# The Future of Mobile Newscasting

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# Table of Contents




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# Abstract

The development of mobile communication has been annoyingly unpredictable. SMS can be considered as a first attempt to use new mobile technology for delivering news. The concept became feasible after GSM technology had made its breakthrough with the public, that is, when there were sufficient numbers of people who were a) using the technology and b) willing to pay for text-messages informing them about news topics. Today, when in some countries almost everyone has a GSM phone, one can hardly remember that the wide popularity of SMS has been rather a surprise. For years it seemed that GSM phones would be used only by a few and mostly for audio communication. Instead, SMS now is a part of people's everyday life and a natural mode of business communication as well as casual chatting.

After the SMS surprise, however, we have encountered the WAP flop. Those who assumed that the popularity of GSM and SMS would be followed by an enthusiastic acceptance of WAP phones have been bitterly disappointed. Some of the reasons for this can be found in the experiences compiled in Infonomics' Deliverable 1.4. The most important lesson is that the WAP's failure to attract large user bases was not foreseen. The promise of GSM/SMS had led many to assume that the new mobile application would triumph as well. Because this did not happen, there is now considerable uncertainty about how the public will react to those new mobile applications that are being developed.

The issue of mobile news is not separate from overall developments in the news industry. The wider background is that there has been a swift move from the analogue model of operation to a digital one. New communications technology has made it possible for all content, from text through audio to video, to be in the same format – in bits and bytes. Because these digital bits are insensitive to the actual contents, the barriers between different mediums are lower than before, if not altogether non-existent. It is possible, for instance, to use text that has been written for a printed publication in an online publication, in a videotext service or in a mobile news service.

At the moment, users inclined to enter the world of mobile communication must be ready to encounter a confusing assortment of devices. Labelled with acronyms understandable only to engineers, these devices suggest that in order to be able to fully make use of mobile news, one should carry several devices. Because this is hardly what the public want, some appliances will oust some others from markets. Content providers will have to bet on the right horse in this race. Secondly, mobile news – in the context of new mobile technology – is forced to elbow its way into a culture already laden with other media. Long before mobile phones, people have been able to receive news while being on the move, i.e. mobile. Today, for instance public spaces, cafés, trains, waiting-halls etc., are actually rich in different media from television through newspapers to mobile phones. Their functions differ greatly but the important thing is that new communication devices don't enter a communication vacuum. Identifying the feasible usage patterns that might be favourable for mobile news services is the crucial issue for the players in this field.

This brief account of the context of mobile news suggests that while technology matters – as is documented in Mudia Deliverable 1.4 – the fate of mobile news is dependent on a variety of factors. The case studies provided are concrete examples of how different actors in the mobile news field have reacted in this general setting.

# Introduction

> *Wireless personal communications can be considered as the fastest growing segment of telecommunications. In fact, mobile telephones have become an everyday accessory for hundreds of million people, and they are increasingly being used in the most developed and many developing countries in the world.*
>
> *(Beaubrun and Pierre, 2001)*

The Internet and associated technologies have gone beyond the initial hype cycle and are now approaching the more serious, more quiet phase, where innovation and development become more reasoned, less exploratory and more tied to serious concerns about profitability and usability. As the opening quotation mentions, there are many aspects to wireless electronic communication and this topic has a large history of well over fifty years. This study focuses upon the production and consumption of news content for mobile telephone services, and looks at the creation of models of content dissemination in this area.

In the mobile news industry, this is a time to consider the options open to news providers and network operators. There is still no established business model for delivery of content to the mobile user, and this difficulty is further compounded by the emergence of new technologies for mobile users that make the content issue far more important.

Mobile telephony has been a European success story. The establishment of GSM technology in Europe, and subsequently across the world has been a testament to the development of common standards for second generation mobile telephony. With new technological developments, comes investment, and this has been hefty: not only in Europe, but across the world. This investment must be regained, and it appears that content and services related to content delivery are the potential life-savers for those network operators that have staked their reputations upon the success of the third generation of mobile telephony services.

Mobile news content is possible. It is also, in small pockets of innovation, seen as successful. The most surprising things can happen in the mobile world, as the SMS example cited will show us.

This study examines five cases, that of a news agency, a content aggregator, a 'net-native' mobile news service, a traditional newspaper and a broadcaster to see what the state of play is in mobile news services. The broad range of cases reflects the phenomenon of convergence at a technological, and a market level.

Both authors of the case studies have questioned high-level executives in the various companies to find out what the current operations are, what the expectations were of services such as WAP and what their experiences were and are of these services. The authors have also questioned their subjects as to their opinion of new services emerging in the wake of the network operators' 'spending spree' on Third Generation mobile telephony licenses for frequencies in the air.

The first part of this study, however, gives a brief overview of the technological developments that have led up to the adaptation of standards for mobile telephony, including Third Generation. It also takes a very short look at what is to come in the future, beyond the Third Generation.

# Technology matters?

The advances made in application of nothing more than the airwaves and a few cleverly constructed computers has led to what can be considered a revolution in the dissemination of news and services now considered 'newsworthy'. How technological developments have contributed to the perceived change in journalism, both from a perspective of journalistic and editorial routine, and also from the perspective of the user (client, or audience) are of crucial importance to readers of this study. In this section of the study, we will a background to technologies associated with communication. We will describe how these have driven the dissemination of news and how they have changed the characteristics of newsworthiness. Another important issue to be dealt with in this part of the study is the way in which new technologies have been adopted by service providers, and the relation to news content delivery.

## Does technology matter?

This section of the study is provocatively titled 'Technology Matters?' because it wishes to raise the question that perhaps it is not the technology that determines the shape of news content and dissemination, but more that it is the aspirations of the users and producers of the technology that matter. Whilst the authors of this report think it problematic to concentrate on the technological aspect of news content and delivery, it is necessary to show how the technology has developed over the ages, whilst maintaining a focus upon the people who use this technology either to produce or consume 'news'. This is important for news producers, and will be raised in further detail later on in the study. In the same way that the telegraph and the fixed-line telephone radically changed our perception of news and communication, this study advocates more careful analysis into what should be done with the technology, rather than looking at what the technology forces one to do. This is particularly important when we examine the case studies in the latter sections of this study.

Rather than just describing the technology, as so many reports have done, it is the intention of this part of the study to go one stage further and discuss the impact of the services made possible by the different technological solutions on 'news'. This section of the study will describe technological developments, but also show how they evolved, hopefully leading to a greater understanding of their relationship to news content production and consumption processes.

## Technology as service platforms

A more careful analysis of the technology as an 'enabler', rather than a 'determiner' will hopefully encourage the reader to consider in more detail the opportunities and usability of the opportunities provided by advances in new mobile technologies. The deterministic approach laid out in other analyses of the potential for mobile news services have often ignored the usability aspect and the desires and needs of users, and have thus failed to deliver promises made in terms of new services. Whilst it is important to understand the nature of the technologies present for mobile news (these are briefly introduced in the following section), it is more important to understand the services that are enabled by these technologies.

The most important point to note when evaluating the potential for news content services on mobile telephones is to realise that these mobile telephone standards have not been designed in collaboration with members of the news industry, and thus lack input into their design, hence explaining to some extent why there are issues in using mobile technology platforms for news content delivery.

## Mobile telephone technologies: a brief overview

The multitude of various mobile technologies and some of the services available over these networks require description, before launching into a discussion of examples of mobile news. The focus of this study is on the most recent developments in mobile technologies, and covers the current dominant technology, as well as looking at various new network technologies, which are included in this study due to the potential convergence of wireless, mobile and networking technologies. Technologies described here cover the existing Second Generation of Mobile Telephones - 2G, the evolving 3G (or UMTS) and the emerging 4G. The acronyms abound in this technology sector, and this study will try to keep these to a minimum, whilst explaining them along the way whenever necessary.

How the realities, potentials and pitfalls of each of these technologies have contributed and will contribute to the development of mobile news services in the European Union and beyond is the main point of departure in this technological section of the study. Traditionally, despite the fact that wireless electronic communication was pioneered in the US, Europe has led the way in mobile telephone technologies, and this is still the case in terms of simple numbers connected to a mobile telephone. However, operators in the US have realised this, and are now overcoming various barriers that have held them back (including lack of common standards) and are marching on relentlessly. Europe has also arrived at a point of near saturation in terms of mobile telephone ownership, according to a study released by Analysys, with over 70% of Europeans owning a mobile (Doward, 2002). One of the major problems with mobile news, or any form of content delivered over a mobile telephone is the pricing. According to the Analysys report, only eight per cent of revenues were attributable to non-voice use in 2001. However, Forrester, in a more recent study, claim that 12 per cent of all revenue made by European mobile operators comes from text messaging alone (http://www.emarketer.com/estatnews/estats/wireless/20020424_forr.html). They also claim that the financial revenue gained from text messaging will decrease over the years to come.

Thus, for the mobile telephone operators, seeking to regain investments made in new telephone networks, the main issue is not only to promote one-to-one communication, but also to receive digital content over one's mobile telephone. Recently in Orlando, Andy Grove, chairman of Intel, stated that "now is the time for U.S. carriers to do something more substantial with the high-speed networks they've built in the past few years" (http://news.com.com/2100-1033-862300.html). The focus is now much more on the Mobile Portal, as defined by Ralph and Shephard as 'a cut-down version of existing Web-based applications, such as news, weather and e-mail' (Ralph and Shephard, 2001: 88). What precisely are the visions behind the new technologies that are being presented briefly in the following pages, and do the technologies live up to these visions?

A look at the 'evolution' of mobile telephony systems will reveal that there has been a major shift from voice to data, which also means a shift from communication to content. Melody (2000) states: "New mobile operators have been recognized as

providing the primary drive to introduce competition into telecom markets." The challenge remains as to whether mobile telephony in its more recent stages (i.e. with the focus moving to data and non-voice communication) can introduce innovation too. The implications and opportunities for content providers is immense, and needs to be investigated thoroughly; hence this study. The story starts back in 1985, with the development of some of the first European mobile telephone networks.

### First steps

The Total Access Communication System (or TACS) was one of the first mobile telephone services made available by Ericsson: Vodaphone started their service in January 1985 in the UK, and Eircell started shortly after in Ireland (http://www.ericsson.com/wireless/products/mobsys/tacs/subpages/market/subpages/teurope.shtml). As with almost all technological advances, there were competing standards, and the story of mobile telecommunications in the US bears the major tales of woe, with another standard, AMPS, being used there. This service allowed for data transmission, but only using equipment fitted with the appropriate modem (and thus normally for users with a mobile connected to a computer). This primitive form of network technology thus allowed for the sending and reception of email, gave the user the ability to surf the Internet, and allowed faxes to be sent as well. The system worked, for the user, as a regular telephone line, when connecting to the Internet, but just slower.

