

Culture Connect:

A comparative study
of the use of mobile media
in Australia and Japan

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Certificate of Originality

I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Swinburne University of Technology or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at Swinburne University of Technology or elsewhere, is explicitly acknowledged in the thesis.

I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.

(Signed)

Abstract

This thesis examines how culture has influenced the take-up of mobile media services in Japan, and asks why the situation has played out differently in Australia. Departing from Paul Levinson's idea that the mobile phone will become an archive of every user's most important information and memories (the 'mobile hearth'), this work will examine the culture surrounding the use of the mobile phone, and specifically mobile media services, in Australia and Japan.

Mobile media is a constantly evolving area, and a brief history of its development will be traced. The introduction of SMS will be looked at, and the way in which people have used the technology both historically and in contemporary times will be discussed. The thesis also investigates the introduction of mobile Internet services, along with some of the reasons for their initial failure.

The thesis will then investigate mobile media use in Japan, beginning with an historical overview detailing what is known as the 'pager phenomenon', where Japanese teenagers adopted the alphanumeric pager as their own device for mobile communication. The mobile phone technologies of *i-mode*, location based services and mobile TV will be discussed within the Japanese context, and the very intimate and personalised nature of the mobile phone will be analysed, along with how this plays out in mobile media services offered.

Mobile media use in Australia will then be examined, from the point of view that Australians are enthusiastic users of mobile phones, considering there are more mobile phone subscriptions than wired phone subscriptions, but mobile media services have failed to excite. The failure of mobile media services like *Optus Networker*, *Telstra Mobile Loop* and *i-mode* will be looked at. As the most recent failure, the reasons why *i-mode* did not achieve its desired success will be looked at closely. Mobile media use in Australia is only beginning to take off now, and the future of the medium in Australia will be looked at, drawing on interviews with experts in the industry.

Finally, a comparison between the cultures of mobile media use in Japan and Australia will be made, to show that despite having access to very similar technologies, users in both countries have come to use their mobile phones for accessing mobile media in very different ways. For Japanese users, their phone is their own personal and private entertainment centre, and as they are accustomed to using media on their mobile phones, the small form factor is not an issue in how they use media, making technology like full television broadcasting over mobile phones likely to succeed in Japan. In Australia, the mobile phone's role as a media device is still developing, but it is likely to be an intermediary between other media devices like computers and large screen televisions. It will receive content for displaying on these other devices. At the same time, it will be used for creating and sending user-generated content which will take the form of services like mobile blogging and instant messaging.

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Introduction

If the Internet is the medium of media, the cellphone has done one better than the Internet and is becoming the medium of media on the move (Levinson 2004: 106).

A mobile phone, or '*keitai*', as the device is known in Japan, functions these days as an all purpose media device. The latest generation of mobile telephones can capture and transmit still and video images, send and receive emails, browse the World Wide Web and exchange information with almost any computer. The establishment of cellular networks based on third generation (3G) protocols, with increased capabilities for data transmission, are extending the capabilities of the mobile phone even further, making services like video conferencing and live television broadcasts possible on a pocket-sized device.

The possibility of carrying round a small device capable of so much was once a science fiction lover's fantasy, with devices loosely resembling today's mobile phones found in the hands of characters out of *Star Trek* and other science fiction texts. The evolution of the mobile phone into an all purpose media device has occurred with rapid pace. The telephone was previously a device found in the home, office, or public phone booth (Levinson, 2004: 58). The first cellular telephone networks, installed in Chicago in 1977 (Agar, 2003:37), gave mobility to the telephone, although its function as a device that enabled voice

communication between two parties, remained the same. The first shift in the functionality of the mobile phone came about with the adoption of the short message service (SMS), introduced as part of the Global System for Mobile (GSM) specifications in 1991 (Agar, 2003: 62), and since then 'texting' has fundamentally altered the way people use their mobile phones.

The first signs of the next shift began to reveal themselves to me on a spring afternoon in the year 2000. That was when I began to notice people on the streets of Tokyo staring at their mobile phones instead of talking on them (Rheingold, 2002:xi).

