internet, mobile services), the usage based models are far less popular. Combination of the different models is also possible. The subscription based pricing supplemented with pay-per-view events can be acceptable for the consumers and profitable for the operators. These contents have to be really premium contents, otherwise the consumers do not have any interest to pay additionally. Some sport events (e.g. premium soccer on the European market) can be suitable for this kind of pricing.

The FTA services can be also favourable for the users, the real question in this case the financial return of the service. It is uncertain if the content providing can be financed by the advertisers, reaching a critical mass is essential in this case. It is somehow the chicken-and-egg problem, without mass audience the market players do not finance the development of free content but without content the service itself is not appeal for the consumers. The one-time fee is the least common (e.g. American digital satellite radios offer life long subscription for one time fee), but a premium price built into the end-device is also possible.

2. Consumption of new media services

Analysis of new media services is an emerging field in the media economics literature. New media is the totality of those mass communication devices and services which allow of the interactivity of services and the personalisation of media content (Urban, 2004). The 3G technology can maximally fulfill this requirement. In the case of broadcasting technologies it is less evident, even if mobile network can be used for feedback. If we want to evaluate the market demand for the mobile television services, we have to identify some crucial points in the environment of mobile television. It is a brand new service but not without precedents. Some experiences from the media and communications market must be known to understand the main questions of mobile television services. There are general tendencies concerning

media consumption patterns and they can also determine the market acceptance of mobile television services. The first question can be if the audience is interested in mobile television viewing or not. In some cases the mass appeal of mobile television is not questioned at all (IBM, 2006). The logic behind this idea is the universal popularity of television viewing and the high penetration of mobile phones. Picard (2005) underlines the differences between telephony being a tool of interpersonal communication and broadcasting designed for one-way mass communication. The concept of mobile television blends these functions, but according to the experiences in the communication industries users prefer the separated technologies in the consumer goods. Goldhammer (2006) compares the highly converged devices to the Swiss army knives. It can be really practical outdoors, but at home we prefer the usage of certain knives for different purposes and we open a bottle of wine with the corkscrew instead of the pocket knife. This phenomenon can be instructive for mobile phones: even if there are some practical advantages of converging the functions, mobile phone can remain a device primary for personal communication. It is not evident at all if the users want to substitute the current high-quality consumer electronic equipments with a new device that offers a more limited viewing experience. The other question is more about the content type desired by the mass audience. For a long time the „content is king“ concept has been prevailing in media economics literature. Concept of Odlyzko (2001) questions the hegemony of professional content and emphasizes importance of connectivity. User-generated content (UGC) became a buzzword in the last years and according to Companie (2006) it can be a driving force not only for the Internet but also for mobile communications. Since cameras are also included in the phones, the civil content providing can be especially important in some breaking news situations (terror attack, accident, etc). The mobile phone owners can become correspondents immediately, as it happened on Internet portals several times in the last years. Its real technological environment is the 3G, in the broadcasting model the viability of UGC is less evident. From this point of view the development of mobile Internet can be threat to the mobile television market.

The UGC phenomenon can have an impact also on the business model and the pricing strategy. Users are generally more willing to pay for two-way interactive and interpersonal communication services than for one-way content services. It can give a priority to the interactivity and personalization in the business development of mobile broadcasting (Tadayoni-Henten, 2006). It obviously favours to the personalized content providing of 3G networks against the mobile television services offered on broadcasting networks. We have to recognize that mobility is a trend in media consumption as well as time-shifting. It is a natural desire of users that they are want to consume the media services where and when they want. The change of 'technological push' models into 'market pull' models in communication industries reflects this expectation. Nowadays free time is limited and it is a clear interest of consumers to kill time when

otherwise they have to wait for something or they have spend time somewhere without any kind of activity (waiting in a queue, sitting on a bus). No doubt, mobile television can be suitable for this purpose. The highly personalized mobile television services can theoretically fulfill the requirements of the consumers, but several practical questions arises. No one knows the exact consumer needs concerning the content and quality issues, and crucial question is how much the users are willing to pay for the services.