However, the implications for mobile news delivery and consumption were not that profound: the technology merely enabled a user to act as if they were connected to the Internet from their home or work computer, albeit at a much slower speed than even a telephone line. One could imagine that it would have allowed journalists out 'in field' to submit short pieces of text from their computer.

Analogue mobile networks are now almost redundant in the European Union. But these provided the first steps for the 'mobile revolution'. New forms of technology, which shall be described in more detail below, have superseded the use of these analogue networks and will in the near future allow people to be always wired in the information society all the time, and everywhere.

### Second Generation mobile telephony

The demand for mobility and communication to be 'wired' together was recognised not only by business, but also by various standards organisations. Due to the growth of the mobile telephony market, moves were taken to standardise the networks that were emerging in various European countries. The Conference of European Posts and Telegraphs started this process, by creating the Groupe Spécial Mobile (GSM) to create a standard across Europe. This standard needed to meet the following requirements:

- good subjective speech quality,
- low terminal and service cost,
- support for international roaming,
- ability to support handheld terminals,
- support for range of new services and facilities,
- spectral efficiency, and
- ISDN compatibility. (http://kbs.cs.tu-berlin.de/~jutta/gsm/js-intro.html)

These requirements were seen as important at the time, due to the demands being placed upon existing analogue services. The adoption of these requirements by this organisation enabled the most popular 2G service - GSM - to be born. The growth in usage of GSM has been phenomenal: according to some statistics "GSM technology is in use by more than one in ten of the world's population and growth continues to soar with the number of subscribers worldwide expected to surpass one billion by the end of 2003" (http://www.gsmworld.com/technology/gsm.shtml). At the beginning of 2001, over 400 operators provided GSM services in 157 countries (Harmer and Friel, 2001: 24). This is not just a European standard, or a European technology: it is truly global. This would go some way to explaining the demand for current telephony services, and the investments and faith placed in the third generation of mobile telephony services.

In terms of news content and delivery, the second generation of mobile telephony provides for a whole host of new services; these have not been introduced at one time, but have been added to the services provided by different operators at different times. It is important to note that these services are not 'seamless': they do not normally connect to each other, but all come under the broad title of 2 (or 2.5) G. The table below describes some of these services, and provides examples of news content delivery services available through them.

| Acronym | Name | Description | Example Service |
|---|---|---|---|
| **SMS** | Short Message Service | 160 character text message | News headlines, sports results |
| **WAP** | Wireless Application Protocol | WWW on mobile telephone | Richer content than SMS |
| **GPRS** | GSM Packet Radio Service (2.5G – an enhancement of 2G systems | Higher data transfer rates | Video conferences |
| **i-mode** | i-mode (2.5G) | Packet-switched technology, transfer rate dependent on network | Multimedia content |

**Table 1: 2G Mobile Telephony Services**

The distinction between 2G and 2.5G is that 2.5G utilises packet switching technology for data transfer, whilst still maintaining the emphasis on circuit switching for voice-calls.[1] The use of packet-switching technology has profound effects upon pricing mechanisms for content and connectivity, payment is either made per amount of data, or on a fixed amount per month. It is important to now describe how the application of both SMS and WAP have differed, and how they have contributed to the development of mobile news content delivery. An analysis of these two services in particular, should provide the reader with a background in why and how mobile news content has developed to its current position. I-mode is particularly interesting, because of its lack of development in Europe, and this will be touched upon towards the end of this section. Detailed analysis of these technologies (specifically the technological details) is not possible, or desirable in this study, but references and useful web links are provided at the

*1. Packet switching and circuit switching refer to the manner in which the call is dealt with by the network operator. It is only important to note that the packet switched network incurs charges to the user through the amount of data transferred, and not the length of time spent on the call.*

end of the document for those who are interested. Also, the issue of hardware constraints, which plague manufacturers of hardware that would be capable of running these higher quality services (such as battery life, for example) is an issue that still has to be entirely resolved for 2.5G systems (Ralph and Shephard, 2001: 88).

### SMS

The Short Message Service (text messaging) has proved to be one of the most successful accidents in mobile telephone's short history. Originally conceived of as a tool for network engineers to pass messages about the telephone network's status to each other, this technology can be seen as unique in its application and history. According to a news piece from the Gartner Group, text messaging will be trialled for electronic voting in local elections in the UK in May 2002 (http://www4.gartner.com/DisplayDocument?id=352646&acsFlg=accessBought). Another news article from mobilesms claims that eight out of ten executives now converse regularly via SMS (http://www.mobilesms.com/GetNews.asp?nid=1109&catid=1&ncat=SMS+News+Zone).

Throughout its short history, SMS has been a pay-for service. This service goes to show that people are willing to pay for content to be delivered to their mobile telephone in addition to the voice call. But we need to question the nature of that content: anecdotal evidence acquired through interviews reveals that most text messages are actually not content provided by a content provider, but more often than not, text messaging is used as a communications tool.

Its growth has been phenomenal: 1.3 billion text messages were sent across the four UK mobile telephone networks in December 2001 (http://www.mobilesms.com/GetNews.asp?nid=1096&catid=1&ncat=SMS+News+Zone). Logica (www.logica.com) expects that over 100 billion messages will be sent per month across the globe by the end of 2002. SMS has provided for some very interesting examples of news delivery: for networks that are able to position cellphones to a specific area. Companies have been able to push localised information through to the user's mobile telephone on, for example the weather, or local events or other issues of local importance.[2] This raises profound questions about the meaning of news for a news organisation: whether the local weather report actually qualifies as news or not is an issue that owners of news organisations have to decide when constructing their mobile news systems.

SMS, however, has become more of a tool for marketing and communication, rather than a tool for disseminating news by news organisations on a grander scale. Small pockets of innovation in this area have failed to catch on, and are not widely used. But the various experiments in news content delivery using SMS should serve as interesting points of departure for those wishing to implement technological developments in news content organisations.

The development of MMS (multimedia messaging services), as identified in one of the cases below, is a logical extension of the SMS phenomenon, and has been taken up by many network operators and content providers across the EU.

### WAP

The Wireless Application Protocol has been the letdown of the news industry. The promise of WAP was the mobile Internet: 'the Internet wherever you go'. News was to be accessible 24 hours a day from a client's mobile telephone, but WAP has

*2. See the MUDIA Research Brief #6 News on the Run, available from http://www.mudia.org*

been destined for the dustbin of technological innovation by many commentators. The reasons for this from a news organisational perspective later on, but from a technological perspective there are a few reasons to explain this tragic display.

1. WAP is a very complicated system to use through a mobile telephone: simply putting the Internet (which most users are familiar with accessing through a computer terminal) into a mobile telephone has user interface problems (http://www.wired.com/news/technology/0,1282,38333,00.html).

2. Transfer rates for data over 2G are not high enough to cope with more than simple text-based applications; which are not very useful for news dissemination.[3]

3. The complexity and cost of installation of WAP servers is, due to the nature of the technology, prohibitive. Information to be transmitted over WAP needs to be coded in a specific markup language (Wireless Markup Language, or WML), which requires 'wapmasters' to learn a new markup language distinct from HTML. This has led to there being fewer WAP sites on the Internet than first intended, due to their incompatibility with normal web sites. However, this difficulty must be contextualised: as some case studies show, the technological challenge has not been a great one in some circumstances discussed later on in this study. An article written in late August 2000 stated that there were only 24,000 WAP-accessible sites in the world (http://www.wired.com/news/technology/0,1282,38333,00.html).

One school of thought would believe that the WAP phenomenon could make a comeback in later years, just as SMS became important after years of existence. However, given the technological capacity required to setup and maintain WAP-sites, this is seen as unlikely. Having said that, it is interesting to note that virtually every single mobile operator in Europe offers a WAP service. And the development of the GPRS network might just revive the idea of WAP as data transmission rates to the telephone will be higher than before, which will thus remove one of the assumed barriers to WAP uptake.

### i-mode

i-mode is more correctly termed a 2.5G technology application, and it appears to be one of Japan's success stories. There seem to be two major differences between WAP and i-mode[4], and these are related to compatibility with the Internet and pricing structure. An i-mode telephone "can read practically any Web page (with varying degrees of legibility) and charges users for the amount of information downloaded rather than air time" (http://www.wired.com/news/technology/0,1282,38333,00.html). This is because it uses a variant of HTML, and can thus read (to some degree) HTML pages as well as ones written specifically for i-mode.[5] It also utilises packed-switched technology, which means that the telephone is always connected. These differences have led to i-mode becoming highly successful in Japan (which could also be attributable to cultural differences). KPN Telecom, the Dutch incumbent operator, is hoping that i-mode will become successful in the Netherlands, as a replacement for WAP services that are rarely used. So far, i-mode has been most successfully used by youngsters in Japan, and it seems that KPN will primarily target this market too, whilst also mentioning that news services will be available.[6]

*3. See, amongst others, http://www.cconvergence.com/article/CTM20020103S0010*

*4. See http://www.mobilein.com/wap_imode.htm for a slightly more detailed comparison.*

*5. see http://imodelinks.com for more information.*

*6. According to the KPN web site, with I-mode one can: send and receive email messages; download ringtones; find out the most recent weather, sport, news and entertainment, and send and receive text messages.*

It is too soon to comment on the uptake of i-mode services in Europe, as this technology only become available in the Netherlands in April 2002. Other countries, such as Germany and the UK in Europe also recently implemented this technology. But first impressions are difficult to interpret, especially in the news content market. However, due to the nature of i-mode, which seems to offer an easier and (thanks to c-HTML), a more open approach to content delivery than WAP, we might expect to see this to become an alternative to Third Generation telephone network infrastructure. Certainly, figures from Japan show the promise that such a technology can hold, even for information and content services, and not only games and ringtones.

### Third Generation technology and services

> *You'll be able to access Hutchison 3G services on demand wherever and whenever you want them. As a result, we believe our customers' lives will be made simpler, better and more enjoyable.*
>
> *source: http://www.hutchison3g.com/faq/media.html*

Whilst 2G mobile telephones and services have been voice-centric in their nature and application, with SMS and its ill-fated 'bigger' brother WAP being relegated to the sidelines as far as new content and delivery were concerned, the third generation of mobile telephones brought along with it much promise for multimedia convergence and thus, the promise of more services for content. The main communication system being developed for the 3G networks is called UMTS, or Universal Mobile Telecommunications System (http://www.umts-forum.org /what_is_umts.html). This service has yet to be activated properly in Europe, but trials have taken place, and Manx Telecom (http://www.manx-telecom.com/mobile/3g/) has been operating a 3G service since December 2001 (http://news.zdnet.co.uk/ story/0,,t269-s2100439,00.html) after a six-month delay due to network hardware problems (http://www.nwfusion.com/news/2001/0514bt.html). Hutchinson intends to launch services in six European countries by the end of 2002. Beijing hopes to have 3G operating in its first phases by 2003, according to 3g.co.uk (http://www.3g.co.uk/PR/April2002/3201.htm).