Howard Rheingold has been at the forefront of thinking on digital communication systems since he published *The Virtual Community* (1993), which delved into early email and Internet based communication. In *Smart Mobs* (2002), he turned his attention to mobile communication, noticing the growing phenomenon of 'texting' at Shibuya Crossing, Tokyo. Since that time, it has become a tool for daily communication, allowing for a discrete exchange of information where a phone call may not be possible or inappropriate. As Paul Levinson says, '[The] advantages of text were not surprising. Writing always has been more quiet (sic) than speaking, and more precise. What was surprising was finding the written word in an instrument intended for spoken conversation...' (2004: 106).

As surprising as it may have been for users to pick up a mobile phone and type a text message in the first place, SMS has proved immensely successful and been adopted rapidly, particularly by younger users (Ling, 2004: 145, 146). The technology and its cultural and social consequences deserve much attention and this has been achieved by the likes of Howard Rheingold (2002), Rich Ling (2003), Paul Levinson (2004) and Gerard Goggin (2005). While this thesis will document SMS, it will instead be in its role as a precursor to other 'cutting edge' mobile media applications.

When I looked into the technical underpinnings of telephone texting, I found that those early texters were walking around with an always-on connection to the Internet in their hands. The tingling in my forebrain turned into a buzz. When you have a persistent connection to the Internet, you have access to a great deal more than a communication channel.

(Rheingold, 2002: xiii)

Internet-like services on mobile phones have been available since the late 1990s, and the most well known and successful service, *i-mode*, was released by NTT DoCoMo in Japan in 1999 (Okada, 2005: 53). The service was an instant success, particularly for its email functionality, because messaging systems used by Japanese mobile networks were previously incompatible with each other (Matsuda, 2005: 35). The Japanese have embraced mobile media services like no other culture, considering that 42 million of NTT DoCoMo's 49 million

subscribers in Japan use the *i-mode* service (*i-mode* Business Strategy, 2005). Mobile media services have been introduced in most countries where mobile phones are common, but the penetration rate experienced in Japan has not been replicated elsewhere. The *i-mode* service itself has been marketed by DoCoMo to mobile carriers in Taiwan, Singapore, Germany, The Netherlands, Belgium, France, Spain, Italy, Greece, Russia, United Kingdom, Ireland, Israel and Australia, (NTT DoCoMo, 2006). While the service is still in its infancy in these other markets, it is fair to say that it has not yet achieved the same sort of take-up rate outside of Japan.

The use of *i-mode* and mobile media services has been mainly approached from a sociological perspective in academic discourse to date (Okada, 2005; Matsuda, 2005; Fujimoto, 2005). As sociologist Howard Rheingold puts it, 'The "killer apps" of tomorrow's mobile infocom industry won't be hardware devices or software programs but social practices. The most far-reaching changes will come, as they often do, from the kinds of relationships, enterprises, communities, and markets that the infrastructure makes possible.' (Rheingold, 2002: xii) Rheingold is more than likely right in saying this, and *Smart Mobs* aptly demonstrates the social transformation that mobile phones are bringing about on different societies around the globe. One of Rheingold's best examples is the use of text messages to bring about the downfall of President Joseph Estrada of The Philippines in 2001 (2002: 157). These massive demonstrations were organised entirely by the forwarding of a text message, and left Estrada with little choice but to resign. This

shows what a powerful communication tool the mobile phone has become with the addition of text based capabilities.

Rich Ling, in *The Mobile Connection* (2004) conducts an exhaustive survey of the habits of mobile phone users in Norway, where mobile phones have been in use since 1981 when the Nordic Mobile Telephone (NMT) system introduced a cellular network across Scandinavia (Agar, 2003:49). Ling's work provides a fascinating sociological analysis of the mobile phone, particularly in the way Norwegian youth use their mobile phones and how SMS is used as a communication tool. Similarly, *Perpetual Contact* (2002), edited by James E. Katz and Mark Aakhus, is a comparative study of mobile phone use in a number of different cultures, and demonstrates that despite mobile phones being more or less identical wherever you may find them, social differences between cultures impact on the way they are used to communicate. Howard Rheingold believes that the mobile phone is far more than a communication tool (2002: xiii), and that is where his thesis diverges from work already published in the field; his work explores the device as a media platform. Like *Perpetual Contact*, this thesis will use two case studies to draw out the cultural implications of mobile phone use, but like Rheingold and Levinson, it will argue that the device is far more than a communication tool.