3. How the consumers accept the mobile television services?

Even most brilliant technologies and innovative business models can fail, if there is no market demand for the product or the service. Even if the success of mobile television seems to be evident because of the popularity of television and mobile phone, the introduction of the service has a business risk. Concerning the potential market demand for the service we have to ask some basic questions:

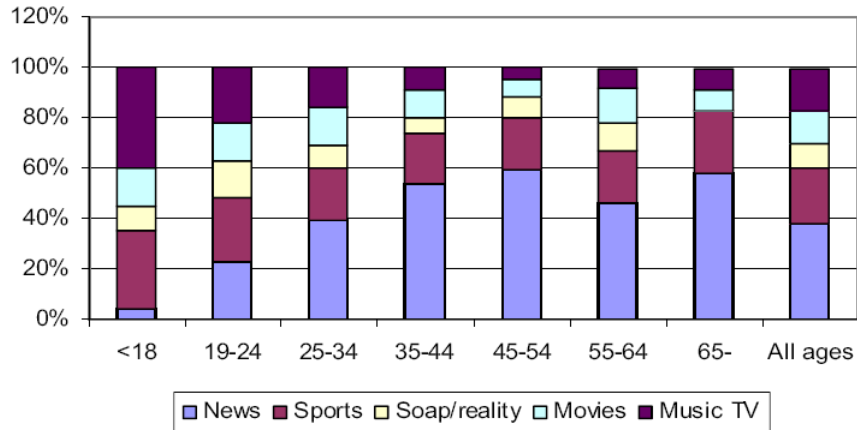
- Which content type can be the most appealing for the consumers?
- How much are they willing to pay for mobile television?
- In which situation, for what purpose do they use mobile television?
- Where do they watch mobile television?
- How much time do they spend on watching mobile television?

There are only a few commercial mobile television services (at least with broadcasting technologies). We can get a picture about the attitude of consumers from the pilot projects. The results are partly available and there are some surprising findings.

Content

Users are interested in those programme types that are well known from traditional television, but not all the genres are equally enjoyable on mobile phones. According to the research of A.T. Kearney conducted in twenty-one countries the news and sports programmes are the most popular. In the young age groups music content seems to be extremely attractive. The different preferences in the age groups is illustrated in Fig. 3.

Fig. 3: „What type of TV programmes would you be most interested in“, by age



Source: A.T. Kearney - University of Cambridge (2005)

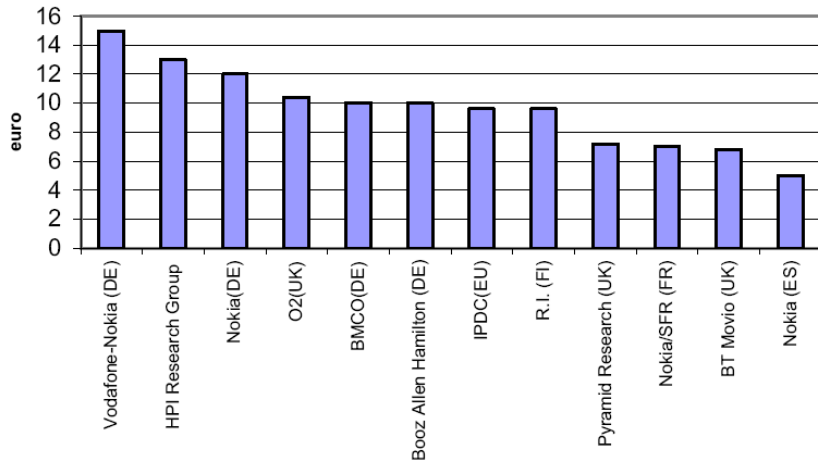
Pilot projects give similar results, news and sport programmes are the most popular. The first commercial DVB-H service in Europe was offered by 3 Italia in June 2006. The timing was not left to chance, the introduction was connected to the World Cup. The triumph of Italian national team was an exceptional luck for the service provider, it obviously boosted the subscription base. At the end of the World Cup 3 Italia had 111.000 subscribers and expected 500.000 mobile television clients by the end of 2006¹. Due to the relatively small size of the display and also because of the short and fragmented viewing situations, the other premium content, the movies will be probably less popular on mobile television platforms. In Korea and China special made-for-mobile films were produced with a commercial success. They are different from traditional movies, editing is more fragmented and unconventional camera techniques are used (Orgad, 2006). It is the question of the future if the mobile television stimulates the specialized content development or the contents developed for traditional television will be suitable for mobile usage. The so-called *mobisodes* (short versions of serial episodes) developed for mobiles are popular, but this kind of content development is relatively costly. Mobisodes were produced for some well-known series (Lost, Dr Who) and some mobisodes were also produced in Hungary based on two popular domestic series. They were available as part of the 3G services without any significant success.