According to Beaubrun and Pierre (2001 - citing Pandya, 1999): "The underlying vision for the emerging mobile and personal communication services for the new century is to enable communication with a person, at any time, at any place, and in any form, with a paradigm shift from the current focus on voice and low-speed data services to high-speed data, multimedia and Internet services". With Third Generation mobile telephones, data will travel much faster to the user's handset: "3G networks must be able to transmit wireless data at 144+ Kbps at mobile user speeds, 384 Kbps at pedestrian user speeds, and an impressive 2+ Mbps in fixed locations (home and office)."[7] This means that users will, for example, be able to receive streaming video to their handsets. Newscasts, highlights of your favourite team's last basketball game, even home videos will be receivable over these mobile terminals. Beaubrun and Pierre claim that "the emerging 3G systems [are] supposed to make information services instantly available… In this changing environment, telecommunication operators and service providers will want to exploit innovative technologies and create new revolutionary services" (Beaubrun and Pierre 2001: 144).

*7. http://www.cconvergence.com/article/CTM20020103S0010, see also http://news.bbc.co.uk/ hi/english/business/newsid_1273000/1273944.stm for a brief overview of 3G*

The problem of standardization remains a contested issue, with a couple of standards apparent at the 3G level. The CDMA and the UMTS standards are different enough to warrant concern over interoperability issues, and this is of great concern to policy makers in business and government alike, who both need the interoperability issue to disappear in order to ensure that mobile 'broadband' will be a success. And there are also still the issues about the pricing mechanisms, and whether the UMTS network will be capable of withstanding the burden of broadband Internet access via mobile telephones (http://sun.systemnews.com/system-news/jobdir/submitted/2002.03/5515/5515.html). Some however, believe that the massive cash investments made in the frequencies capable of carrying the UMTS network mean that telephone operators will have to ensure that standards are compatible in the long run (International Herald Tribune, 6/12/2000: 10).

| Name of telco | Investment made (GBP bn) |
|---|---|
| TIW | 4.3847 |
| Vodaphone Airtouch | 5.964 |
| British Telecom | 4.03 |
| One2One | 4.003 |
| Orange | 4.095 |

**Table 2: Investments made in 3G networks in the UK (source: news.bbc.co.uk/hi/english/business/newsid_727000/727831.stm)**

Although looking at how the technology enables the revolution in mobile news services, it is important to show just how significant these new technological opportunities have become to the market: nowhere is this more appropriately seen than in the 3G auctions that took place across Europe in 2000 and 2001. It seems that these airwaves and cleverly constructed computers have become some of the most important carriers of information services known to investment bankers and their funders.

The huge investments made in mobile technology over the past few years has been astounding; the table above shows how much money each successful mobile operator paid for a set of frequencies in the UK.

The importance of 3G to the consumer, and the audience (for the purposes of news content), is, currently, not so apparent. As noted in the February 2001 edition of Tornado Insider, "It is always a risk for application developers to create for future technology platforms. One never really knows how long it will take before there is a critical mass of customers. Usually, it takes far longer than the network vendors claim, which makes the business case for huge investment very vulnerable" (Selby, 2001: 56). Selby claims that over $100 billion has been spent on licenses alone in Europe, and that this must be reinforced with a further $120-$200 billion investment in infrastructure.

For the user of 3G systems, "3G will mean new devices that support these new wireless network technologies. To take advantage of 3G wireless connectivity, you'll need to subscribe to specific data services. Determining which services you'll need will depend on how much bandwidth you require. New devices built to take advantage of 3G technology will include smart phones and PDAs that feature Bluetooth technology and other integrated functionality" (http://www.winnetmag.com/articles/index.cfm?articleid=23571). This could mean that pricing will be variable according to the user's need: those that have the need for broadband (e.g. for work) will pay for it. This could provide a barrier for the one-time user of news services that require broadband capacity, as they would not pay a higher subscription for the bandwidth to view newscasts on an irregular basis.

One of the biggest problems for mobile telephone operators has been the roll-out of handsets built to carry the 3G network. Manx Telecom, mentioned earlier on in the study, has a problem with handset availability. Despite there being many concepts and prototypes, 3G mobile handsets are only now becoming available (see http://www.3g.co.uk/3GNewestPhones.htm, for a list).

The most important question remains: who would use these services? What types of new services will be available for use over 3G networks? "Australian carrier Telstra (www.telstra.com) said that despite spending more than $148 million in the country's auction, it couldn't identify any major 3G applications not already available on its existing wireless networks". (http://industryclick.com/magazinearticle.asp?releaseid=6367&magazinearticleid=103580&siteid=3&magazineid=9) According to a position paper published by the UMTS forum in August 2001, voice calls will still be the most important service offered by 3G telephones (in terms of revenue generated) for a few years to come (http://www.umts-forum.org/ppapers/POSITION_PAPER_2.pdf). From a user-centric perspective, the use of 3G technology needs careful discussion and analysis, and that remains difficult at this stage. Perhaps the best approach lies in looking at the various services that will be enabled on these handsets when they become live. This then becomes the responsibility of the small company, more able to innovate and provide ideas that are not readily thought of in older, more established companies. Hopefully, Telstra will be proved wrong in this regard, and services for 3G networks will emerge.

### Fourth Generation service possibilities

In other analysts' opinions, however, technology continues to drive the frenzy towards 4G, soon to be prototyped in Japan and other countries (http://www.4gmobile.com). 4G represents a complete convergence of network technologies, from PC to mobile telephone, including personal digital assistants and other technologies that will access the new Internet (http://sun.systemnews.com/system-news/jobdir/submitted/2002.03/5515/5515.html). The potential services that this could embrace would be much more interactive and highly personalised, due to the fact that each person would carry their own personal number across different networks (http://www.4gmobile.com). An example of this service has been operating in Munich (http://www.my-genion.de) for several years now (since August 1999), but this is not truly Fourth Generation, but more a connection between fixed and mobile telephony (DECT and GSM). However, this technology should be considered more as an ideal right now, as there are still questions as to what 4G actually is.

# Lessons from Practice – Contextualising the unpredictable phenomenon of mobile news: Case studies

> *Much as the development was coalescing around the Web in 1994, development is moving toward the mobile platform today. As a publisher, we have to pay attention to this movement and find the right way to ride this new wave."*
>
> *Budde 2001*

This argument of Neil Budde, the editor and publisher of the Wall Street Journal, reflects the importance of mobile communication in the circles of media industry. Budde's comment tries to remind the players in the field that they would be wise to learn from the past. Although mobile technology is still very much in the development phase, it should not be ignored because of that. Budde notes: "…it is instructive to remember what people said about the Web in its infancy - it's slow, it's clunky, it's hard to use…" (ibid.) The same can be said of the mobile devices of today, but nonetheless the media should ready themselves for the new era.

The problem in finding "the right way to ride this new wave" is that the development of mobile communication has been annoyingly unpredictable. SMS can be considered as a first attempt to use new mobile technology for delivering news. The concept became feasible after GSM technology had made its breakthrough among the public, that is, when there were sufficient amounts of people who a) were using the technology and b) were willing to pay for text-messages informing them about news topics. Today, when in some countries almost everyone has a GSM phone, one can hardly remember that the wide popularity of SMS has been rather surprising. For years it seemed that GSM phones would be used only by a few and mostly for audio communication. Instead, SMS now is a part of people's everyday life and a natural mode of business communication as well as casual chatting.

But after witnessing the SMS surprise, we have encountered the WAP flop. Those who assumed that the popularity of SMS would be followed by an enthusiastic acceptance by the public of WAP phones and services have been bitterly disappointed. Some of the reasons for this have been mentioned above, and more can be found in the experiences compiled in the following case studies of mobile news efforts. However, the most important lesson is that the WAP's failure to attract large user bases was not foreseen. The promise of SMS had led many to assume that the new WAP mobile application would triumph as well. Because that did not happen, there exists a considerable uncertainty about how the public will react to the newer mobile services and technologies that are being developed.

The prevailing consensus in this situation seems to be that the general direction is towards more mobile communication practices, but the pace of development and the exact applications remain unclear and vague. One can try to learn by analysing the experiences of those who have experience, and the case studies in this section offer material for enlightened discussion of the possible future of mobile news. At the same time, it is useful to put the mobile news experiences in a wider context by identifying the contexts of the phenomenon. It is possible to distinguish at least three relevant issues in this regard: convergence in the news industry, changing production practices and users' communication behaviour.

## Convergence in news industry

The issue of mobile news is not separate from overall developments in the news industry. The wider background is that there has been a shift in development from the analogue model of operation to a digital one. New communications technology has made it possible that all content, from text through audio to video are in the same format, in bits and bytes. Because these digital bits are insensitive to the actual content, the barriers between different mediums are lower than before, if not altogether vanishing. It is possible to use, for instance, text that has been written for a printed publication in an online publication, in a video-text service or in a mobile news service. (see Heinonen 1999, 37-38)

This convergence - or integration - as a result of digitalisation is currently the dominant mover in the news industry. It started in earnest with the introduction of online publishing on the Web, and has been moulding the news industry towards the multiple-media publishing concept. In many cases, new media operations were initially kept separate from the core production in media houses. Gradually it has become evident that instead of establishing separate units for every new publishing platform, it is more feasible to search for synergy. (Giner 2001) Thus convergence is leading - on the technological foundations of digitalisation - news organisations to change their identity from predominantly monomedia to multiple-media operators. The essence of this change is that news will be produced in a way that enables their distribution through many channels. This approach defines the mobile news production as well, because it is not something that happens outside of or detached from other activities of a news medium. Mobile news operations are one complementing dimension among media houses' increasingly varied performance.

## Changing production practices

While convergence is to a certain extent a "state of mind" in that the crucial issue is to understand the need to change from monomedia to multiple media, it naturally has practical consequences as well. In the era of analogue media, news production was organised to feed a single publishing platform. Working practices were designed to meet the requirements of this setting. In the multiple-media environment, the organisational model should be changed to correspond to the altered situation. To meet this challenge news providers must pay attention to the technological solutions of information flows and their management in newsrooms, to the repertoire of professional skills required from the personnel, and to work-flows in newsrooms. New solutions based on advanced database technology are needed to ensure that the raw material for news is effortlessly accessible for editing and publishing in various channels. Staff in newsrooms must be able to understand the requirements of several platforms, and there must a suitable division of tasks among news producers. All these changes are only now emerging in various forms in news media. (Northrup 2002, Stone 2001)

In spite of its assumed future importance, mobile news is still a minor factor in the entity of converged production practices. From the perspective of news production, the current types of mobile news are not particularly demanding. In most newsrooms mobile news has been produced as a "by-product" of the core activity. For instance in newspapers, new publishing systems make it rather easy to publish the material written for the online publication simultaneously for WAP. It is even possible to automate this process. (Antikainen 2001, Södergård 2001) At the same it is felt that if there would be more demand for mobile news and if users were to become more selective, it would not be sufficient to treat mobile news so carelessly.

It can be anticipated that more attention will be paid to the fact that each medium has its own peculiar character which should be reflected in the news offering. (Heinonen 2002) When producing 3G mobile news this could mean, for instance, that news providers create appropriate story formats that take into account the limitations and possibilities of these specific receivers.

## Users' communication behaviour

Undoubtedly the SMS surprise was more a result of users' unexpected communication behaviour than industry's resolute campaign, and the WAP flop is result of the public's rejection of industry's marketing pitches. When making estimates of the future mobile news services one therefore cannot too much underline the importance of understanding users' communication behaviour. Far too often new technological innovations are introduced to consumers assuming that they are interested in new gadgets because these are technically avant-garde solutions. Excluding technically oriented persons, the majority of users are more interested in how a new communications device might serve them in their daily needs. And in this respect, mobile communication is only beginning to take shape. (Peteri 2000)

At the moment, users inclined to enter the world of mobile communication must be ready to encounter a confusing assortment of devices. Labelled with acronyms understandable only to engineers, these devices suggest that in order to be able to fully make use of mobile news, one should carry several devices. (Crosbie 2002) Because this is hardly what the public wants, some appliances will oust some others from markets. The question for content providers is to bet on the right horse in this race. Secondly, mobile news - in the context of new mobile technology - is forced to elbow its way into a culture already laden with other media. Long before mobile phones, people have been able to receive news while being on the move, i.e. mobile. Today, for instance public spaces, cafés, trains, waiting-halls etc., are actually rich with different media: from television through newspapers to mobile phones. Their functions differ greatly but the important thing to note is that new communication devices don't enter a communication vacuum. (Harju et al. 2002) Identifying the feasible usage patterns that might be favourable for mobile news services is the crucial issue for the players in this field.

This brief account of the context of mobile news suggests that while technology matters - as has been shown earlier in this study - the fate of mobile news is depending on a variety of factors. The following case studies are concrete examples of how different actors in the mobile news field have reacted in this general setting.

# The news agency: Belga

Interviewee: Olivier Simonis, Sales & Marketing Manager
Web: www.belga.be
Email: Olivier.Simonis@belga.be

## A potted history

- 1921: Distributes first dispatches and takes on subscriptions from 45 newspapers, 16 banks, 9 companies and the Government.
- 1948: Belgian newspapers become the majority shareholders in the Agency
- 1981: Editorial computerised using the Hermes system, making it Belgium's first electronic press agency

- 1984: Real-time dispatches introduced into the government's Bistel information network
- 1986: Distribution of news on specific subjects to interested clients by fax and later by email.
- 1993: Provides digital transfer of colour photographs through ISDN (Integrated Services Digital Network)
- 1998: Launch of the BelgaBrief (news briefs) product for Internet portals
- 2001: Supplies SMS and WAP services.

Today, Belga© produces more than 550 stories a day and over 50 million words in Dutch and French a year. It has its own network of correspondents and editorial staff to provide national news and co-operates with international news agencies like Agence France Presse, Deutsche Presse Agentur, ANP in the Netherlands and Bloomberg to provide foreign and financial news.

Belga also supplies 25,000 of its own photographs, 75,000 from the European Pressphoto Agency (EPA), 500,000 from Wenn and Pressens Bild Databank. All the images are digitally stored and available over Internet, GSM or satellite telephone.

### Online products

Belga supplies a 'customised' multimedia breaking news journal called BelgaWeb. The service offers a 'menu card' from which customers choose a specific heading - General Interest or Special Interest - and the number of dispatches and photos according to the areas of interest of visitors. A separate service called BelgaSelect offers real time emails of dispatches relating to required subjects on the basis of one or more key words.

### 'Mobile' news

BelgaMobile supplies an 'à la carte' breaking news service of short dispatches on sports, general economic and political news. The news flashes are tailored for cellular phones and Personal Digital Assistants using Short Message System (SMS) or Wireless Application Protocol (WAP). In a near future, the GPRS (General Package Radio Service) will totally ensure this service. WAP users, who can connect at any time to consult the latest dispatches, have hypertext links make navigation easier.

## Operations - expectations

### The News/Product Recycling Model for mobile news

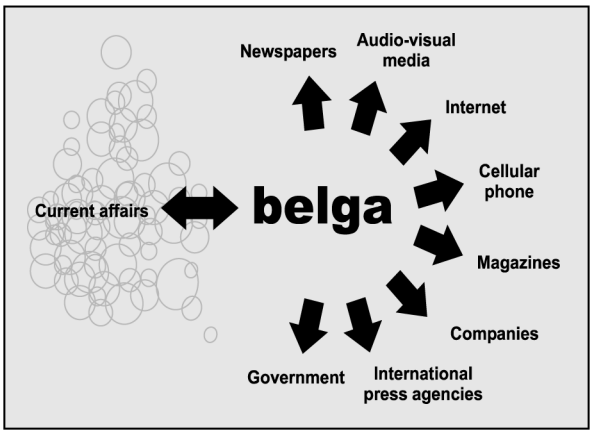
Ninety journalists work for the traditional media clients and a team of 7 journalists produce solely for the 'new' media. This team tailors the original dispatches for web, and cuts them down for shorter versions SMS (160 characters) and WAP (500 characters).

Belga believes that traditional dispatches need to be cut-down for the online delivery, as "web surfers do not have the time to go through lengthy news. So we have to stick to what is really important". News for web clients is delivered using XML (Extensible Markup Language) and this allows their web clients (like Skynet and Wanadoo) to customize the report without rewriting. In this way they deliver the final product using their own logos but also attribute it to Belga.

The traditional media have also always rewritten Belga's stories with "their point of view. We deliver objective and neutral facts to them and they add their own touch according to their political 'inclinations'," Belga said.

The new media allows Belga to reuse the existing news material. "The main advantage is the opportunity to 'recycle'. It had the source, the product, the raw material. The WAP, like SMS and the Web open new channels to display the news that it already had. This is the advantage of the traditional medium like a news agency entering the 'new media' market," said Belga.

### The Business to Business Model




***Belga's clients***

- printed press 43 %
- audio-visual 25 %
- public authorities 17 %
- companies 10 %
- new media 5 %

Belga's clients, who wanted to offer WAP and SMS services, initially led to the development technologies and formats to meet this need. Today, Belgium's WAP users account for 1% of all mobile phone users.

Belga is completely Business-to-Business oriented. Most clients are either traditional or on-line media and mobile operators that use Belga's information feeds to add value for their company's services.

"Some journalists are asking me why do we need a sales dept. when all the media of the country are our clients. Well, first you need to do follow ups and monitor their needs. Sometimes they are happy about your products sometimes they are not and you should monitor that and try to 'fix' the problem in cooperation with the newsroom. You also have to try to develop new products even for your traditional clients. And also you need to seek new types of clients. We have a portfolio of new clients who are business clients, like corporations, and they receive the Selective service. They want to stay up to date, in real time with news about their industry. They select the news through key words that they are giving us. If something is really important they get informed through SMS. We want to be completely customer oriented now," said Belga.

## Experiences

### The journalists' adaptation to change

"The traditional journalists are not always open to produce news for SMS and WAP services. Some said: 'I have been working like this for 20 years, I am not ready now to start producing the news in 145 character format.' So that is why we had to set up a separate team for the on line news" said Belga. "Belga is an organization that has 80 years of history and way of working. These products are very new. These are very different from what Belga used to do. And that has been very difficult in the process of production."

### The new marketing approach

Marketing for the online products differs from the traditional products. Pricing for the traditional media is based on three elements: A fixed fee, the number of journalists who use the news stories and the size of the audience of the medium.

For a website, there is a fixed price, plus an extra fee according to the audience of the site. The number of journalists is not taken into consideration because there are no journalists working with the Belga story in the web based medium [the story is placed unedited];

For mobile applications: there is not a structured model. "For the first time, we work with a fixed fee and a revenue sharing pricing structure. We have to become flexible. This is a radical change in Belga way of working. We have to be flexible in the way we price our services," said Belga. In early 2002, Belga had two clients: Proximus and Orange/KPN, and there are discussions under way with Mobistar, the third and last operator in Belgium. Belga charges a flat fee to Proximus, which makes the profit on the connection (on the minutes that the people are connected with the operator). On the other hand, Belga charges a flat fee to Orange/KPN and they also have an agreement for a 50-50 revenue sharing from the customers use. After three years of offering on-line products, they now account for 15% of Belga's revenue, and after one year of offering WAP and SMS services, mobile revenues are estimated at between 3-5% in 2002.

## Future

### Mobile operators taking the lead

Belga believes that the mobile operators will take the lead and push the content to the consumer end. "I think that the operators have not yet found the right content mix to seduce the customer. I don't see it happening in the next months but definitely in a year or two, because the mobile operators will put money into it. They cannot go backwards. They spent so much money for licenses and the rest that now they need to make their money back".

### New content needs

Belga continues to try to enhance its services. This will involve new working patterns as well as co-operation with externals consultants or companies to outsource some of the work. "We would like to increase the diversity of the content for our clients, with a features articles service for example. We also recently cut a deal for the entertainment news with a specialized agency in London, which provides us with special content. It is possible to start collaborating with external consultants more," said Belga.

### New marketing policies

According to Belga, the i-mode, WAP and GPRS applications will not follow the free of charge model. "This is a trend that we even see it now in the web. Sites that they used to be free of charge, now more and more are asking for a fee. It will be difficult to have revenue earning news websites but it will be different for the WAP where the people who will want this service would definitely be willing to pay for it. If customers want quality and breaking news delivered in their mobile they will pay for this service. Nothing is free in the WAP," said Belga.

### Current and future market challenges

Belga expects mobile content take off within two years, especially for the young high-tech market. For the GPRS in general, they expect that it will take at least three years for a substantial number of subscribers to switch to the system. "Everyone is very careful now after the experience of the WAP when everyone was pushing to be the first," said Belga.

New technology also brings competition from emerging companies. The internet, with its wide range of information, is one threat. Smaller companies, with lower overheads and different standards are another. "They can go and pump the news content from the Internet's various sources and then promote their services to our clients in a much lower rates. Actually, we have two competitors. First, these small companies and then our own clients, the media that we provide with information. Our clients take our content, they re-work it and then they try to sell it to our other clients, because they are also trying to find other sources of revenue as well. The tricky part is that some of those clients/competitors are also our shareholders at Belga!"

### New and future business models

Presently, Belga's Business-to-Business wireless strategy has strengths and benefits. They deliver their content to a pre-existing platform with an existing client base and do not focus on membership recruitment. This strategy avoids dealing with the technicalities of maintaining the platform and the business of client marketing.