¹ Probably this expectation was not realized, since 3 Italia has not published any subscriber information since July 2006. It is somehow informative in itself. (Relevant information about the 3 Italia mobile television service are available on <http://www.dvb-h.org/Services/services-Italy-3Italia.htm>)

Pay willingness

The return on investments of programme developing is highly uncertain. The pay willingness of the users is relatively low, as the different research results illustrate in Fig. 4. This sums can change as more and more content will be available on the mobile platform and users consider the service as the part of everyday life.

Fig. 4: Willingness to pay (monthly in euro) based on different research results



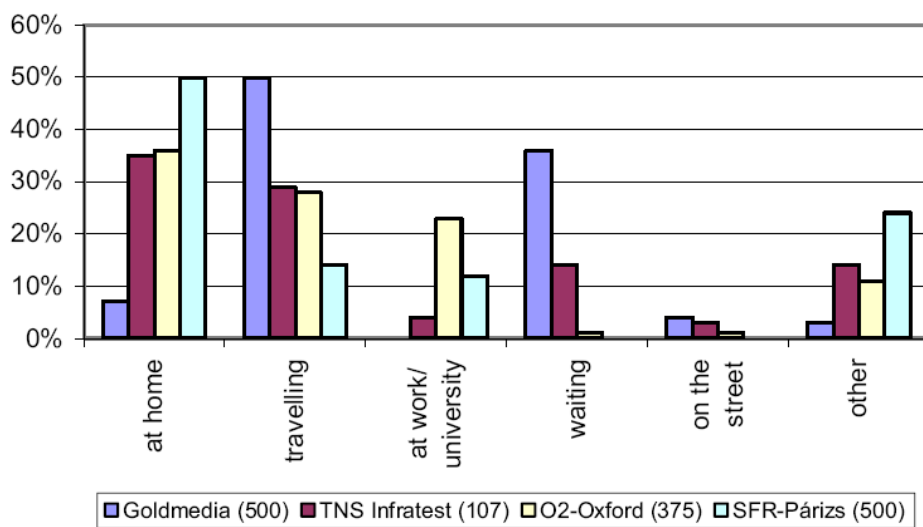
Source: BCE (2006)

The premium contents can have high revenue generating potential. Countries having popular sport content and high demand for that (e.g. soccer in UK, Italy, Germany, Spain) are in favourable situation. The lack of domestic premium sport content hits several smaller countries, it can have an effect both on the ARPU and the number of subscribers. The question of the adult content is also highly uncertain, maybe mobile phone is not the most suitable device for viewing this content type. But it must be added that adult content could find its audience via any kind of medium (print media, television, internet) and it could be a mistake to underestimate revenue generating potential of adult content. Unfortunately it is not an easily researchable area, the pilot projects do not say a lot about it. Orgad (2006) points out, that ca. 30% of video content viewed on mobile device outside the U.S. is pornography. Anyway we have to take it into consideration if we want to get a picture about the market of mobile television.

Viewing situations and venues

The question of place or situation where consumers view mobile television is also important. The research results show that consumers watch mobile television not only during commuting or at work but also at home. It means that mobile television can substitute the traditional television or at least it can function as a secondary set in the household.

Fig. 5: „Where do you use the service most often?” – results of different researches



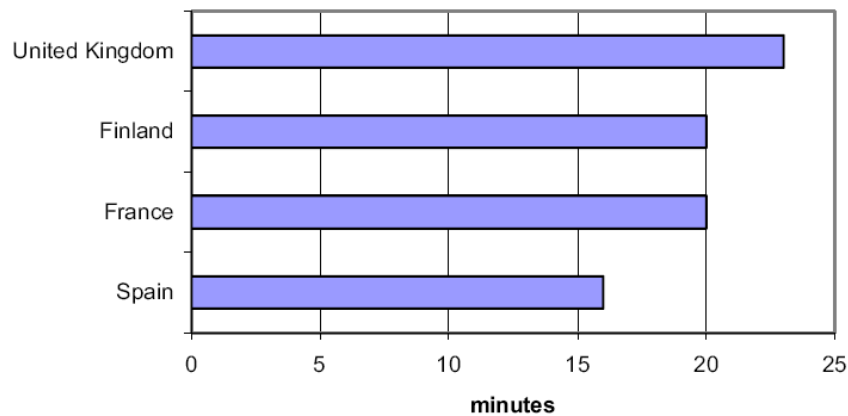
Source: RTR (2006), TNS Infratest (2006), Mason (2006), LesMobiles.com. (2006)