However, Belga says, this does not mean that they avoid direct marketing in the future as new mobile products like the i-mode are coming in the market "In some case, when I look at the i-mode coming in the near future, we will be working, not in the short term but in the long term, in a variable basis. According to the number of clients who will choose to pay, lets say three hours a month to get the Belga news. That makes a main difference between the on-line and the WAP products against the traditional media. The business model is completely different. And this is a major challenge Belga is facing in the following years. To be able to work in the frameworks of different business models. It is because our new non-traditional media clients are and will be working themselves with completely different business models than the business models of Belga's traditional media clients."

"I see the relationship between the mobile operator and the content provider shaping on a revenue sharing basis," said Belga. Belga also believes that in the future it should still be the mobile operator who would keep the customer relations. On the other hand, "more and more content providers will have to do their own marketing inside the platform of the mobile operator to promote their own products against the other promoted products. The mobile operator will give a platform to the content provider. Inside this platform, the content provider will have to be the best of its class," said Belga.

### New technical needs

"There is a need for future standardization on the markets with regard to how the mobile content is dealt with. Especially for the exchange of XML formats (eXtensible Markup Language). It will make everyone's life so much easier," Belga said.

# The acquisition of the content provider by the mobile operator: Ananova

Interviewee: Simon Glover, News editor
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The UK's Press Association (PA) set up Ananova as an online representation of the PA news feed. Initially, it had two main parts.

- Syndicating content to other web sites like AOL, Yahoo, Freeserve and the Daily Mirror - which it still does.
- A separate web site, PAPress, which was eventually sold.

Orange, the UK's fastest growing mobile operator, acquired Ananova in July 2000. Now Orange, as part of the France Telecom group of companies, they plan to offer a range of innovative services to mobile phone users.

Ananova's expertise is in delivering real-time news and information to people wherever they are - using a website, e-mail, SMS, WAP or PDAs. In April 2000, they launched a live news and information website at www.ananova.com, featuring real-time news, sport, entertainment, business and weather for the UK. An e-mail alerting service released at the same time now offers users breaking news on more than 2,500 subjects. The company was among the first UK companies to publish news for mobile browsing on PDAs, and WAP.

Ananova was also dubbed as a virtual newscaster because its online news delivery was 'read' out by a simulated newsreader to bring a personal touch to online news. It was created using a combination of computer animation, text-to-speech and real-time information systems. Ananova aims to keep pace with future innovation when broadband access and increasingly sophisticated mobile devices open up new opportunities for the Internet.

The majority of the Ananova readers are UK-based. The Forester survey found that 70% were UK-based and 30% outside. Approximately 2.5 million unique users.

## Expectations

"It's always been about personalisation, it's always been about breaking news quickly, it's always about been at the forefront of technology so, yes. As you go along you explore different areas, you explore very heavily a personalised service through phones. We were bought by Orange a few months after Ananova was launched and that has probably played the biggest part in the way we have directed our work."

## Experiences - operations

Ananova's experience with WAP is positive and constantly improving. "WAP hasn't been quite what people built it up to be but within its limitations it does its job very well. It's probably underrated. (…) I haven't got any research to back this up, but my inkling is that WAP is now becoming more of a standard. A year ago if people had a WAP phone people would say, oh you've got the internet on your phone, let's

have a look, and they'd be disappointed that it didn't have pictures on it and all that. Expectations were quite high. But now if you get a phone it probably has WAP access on it." Ananova also believes that online journalism is something that could be profitable. "We're owned by Orange so if someone is on our WAP site they are making a call to Orange."

### User's feedback

Ananova admits that a very small percentage of the content is coming from user interaction. "We try, every day, whatever news comes in, we consider which would be suitable for interaction with readers because we think that is what we're interested in. We want people to interact with us, we want people to identify with the site. It encourages loyalty. It gives them an opportunity to get involved and we like them to tell us their news. For example, if during the news strike somebody is stuck on a rail platform for 16 hours we encourage him or her to send us a text message about it. Get through to them and follow up the story. It obviously helps our news coverage. [Having said that,] we publish hundreds of stories a day but you probably have only one or two stories a day where people are feeding back their news. So in terms of percentages it's probably very small but it's an important part of our coverage and an important part of what we are."

### User demand

The main demand on Ananova's website is breaking news, business, entertainment and sport. Recently, Ananova added a pop-up picture system where by you can flick through all the pictures on the site "which is phenomenally, far more popular than we would have thought," Ananova said. "It's interesting. You layout your page with what are perceived to be the biggest news stories of the day and you probably have a little paragraph at the bottom about something weird or wonderful that happened in Romania and it is very often this which is getting three times as many hits as the top story of the day. (…) That's why we're into personalisation, we let people decide what is the best story and we'll provide it."

### Story formats

On the surface, Ananova's newsroom appears to be organized on a traditional model. "Speed is all important to us. So if a story is breaking, normally [for off line media] you would wait to cover the whole story. If Tony Blair says something about Ian Duncan-Smith you would want to wait and see what Ian Duncan-Smith has to say about it and you could put it in perspective before you publish it and you would put together twelve paragraphs in a way which is accurate and fair to all sides. What we would do is bash out three paragraphs on what Tony Blair had said and then seek out what Ian Duncan-Smith thinks about it and then put that out. So you build up your balance through a number of stories. So you are not keeping people waiting to hear what Blair said while you find out about Smith," said Ananova. "And we try and keep stories short. We tend to think we are not about in-depth analysis. We are more about breaking news. Not saying that analysis is not important but there are many places that provide that, whether its television or broadsheet newspapers. The BBC website is excellent for in-depth news coverage but we've gone a slightly different way in telling people the bare facts really as quickly as we possibly can. (…) It's changed the way we write as well. We have tried to move away from the 'journalese' and the clichés and write in a very conversational style. "

## Future

### Alerting service

Ananova is looking to build upon the SMS alerting service whereby people tell them what they want and Ananova sends it to them. "We are hoping that that will make us some money. Those products will only be successful if we are telling people things they do not already know. At the end of the day it is only a text message, its only 150 characters, or whatever it is. So if it tells you something you really want to know and you are finding it out before anyone else, ok you will pay your 10 pence or whatever. If its something you've heard on the radio or whatever you're going to resent being charged for it," said Ananova.

### Experimenting with technology: Anticipating future demand

Although at the moment the PDA use is very small in numbers, Ananova decided to create a PDA version of the site. "You can see the kind of product we are developing now can be incredibly useful to the next generation of mobile phones for example. At the moment PDA is just text but we have as you can imagine, technical teams constantly looking at new projects and new ideas and we're looking to develop ways of sending people news that interests them across all platforms. But what we're interested in is personalisation on all platforms and as it goes on, to make that as rich an experience as possible. So that could include still pictures initially and then video and audio. What is text message today could become a really compelling experience as time goes on," Ananova said.

Looking ahead, Ananova wants to be seen as the news organization that has a reputation for being the best and fastest. "Probably more importantly I would like us to be at the forefront of delivering news in a personalised way to people wherever the technology has taken us at that time. I think it would be some kind of mobile device which would still be a computer with all singing, all dancing, pictures and video and so Ananova would literally have lived up to the goal of being a personal news assistant. So people can take from it exactly what they want and they can get the news in the way that they want and about what they want from us before they get it from anyone else."

# The aggregator: WAP.GR

Interviewee: Kosmas Skiadopoulos, General Manager
Web: www.wap.gr
Email: kosmas@incredible.com

Established as a start-up company in 1997, Wap.gr was the first company in Greece to provide WAP services. Its goal was to provide Greek companies the right technical infrastructure and distribute their products and services to customers through WAP technology.

Products that Wap.gr offer through WAP and SMS include:

- E-mail (Read & Send e-mail, from any POP3 account)
- E-maps (Navigate the streets of Athens)
- WAP Books (Read books online. Place a bookmark when you need to hang-up...)
- The Greek Criminal Code
- Recipes
- E-tools (Domain search, Ping, Finger, Traceroute)

- WAP Chat
- E-news (News, sports, weather)
- WAP Bar (Instructions on how to make any drink/cocktail!)
- Greek-English Translator
- First-Aid (Online medical assistance)
- Polls
- Jokes
- M-commerce
- Ticket Booking
- Stock Market News

## Expectations and experiences

Wap.gr stopped providing WAP services in 2001 due to the lack of demand. No recent client reports or Marketing Plans are available.

## Reasons for the failure of WAP according to Wap.gr

1. High costs of buying a good telephone device and maintain the connection.
2. When WAP was introduced in the market there were already discussions about GPRS being introduced in a couple of years. Many customers preferred to wait for the new technology.
3. The telephone devices that used WAP were not user friendly.
4. The platforms (protocols) that carried WAP to Ericsson and Nokia were different and Wap.gr spent considerable capital in Research and Development to solve the technical problems and be able to provide the content to both. Wap.gr says this effort drained the company financially.
5. A slowdown in the international economy did not encourage customers to buy a new gsm phones for the WAP. "That is one of the reasons that companies are now waiting for the economy to recover before introducing new generation products," said Wap.gr.
6. Greece and other countries in the south of EU, were (and in some sense still are) squeezed between the lower average per capita income (70% of the EU average) and the high costs. First, the high salaries of the IT personnel in Greece, which were almost comparable with the ones in the rest of the EU (due to the high mobility of these professionals who can easily work across borders, competition raised their salaries disproportionally to the rest of the employees in Greece). Second, telecommunications in Greece cost much higher than in other EU countries and definitely much higher than in the US. "The end result is that you get IT products that cost you as much in salaries and more in operational costs than in the North, but then you have to sell them in a market with low average salaries thus your margin of profit is minimal. A lot of Greek telecommunication software companies ended up producing some of their products in India and Pakistan", said Wap.gr.
7. In a climate of fierce competition with a limited demand, many companies wanted to have the 'first-mover' advantage in the WAP arena and openly sold products below the cost of production to drive out competitors and create a viable market for those that remained. According to Wap.gr "this made commerce [in the orthodox sense] 'un-functional'. "

8. There is a also a great trend in the IT market to give things for free hoping that once your customers get used to the idea of the product you can then charge them for its use. But a number of customers did not and still do not behave this way. For this, many companies including Wap.gr lost vital venture capital," said Wap.gr.

### Future expectations

1. "Technology is a challenge but you have to wait for the market to settle. Until the time of WAP, everyone wanted to be the first (the virgin territory principle). For the new generation of technologies, companies wait to see the demand and then they will decide if and when and with what products they will enter the market," said Wap.gr.
2. "Companies need to form alliances from the very beginning in order to share the efforts and the risk. These alliances need to be formed between mobile operators, content providers, software companies and telephone companies," said Wap.gr. "And probably mobile network operators and content providers will eventually have to merge".
3. Technical Standardisation: Wap.gr commented "there is a need for a European Bible, a standardisation book".

## The newspaper: Kauppalehti

Interviewee: Mr. Markku Kiuru, assistant director, product development

Kauppalehti is Finland's largest business media, founded in 1898. It consists of a 5 day/week business newspaper Kauppalehti, a bimonthly magazine Kauppalehti Optio, real-time, round-the-clock web services (kauppalehti.fi), the weekly Saldo insert and Kauppalehti Extra magazines on specific themes. Kauppalehti's circulation is 85 292 (2001). The annual turnover is approximately €42 mln. The mobile services of Kauppalehti are for SMS, WAP, PDA and Communicator. Kauppalehti is part of Alma Media Corporation whose main businesses are newspaper publishing, production and distribution of business information, television and radio broadcasting, new media and printing. The group's net sales totalled €480 million (2001) and it has approximately 4,000 employees including 1,000 part-time delivery staff.

Sources: www.almamedia.fi, www.kauppalehti.ft/mobile/

### Customer oriented expectations

Kauppalehti has a long and strong tradition in multiple media publishing. They have had a so called 'superdesk' in the newsroom since the mid-1990's feeding first their online publication, and later on, mobile (SMS) and also TV. All this is alongside producing the printed daily, which has always been, and still is the core product of the company.

The WAP project at Kauppalehti started when it became technologically feasible in 1999 (in June, with services in operation in the autumn of the same year). The objective for introducing this new service was customer oriented: Kauppalehti wants its customers to be able to access the information via all possible channels and customers should be able to make individual choices between these. With regards to the business model, the plan was to define the price for the content, and in case of joint operations, the price for the commission.

The target group for new services was the entire user audience of Kauppalehti (meaning both printed and online versions). The contents of the WAP services reflected this in that the core contents were (and are) business news, stock exchange monitoring, portfolio managing services and other similar auxiliary services.

WAP was never anticipated to become a major business for Kauppalehti. The development and launch of the new services was carried out by Kauppalehti's own staff (content and technology developers) with assistance from the parent company. Outside consultation was used for special purposes only, e.g. for building the WAP server. The project was financed internally from the cash-flow of the company.

The strategy that has guided Kauppalehti's WAP operations (as well as earlier SMS) is a dual one: on one hand Kauppalehti offers various services in cooperation with network operators. This was the strategy that was dominant especially in the launch phase of the services. On the other hand Kauppalehti strives to produce its own services that are independent of the network operators. The overarching guideline at Kauppalehti has been, is and will be that the content provider needs to make sure that customers have easy access to the services that are being offered. Future mobile services will be designed along these lines, too.

Since launching WAP services, they have been gradually developed and also expanded. There has especially been development towards customer-specific services.

## Smooth operations

At the moment, WAP scheme is still considered to be an added-value service to the customer interface of Kauppalehti's various operations. It is not regarded as important from the perspective of the overall business, but its importance rests more in its general marketing value of the brand.

At Kauppalehti, there has not been significant problems with WAP operations regarding either organisational or human resource questions. At the initial stage there was need to improve the available technological know-how, and also the organisation of customer support required attention. These were solved by nurturing internal expertise in these areas. All mobile operations are handled as part of Kauppalehti's overall business and publishing operations; there are no separate sales or news departments for this area in Kauppalehti. Those that are involved in mobile operations are a) the newsroom (content production), b) the technology department (technical support and development) and c) business development units.

Kauppalehti's approach towards handling the commercial process of WAP operations is to make use of the established brand of the publication. The initial customer contact - with regards to Kauppalehti's own services - are carried out by publication's own organisation. The customer has two alternatives when ordering the services: it is possible either to order on e.g. monthly rates a service package of online services where WAP services are also included. The other possibility is to pay for content that is being used per view. The billing is carried out accordingly. Payments for Kauppalehti's own services are charged by the publication, and those offered via network operator by these partners.

Kauppalehti will not disclose exact figures regarding the percentage of its WAP services of the company's turnover. However, the share of WAP is "modest" compared to overall turnover although it is on the break-even level.

## Valuable experiences

Throughout its existence, Kauppalehti has been evaluating its WAP scheme on the basis of the continuous feedback from its customers. Constant internal evaluation has been carried out as well.

At Kauppalehti, the prevailing view is that their WAP scheme has been relatively successful. (One problem with this evaluation is that there are no exact figures available for WAP market shares in Finland.) The services seem to have met a demand that existed among Kauppalehti's customers. The content production for WAP has not been a major problem at Kauppalehti thanks to its experience in online and SMS publishing. Regarding content production, WAP does not differ much from earlier applications. Similarly, the technological development was not particularly demanding and the services have been stable.

From the content production point of view, mobile channels have meant that everything must be done even more exactly than before. That was a challenge particularly with SMS where news content had to condensed into 160 characters. WAP and 3G allow for wider and longer presentations which mean that it is possible to better pay attention to the users' information needs. The constant challenge for content production in newsroom is that a new kind of approach to work is needed. New technologies have lead to multiple-media journalism which requires a learning process. Nevertheless, the idea of mobile news is considered to be a feasible idea at Kauppalehti. In the future, it is assumed that practically everyone will have some kind of mobile communication device. It is also probable that new payment patterns will emerge. At the moment online news doesn't usually cost anything but everyone is used to paying for home-delivery of their newspaper. In a mobile environment it remains feasible to think that users will pay for the news that is delivered to them via mobile devices as stated in the previous section.

For the present, Kauppalehti is not happy with the size of their WAP customer base. There are not so many users as initially was expected and hoped for. Two basic reasons can be identified from the Kauppalehti case, and others have also been mentioned in the technology section of this study. One has to do with the problems in pricing policies and mechanisms. At Kauppalehti, the view is that at the moment the cost that the end-user has to pay for the WAP services is intolerably high. There should have been more flexibility both from both the network operators and the content providers in this regard. Until now, content providers have not been able to influence the pricing policies sufficiently. The result is that customers pay too much from content providers' perspective.

The other reason for the WAP's failure to attract users has to do with the its general launching strategy and the image that was created during the launch. WAP was introduced as a technology. What was being sold to users was protocol and/or hardware equipment and that is now seen as an unsuccessful strategy. Instead, the emphasis in the introduction of WAP should have been on new services, new content and new usage concepts. Kauppalehti's experience is that end-users' needs were not considered thoroughly enough in WAP's launching phase.

The overall opinion at Kauppalehti is that the WAP service has made it possible to realise the idea of "mobile freedom" to a great extent, i.e. the idea that the user can access information from anywhere. WAP was a considerable improvement upon SMS and it is indeed the first mobile technology that can be said to be truly useful for delivering news. Since the purpose of WAP project at Kauppalehti has been to get experience by practising with the new interface and services, Kauppalehti is "somewhat satisfied" with its WAP scheme.

## The future: Expansion

Thinking of the future of mobile operations - WAP, other 2.5G and 3G services - Kauppalehti's strategy is to proceed by and large along the path that it has been following so far. They anticipate that new technologies will allow for better performance and new services that are more interesting for customers than those that have been introduced with SMS and the present WAP. The basis for new experiments have been laid with SMS and WAP in that Kauppalehti now has acquired understanding of a) what services are of interest to their customers in mobile environment and b) what the customers' usage patterns are. In addition, Kauppalehti sees that previous experiences provide guidance in producing and packaging the services in a way that is attractive to users of newer technologies.

Kauppalehti will in the future adhere to its role as a content provider although it may also adopt the role of the aggregator by purchasing content from other producers, packaging it and reselling it to carriers. The formula in market integration will be to create internal partnerships within the parent corporation (Alma Media) and external partnerships with network operators, and possibly in some cases, also with hardware producers. The main new direction will be - and this has been adopted already whilst developing WAP services - to orientate more towards network operator-independent mobile services.

Kauppalehti will also try to avoid overdoing and over-estimating the importance of mobile operations. So far they have been able to minimise the expenses of mobile efforts and thus Kauppalehti has avoided unpleasant situations that some others have encountered in this field. Kauppalehti will continue to rely on its basic strength - that they are considered to be a source of credible information regardless of the delivery mechanism.

The threats that Kauppalehti anticipates are that the pricing policy continues to be problematic and that new technologies are introduced incorrectly. From the content providers' point of view it is important that the pricing in new mobile services will be reasonable. This is important also for the development of new services because only when the content providers receive a sufficient compensation will new content emerge. When introducing new mobile communication innovations it is important their initial image is not excessively technologically laden.

At the moment Kauppalehti is rather cautious about the new mobile era. Their previous experiences - especially with WAP - have taught a certain patience: Kauppalehti does not necessarily need to be among the first ones that start 3G services. What has happened earlier, in the WAP example, has undoubtedly diminished 3G's credibility in the business sense, and most probably has had an impact also on the attitudes of end-users' towards newer mobile devices and services. In spite of this, Kauppalehti started to develop its 3G services right after launching WAP.

Among the most successful applications, according to Kauppalehti's judgement, of new mobile technologies in general will be brokering, sports, dating and erotica. Also, auctions, betting, banking, calendars, e-mail, news, weather, yellow pages, coupons, cartoons, gaming, diagnostics (as a remote service), transport information and directories could be among the services that will become popular. Those applications that probably will not attract wide user bases in the mobile environment may be e.g. ticketing, mobile commerce in the travel sector, browsing, flash advertising, placement advertising, edutainment or video-conferencing.

From Kauppalehti's own perspective it is expected that in the new mobile era the most important fields of services will be news, stock exchange information and various individualised or personalised services. Additionally, the speed of all services will be important in the mobile operations.

The general evaluation of mobile markets in Finland at Kauppalehti is that there is only one direction at the moment and that is towards expansion. Right now everything is only in its infancy and several modes of mobile usage are only emerging. These include content exchange between users (c-to-c) which is seen to be in a good swing. In the rest of Europe, mobile markets are at an even earlier level of development than in Finland. The same goes with many if not most other regions of the world where genuine content production is only now taking its first steps. Of course the Far East is an exception in this regard, with already existing expertise in mobile markets. However, it will take some three to five years before larger user groups will adopt new mobile technologies because at the moment technology is not yet ready and the prices are too high.

It is anticipated at Kauppalehti that their customers (predominantly from business circles and other users interested in business information) are among those early adopters that will be the first users of newer mobile services. However, it looks like there will be diversification among users in that some users, in a way "must" use new services and others will use them out of free will. It is probable that diversification will happen, also with regard to usage patterns. Some users want to communicate with one another and will produce content of their own for this, whereas other users will be looking for ready-made content that is produced for their various needs. Important to note is that an individual user may move across different segments according to his/her situation thus changing his/her customer role: sometimes a person wants to send a mobile picture from a leisure trip and on another time the same person wants to immediately read the latest stock-exchange news.

Standardisation on the markets with regard to how mobile content is dealt with is wise, in Kauppalehti's opinion, since without it there will be wild markets, or even no markets. Standardisation is also central to technological interoperability, as noted in the technology section of this study. This would lead to problems in developing and realising services. The danger, however, in standardisation is that it might be carried out solely on the terms of network operators or hardware producers. When standards are adopted that make content delivery more difficult, news content delivery becomes a failure, thus, the process should carried out as joint effort of all relevant parties.