The relatively high proportion of the home viewing is somehow surprising. At first sight the core competence of mobile television can be its immediacy and flexibility. Consumers can get the desired content where and when they want and they do not miss the breaking news. The entertainment part can be also important when people have empty times and they are bored. But the home viewing reflects a different kind of motivation, since traditional television and internet is much more suitable for being entertained or for information seeking. A potential explanation can be that mobile device can create a really private environment in the household (e.g. in the case of pornographic content it can be an evident need). Or the portability can be a useful feature even inside the house and television content can be available even in the rooms where otherwise not (e.g. kitchen or bath). Anyway these are only speculations, consumer researches should aim to find the motivations of home-viewing of mobile television.

Time devoted to mobile television

The market potential of mobile television highly depends on the time devoted to viewing. It became also obvious that participants of the pilot project did not spend too much time with mobile television viewing.

Fig. 6: Average daily viewing of mobile television services (based on different pilot projects)



Source: <http://www.dvb-h.org>

The results of the latest pilot project, just finished in Stockholm have similar results. The 62% of the participants spent 1-25 minutes on a day with mobile television viewing, and they mostly watched it in the morning and evening (Bergdahl, 2007). The expectation that mobile television can reshape the television prime time, giving a higher importance of daytime viewing has not been proved. Generally the pilot projects cannot make the potential investors really optimistic. There is a demand for mobile television services in certain situations and for certain type of content but this demand is limited. The return on content development can be risky, but the programmes originally developed for traditional television are not always enjoyable on mobile displays.

4. Conclusions

Mobile television services are relatively new on the market. There are some commercial offers (especially based on 3G technology), but most of the research results are coming from surveys and pilot projects. The market players face with a dilemma. On the one hand the 3G services are relatively well known, the possible business model is more or less clear but the mobile television cannot be really popular. A possible reason can be the high prices that are consequence of the high costs. The economies of scale is hardly

prevails in this case, because of technological reasons. Due to the point-to-point connection the costs increase by the growing number of users. On the other hand the broadcasting technologies have a high risk now. The business models are not clear, the role of the mobile operator is uncertain. It has higher investment costs (a broadcasting network has to be built out) but due to the broadcasting technology the capacity planning is less problematic. Since the media consumption is more and more about the interactive and personalized services, the one-way broadcasting technologies would be less preferred by the consumers. It will be a challenge for market players to integrate the advantages of the two technologies and to offer an attractive service to the consumers at a competitive price. The behaviour of the consumers is also a question. The technological development is much faster than the change of consumption habits. In the infocommunication sector the pull model becomes prevailing instead of push models, but overall the technological possibilities highly influence the market development. The competition for the free time and money of the consumers is more and more intense. Mobile television can be competitive, since it can be for killing time while waiting, commuting, etc. But the rationality is not enough for the market success. The emotional aspects, like the new viewing environment (e.g. on the street or on bus) or just the subjective perception of the quality can negatively influence the diffusion of mobile television services. There are other uncertainties concerning the mobile television development. Mobile operators can easily cannibalize the mobile television market with the introduction of mobile internet services. If consumers can reach the internet with the mobile phone their need for information and entertainment content in empty times will be fulfilled. Of course other technologies and other devices can be also a challenge for mobile television market. The free city WiFi systems and the high diffusion of mobile devices (laptop, PDA) can mean a real threat to the emerging market of mobile television. The basic assumption of the researchers and operators was that consumers view mobile television when they want to kill time. The pilot projects do not prove this assumption, and based on this finding probably different kind of program development strategy is required than it was thought before. The broadcasters have been searching for killer application in interactive television for long years, and it seems that mobile operators try to do the same. In the case of interactive television Van Dijk and de Vos (2001) compared it to the searching for the Holy Grail. Maybe the mobile television market players prove more successful in finding the killer application.

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