One thing that in the future needs clarification is customer relationships. It is the view of Kauppalehti that at the moment the various parties' roles have been somewhat blurred: it is not exactly clear what is the role of a network operator and of a content provider. One of the previous case studies highlights this blurring in more detail. In the future, it should be kept in mind what the customer is buying in any specific situation and an effort should be taken to think about his/her attachment from this starting point. If the customer is buying content, he/she is a content providers' customer and not a client of a network operator in much the same way as a manufacturer of a television set does not own the customer who is viewing it. Regarding the relations between content provider and network operator, this would mean a new way of thinking with a minimum goal of 'jointly owning' the customer. Network operators should consider what is their core-business because if the roles get mixed up, nothing will work properly and users will be confused.

# A broadcaster preparing for MMS: MTV3

Interviewee: Mr. Rami Niittysalo, Manager, Mobile Services

MTV Oy, established in 1957, is one of the oldest commercial TV companies in Europe. MTV Oy manages the MTV3 Channel and Subtv television channels. MTV3 had 39,1 % of total viewing time in 2001 in Finland. In 2001 44% of its production was foreign and 56 % domestic. MTV3 points out that its advertisers can target their messages either to the whole population or to a combination of altogether 11 separate coverage areas in the country.

MTV3 is a part of Alma Media Corporation whose broadcasting business area comprises the television channels owned by MTV Oy, MTV3 Channel and TVTV!, the associated company TV4 AB that operates in Sweden, in which MTV Oy has a 23.4 % holding, and the nationwide radio channel Radio Nova (Oy Suomen Uutisradio Ab). MTV Oy administers the digital TV channels allocated to digital multiplex B in Finland: MTV3D, Sports Channel (Urheilukanava) and the CityTV chain. A digital TV project was launched at the end of 2000 to develop these channels.

In 2001 MTV3's personnel was 627, and company's net sales € 170 mln. Its headquarters is in Helsinki.

Sources: Parent company's (Alma Media) web-site http://www.almamedia.fi/, MTV3's web-site http://www.mtv3.fi/

## Moderate expectations

MTV3 launched its mobile service operations in the beginning of 2001. At that time MTV3's online operation MTV3i, as well as its teletext channel, opened their respective pages up to mobile services. Earlier, already in 2000, MTV3's teletext channel had started so called television chat service where users would send in their messages via mobile phones using SMS (this service is on television too).

MTV3 had been aware that some competing companies had started to produce mobile content much earlier. MTV3 made its decision to join the mobile content market when it saw that timing was appropriate. After assessing the mobile market situation of the time, it was considered that a) there was a sufficient user base, and that b) certain services seemed to be genuinely attractive to users.

The initial and also the prevailing strategy of MTV3 in the mobile market is to rely on the fact the they are a media house. This is a distinctive character of MTV3 when compared to many of its rivals. In practice this means that MTV3 has the entire television, online and teletext operations at its disposal for mobile services. The aim in the new operations was to make MTV3's services available also via mobile devices. This meant that the service palette that was created for mobile devices was intended to carry forward the brand of MTV3. For instance, MTV3 mobile services included from the beginning news from MTV3 newsdesk, sports news from the sports news desk, ring tones from MTV3's television programmes as well as mobile phone display logos of MTV3 tv-programmes.

The target audience for new services was wide, in fact as wide as MTV3's aggregated user groups. This comprised people watching MTV3 television programmes, those who used MTV3i's online services and those using MTV3's teletext services. The company wanted to bring new service "to the masses, not only to some focused groups".

As for the business expectations for the mobile services, they were kept moderate at MTV3. The new operations were not seen as something that would bring in huge profits. However, already in 2001 it was seen that new operations were successful. The result was that MTV3 increased the resources allocated to mobile services.

## Developing operations

The mobile operations has been a dynamic development project at MTV3. Although it is admitted that ring tones and display logos are basically bulk products, the company has invested in their production process and also wants to keep them constantly updated. It has been MTV3's strategic and conscious approach to be involved in the competition in this area.

Regarding mobile news services - general news and sports news - MTV3 has developed new services in this field as well. For instance, customers can subscribe to news services either by flat rate on a monthly basis, or pay-per-news basis. These models have been seen in other cases studied above. Flat-rate subscription means that the customer receives all the news regardless their number. Pay-per-news model became very popular at the time of WTC and Afghanistan crises in autumn 2001. In this model, customers can subscribe to news at any time via SMS, and respectively cancel the subscription via SMS - and activate the service again at any time.

In addition to the news and ringtones/logo services, MTV3 offers some entertainment products for its customers. These include horoscopes, dream-reading and games. In this field, the approach has been cautious. It is considered at MTV3, that today's mobile phones are not very suitable for gaming.

The organisation of mobile services operations and development at MTV3 is based on co-operation. The mobile services unit works closely with other units, most importantly with online unit, teletext unit and newsdesk. The mobile unit itself does not produce content, but develops them with other units. Its main responsibility is the implementation and maintenance of new services.

The news content for mobile services come from MTV3's multimedia newsdesk. This has been in operation for a fairly long time, feeding the online publication, the teletext channel and also producing news flashes for the television channel as well as for the company's nationwide radio station (Radio Nova). Journalists at the multimedia newsdesk have experience in this kind of work which means that mobile news services benefit from a feed of news pieces written originally for mobile devices.

As for the co-operation with outside content producers, it is based on a revenue-sharing principle. At the heights of the IT boom, some content production partners tended to propose a model where they would get a considerable lump sum first, and only then the revenue would have been shared. At the moment all contracts are on a shared-revenue model.

## Experience also of WAP

Since there are no exact figures available of the entire mobile contents market in Finland, it is difficult to estimate how well MTV3 actually has been doing with respect to the competition. The company's own assessment is that they are one of the leading mobile content producers in the country, based upon the volume of sales.

This is based on the comparisons of the size of the production organisations and the estimates of sales volumes of various rivals in the market. Also the user-base numbers point to this conclusion.

The most popular mobile content service of the whole MTV3 is the teletext/television-chat, and the company has also sold licences for that particular service abroad. Television games that are played using mobile devices are popular as well. Regarding the mobile operations of MTV3's online unit, the ring tones and display logos were at the beginning most popular. These continue to be at the top of sold services on the mobile portal of MTV3's online unit. Also the breaking news services (pay-per-news model) peak, every time something widely interesting happens in the world.

Characteristic of MTV3's approach to mobile-content operations is that it has been focused mostly on SMS services, although news services have been available for WAP too. The company's strategy has been that WAP is something that does not invite major investment. MTV3 has based its judgement, among other things, on the experiences that have been gathered in the parent company's (Alma Media) mobile experiments. There are not enough WAP users at the moment to make WAP revenues something more than marginal, is the attitude of MTV3. Therefore it is seen that the cost - benefit ratio is not satisfactory for the WAP business.

Experiences of the cooperation with network operators has been mixed. On the one hand, the development of new services and technologies together with operators has been rather smooth. On the other hand, the operators' pricing policy is not so satisfactory. It is seen that the operators' share is rather big, but there remain no ways to change this, not at least in the short run.

## The future is MMS

While concentrating on mobile content services based on GSM/SMS, MTV3 is awaiting the new generation of mobile technology. As it was said, WAP is considered at MTV3 not to be a tempting area at the moment. The aim at MTV3 is at GPRS and other 2.5 and 3G mobile technologies. The company indicates that it has been already getting prepared for the new era by developing new products.

MMS (multimedia messaging) content is something that is assessed by MTV3 as being a really interesting avenue of investigation. This approach derives from the fact that MTV3 is by tradition a media company with extensive visual (and audio) resources and expertise. It is anticipated that once appropriate technology is available, MMS content services will attract large user bases. One reason for this is that entertainment contents - games, for instance - will work much better in this new environment than in present applications.

MTV3 projects that with MMS there will be a variety of new uses emerging for mobile devices. These may include personal communication uses such as sending mobile visual messages whilst on holiday, recent events, etc. but there will be also new business opportunities for content providers. For example, MTV3 is convinced that its large image archives can be utilised in creating MMS products. In news services, MTV3 also anticipates new possibilities for presenting news items with visuals in news stories, in weather reports and so on.

However, MTV3 does not claim that the emergence of MMS market would be a rapid process. There will be devices allowing MMS available in mid-2002, but that does not imply that MMS boom would follow immediately. The penetration of devices will take

some time, at least not until 2003 when there might be sufficient numbers of users to make MMS content production feasible. The positive and promising aspect is that with SMS, users have already learned how to use messaging so MMS does not require that much new learning from customers.

The pricing policy of services is very important in this new critical period, in order to support the penetration of new devices and usage practices. The danger is that a new wave of hype will be created with promises that cannot be held. If it is claimed that new technology will (again) revolutionise everything in people's communication, and then the pricing chases away the potential users, another mobile flop will follow. As MTV3 sees it, it would be to the benefit of content producers and network operators, as well as device manufacturers that the new mobile communication practices would be advanced on all levels.

# Conclusions

The case studies presented above suggest that there is not one single strategy that would be more feasible than others in the mobile content market. As the experiences of different actors show, it is possible to create flourishing business models with quite different approaches. At the same time, it is clear that the obstacles to creating mobile news concepts vary as well. What seems to be important for all players in the field, though, is to rely on one's characteristic features and already existing resources when going mobile.

Regarding WAP, it can be generally concluded that it failed (at least relatively speaking) because it "distanced" itself from the communication practises in three different ways: financially (the devices were too expensive in a downward circle of the economy, technically (the devices where not user friendly) and content-wise (they did not offer the right content mix in order to be able to compete successfully with other media for people's time and money).

On a more general level this implies that also the new generation of mobile technology, and with it the concept of mobile news as well, will encounter serious challenges. One of them is that - as our case studies and other research show - the technology-driven penetration model does not work. It may have worked when introducing SMS services although even then it took a long time before a sufficient user base was created for mobile news and other content services. But today, technology itself will attract only that small group of users that are techno-oriented. Others will wait for useful or entertaining services that meet their genuine communication needs.

On the other hand, it also seems that the content-driven penetration model may encounter problems. In the background is the fact that in the Internet communication sphere, news has been a commodity that is predominantly free. This background has created expectations that in all new technology, news is something you can receive with no fee. In the mobile environment, there has been additional problems as well, for instance the pricing policy and the weak appeal of the content itself. In the case studies it became quite clear that news and other content services suffered in the WAP era - and may suffer in the 3G era too - due to the fact that pricing that was considered to be too high from the end-user's perspective. As for the content itself, it has been pointed out that still most of the revenues in mobile telephony comes from voice calls, not from data or other content calls. It has been further suggested that mobile content services will remain rather insignificant considering the whole picture of mobile market until the advent of 4G systems. (Odlyzko 2001) Even if this does not totally exclude possibility that content services may become important revenue operations for content producers along 3G era, this is something to be carefully thought over by the industry.

To better understand the message of the case studies and other experiences of mobile content and especially mobile news services, it is useful to introduce an explanatory concept. Based on Fortner's definition it is possible to call the exclusion from information sources in general "excommunication". There are three kinds of exclusion: "impediment excommunication "on the grounds of economics (as described above: expensive devices, downward circle of the economy, etc), "pleonastic excommunication" based on an overload of information (the inability to find the right content mix and the right packaging in order to compete for the audience attendance), and "ascetic excommunication "as exclusion by choice (because the devices were not user friendly, etc.). (Fortner 1995)

It seems quite evident that in the not-too-distant future these three categories of challenges need to be addressed if there is to be a successful concept of mobile news. In practical terms, this implies that there is clear need for extensive and thorough research on social communication patterns and on issues that affect them. It would be necessary to combine the approaches of technology oriented user research and social sciences oriented communications research and thus identify the emerging social communications environment and its various sections.

While bearing in mind the problems of generalisations in the field of mobile news, it is possible to discuss the findings of this study in an analytical framework. The following setting draws together the findings of the study. There are two perspectives in the setting: 1) the user's, and 2) the content producer's. In this setting, the user and the content producer are more like analytical types rather concrete entities allowing us to illustrate the state of the field.

| | IS | Needs |
|---|---|---|
| **User** | | |
| technology | unpredictable, dominant | standards; “fading” |
| content | recycled, bulk | variety, lifelines |
| costs | high | moderateness, accurate models |
| **Content producer** | | |
| technology | unpredictable | standards |
| content | recycled, bulk | profiling, targeting |
| revenues | low, unpredictable | steadiness |

**Table 3: Identifying focus areas for mobile news development strategies**

From the user's point of view, it is frustrating to see how mobile technology parades from one phase to another one without giving real possibilities for making sound purchase decisions. Therefore technology needs to be faded to the background while contents take the foreground offering users a rich variety of (multimedia) presentations on a reasonable prices. The perspective of content producer is much the same: There is evident need for technical standards that would allow concentration on content development on a stabile platform environment. This would enable content producers to create more targeted content offering which, on its turn, might result into a steadier revenue flow.

It is necessary to state that this has only been a very cursory glance into the developments surrounding mobile telephone technologies. The intention has been to show that there are differing opinions on the future of technological platforms for mobile telephones, and that, in most cases, the services are often introduced at a later stage as, in the case of SMS, where the market demanded this relatively unannounced technological feature.

The development of technological standards to encourage content delivery in the mobile market needs to be encouraged to ensure that the mobile telephone industry, and news 'deliverers' can operate together and in harmony. This, until now, has been rarely the case, as the case studies above highlight.

3G, a technology with much hype and promise, has some scope for development of new 'products' or services by third-party providers, and this is inevitably where news content delivery services will be introduced into the 3G product market. The key to this development, however, as the case studies above show, lies not in the technology, but in the development of innovations in news content delivery that will encourage users to subscribe to premium services over the new networks.

Some commentators believe that the following generation of mobile technologies will actually overtake 3G to become more popular in a much shorter space of time. Fourth Generation mobile network services are in operation in various parts of the world right now, (airport lounges are the most common places), and offer direct connection to the Internet and all services therein, under a pricing mechanism that still needs to be worked out comprehensively.

Content delivered to the mobile telephone provides a source of income not only for the network operators, but also for the content producers, as the take over of Ananova by Orange shows (see case study: Ananova). The market must adapt to the new phenomenon of mobile communication, and it already taking steps in this direction. Whereas the 'fixed' Internet - in our offices and homes - is entering into a problematic stage of development where people now have to start to pay for content services (with great resistance, hence the focus upon advertising on the Internet shown in other studies in the MUDIA project), paying for content on mobile telephones has been the norm. This should encourage innovators and developers to find ways to make content on mobile telephones more attractive to users. One of the conclusions drawn in a recent study of the German mobile telephone market was that if "an operator of mobile communications networks in Germany is the first provider to introduce functioning fast(er) mobile data services and the next mobile network generation with broadband multimedia services onto the market he will have the opportunity to forge stronger ties with residential customers as well" (Gerpott, Rams and Schindler: 2001). This reveals that the remaining non-users could be tempted with the new generations of mobile telephones, for the non-voice services.

However, managing, distributing and charging for mobile content is a long way from perfect. Both in the models that we use to explain, and in actual usage by companies. The case studies shown above have revealed that there is no model that fits all mobile news operations, where, traditionally, many types of players take part in the market.

# Appendices

## Annex 1; Sample of web sites

- www.4gmobile.com
- www.cconvergence.com
- www.commweb.com
- www.mobilemediajapan.com
- www.ericsson.com
- www.gsmworld.com
- http://kbs.cs.tu-berlin.de/~jutta/gsm/js-intro.html
- www.oftel.gov.uk
- www.win2000mag.com
- www.wirelesscongress.com
- www.wirelessnewsfactor.com
- soeunix.ucsd.edu/~lsmarr/talks/Grid%20on%20the%20Go.5.01_files/frame.htm
- news.com.com
- www.mobilesms.com
- news.bbc.co.uk
- www.eurotechnology.com/
- www.wapforum.com
- www.palowireless.com
- www.nttdocomo.com
- i-mode.nttdocomo.com
- www.pinpoint.com
- www.wirelessreview.com
- www.logica.com
- www.umts-forum.org
- www.wheatstone.net/whatwedo/Portal/Standards/smg.htm
- www.3g.co.uk

# Annex 2; MUDIA - multimedia content in the digital age

## The inevitability of change

MUDIA will function as an important catalyst for the adoption of a proactive attitude towards technological innovation in the media industry by offering both the means to assess new opportunities and the management tools to drive them forward. It will also facilitate cooperative media ventures at local, national and international levels. This will be achieved by providing a much-needed European media leadership structure that can see the bigger picture and take a long-term perspective concerning the role of the media in a digital society.

The project will map the profound changes taking place in the job profiles of information professionals, and establish an overview of novel ways of organising their work. Traditionally, the media profession is hierarchically structured with a top-down operation from a single source to a large number of users. This will gradually be replaced by a much more horizontal relationship, in which there are different forms of feeding and feedback between content providers and their audiences. This type of interactivity is made possible by point-to-point communication media such as the Internet. For the first time, the previously amorphous public gets a face and can voice opinions. Media professionals will have to deal with these interventions, and will have to respond to the demands for particular types of information.

At the same time, multimedia productions will increase in number and importance. The strict division between text, audio and video will disappear and media professionals will have to have operational knowledge of more, if not all, delivery modes. The focus on the message (information) element will be complemented by understanding of the visual (form) element, as well as of the storage and communication technology involved.

MUDIA will identify the European media outlets where these transformations have started and have lead to successful new formats for the collection, storage, distribution and exploitation of news materials. By analysing how this has been achieved, MUDIA will facilitate similar action on the part of less forward-looking sectors of the industry and create a unique opportunity for informed decision-taking and critical assessment of media innovation processes throughout Europe.

### *The MUDIA consortium approach*

Most media organisations know they must become more diverse and flexible in the way they process information, but it is by no means clear how this objective can be achieved. The MUDIA project intends to provide the hard information the European multimedia industry must have if it is to develop and adapt to new technologies and evolving content production and consumption issues.

MUDIA's main objective is to stimulate innovative media practices and develop an understanding of the changing role of information (and information providers) in a networked society. To this end, consortium members are drawn from many different organisations involved in the media industry, representing both commercial and academic interests. All partners bring not only themselves, but their networks, to the project board, making MUDIA a truly European-wide research and development initiative. The composition of the consortium* has been deliberately designed to ensure that the research is relevant, practical and industry-focused as well as academically rigorous and multidisciplinary.

***Research objectives***

MUDIA will carry out a number of research projects, which, for the first time, will establish an overview of the current state of the European media industry. Research activities will involve socio-economic studies, trend analyses, observation of worldwide field practices, analysis of multimedia newsroom trials and analysis of the evolving needs of users and providers.

Towards the end of the project period, which runs from May 2001 till December 2002, the following reports will be available:

- A factual overview of the trends in online European media
- Future scenarios for the news media industries
- A study on the user orientation of European online media
- An assessment of the projects for mobile newscasting
- Selected case studies of media innovation initiatives
- A comparative study on multimedia convergence trends
- A feasibility study for a novel research information format

***The MUDIA website***

The project website <www.mudia.org> has overviews of the project activities, other data on multimedia developments, information about related events and links to partner websites. A regular e-zine gives summaries of project findings.

One of the most valuable features of the website is its Monitoring Service. This gives comprehensive coverage of all the latest developments in the publishing, broadcasting and new media industries, and is an important resource for media managers and researchers of all kinds.

***Conferences and meetings***

In addition to the website, a variety of meetings, work sessions and conferences will be held to disseminate the results. The project will end with a major European conference in October 2002 in Maastricht. Its aims will be to:

- define the state of play in multimedia content production;
- establish an advisory industry council to set the future research agenda;
- present a proposal for a permanent multimedia monitoring facility;
- explore the scope for a European research network for continued R&D activities.

** MUDIA (MultiMedia Content in the Digital Age) is a European Commission-sponsored IST project. The consortium consists of the following partners: (1) International Institute of Infonomics, Maastricht (co-ordinator); (2) World Association of Newspapers (WAN), Paris; (3) News World International Limited, London; (4) Institute for Prospective Technological Studies (IPTS), JRC, Sevilla and (5) Centre for Society, Technology and Media (STeM), Dublin City University.*

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*All websites referred to in this document were checked between 21-24 April 2002.*


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Hard copies of MUDIA reports can be ordered by visiting the MUDIA website or by contacting:

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MUDIA – Multimedia Content in the Digital Age is a European Commission sponsored IST project, functioning as an important catalyst for the adoption of a proactive attitude towards technological innovation in the media industry.

Most media organisations know that they must become more diverse and flexible in the way they process information, but it is by no means clear how this objective can be achieved. MUDIA intends to provide hard information the European multimedia industry needs if it is to adapt to evolving content production and consumption issues. MUDIA's main objective is to stimulate innovative media practices and develop an understanding of the changing role of information (and information providers) in a networked society.

To this end, consortium members are drawn from many different organisations involved in the media industry, representing both commercial and academic interests. Partners are Infonomics (the Netherlands), IPTS (Spain), WAN (France), NewsWorld (UK) and STeM, DCU (Ireland). All partners bring not only themselves, but their networks to the project, making MUDIA a truly Europe-wide research and development initiative.

This study you are holding is one of seven which, for the first time, will establish an overview of the current state of the European media industry. These research activities involve socio-economic studies, trend analyses, observation of worldwide field practices, analysis of multimedia newsroom trials and analysis of the evolving needs of users and providers.

This and other MUDIA Reports are available to download or order in electronic or hard copy format.

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