This thesis takes the view that the mobile phone has evolved to become a media platform, incorporating elements of television, radio, print and the Internet. As such, I will be taking a media and cultural studies approach to its evolution. Just as the transistor radio became the first ever portable electronic medium, and ended the days that the home was the sole site of media enactment, the media enabled mobile phone will surely be a catalyst for changes in the way media is absorbed. Already, media enactment can take place wherever cellular network coverage can be found, and in the future the range of content available will only increase. This may lead to a change in consumption habits, as users become accustomed to viewing shorter programs on the low resolution screens of their mobile phones.

Considering the way Japanese users have devoured mobile media, no consideration of the mobile phone as a media device can ignore the cultural trends found in Japan. On the other hand, Australian mobile phone culture is strong, considering that the number of mobile phones in the country exceeded the number of wired access lines in 2001 (AMTA, 2006). Media services have been launched in Australia, offering content very similar to that found in Japan, but in Australia mobile media has not been accepted culturally in that way that using a mobile phone for voice communication or SMS has been. Thus the aim of this thesis is to fully understand the impact that the ability to access media content on a mobile phone has had on Japanese culture in the take-up of the technology and how this has played out *differently* in the Australian context.

Japanese mobile culture, and *i-mode* in particular, has been explored extensively in *Personal, Portable, Pedestrian*, edited by Mizuko Ito, Daisuke Okabe and Misa Matsuda (2005). This book takes a mainly sociological approach to the subject, but in taking this approach, many cultural aspects of mobile media use in Japan are broached, and this thesis will make use of that. Authors such as Misa Matsuda, Tomoyuki Okada and Kenichi Fujimoto have contributed reasons why there is such a heavy reliance on ‘texting’ in Japanese culture, what the most popular forms of media content are and why this is so, and the ways in which the services offered by *i-mode* and its competing platforms are used.

Unfortunately, very little academic work has been done on the use of mobile media in Australia. Gerard Goggin (2006), Larissa Hjorth (2006a, 2006b) and Ingrid Richardson (2006) are leaders in this discourse, having published on the history of the mobile phone in Australia, the role that customization and personalisation play in mobile media, and the culture being created by personal media devices such as the mobile phone. In examining the culture surrounding mobile media in Australia, this thesis will draw upon the knowledge they have imparted on this subject to date.

In order to articulate the culture surrounding the mobile phone in Japan, and the comparative situation in Australia I will be drawing on the work of Paul Levinson, who has situated the device within a history of media and approached the mobile

phone as a device for 'media on the move' (2004: 106). Levinson's work also demonstrates an awareness of other media devices such as the radio receiver and the Internet-enabled personal computer, what sort of cultural impact they have had, and how the impact of the mobile phone may differ to these other media devices.

In *Cellphone*, Levinson coined the phrase 'the mobile hearth' (2004: 49). By definition, a hearth is the fireplace of a home, thought of as a symbol of the home and the life of the family who live in it. In applying this term to the mobile phone, Levinson is suggesting that it is now a ubiquitous device where all manner of communication, information and personalisation comes together to form a symbolic representation of the user. The mobile phone has become a device that allows reception of media, the production of media, and enables this two-way exchange of media to happen immediately and over a long distance, in an interactive manner (Levinson, 2004: 52). As Levinson puts it, 'The result of [having] all these capacities instantly at hand is that the contents of our minds, including ideas, impulses, strategies, become a fingertip away from implementation' (2004: 52) So in looking at the culture of mobile media use in Japan and Australia, this thesis will engage with Levinson's idea of the mobile hearth, to see whether the ability to have so much information in a small and personal device, defines the mobile phone as a medium.

Levinson takes a somewhat hypothetical approach to his subject, and does not utilise current usage statistics or interviews with mobile phone users, as other authors approaching the subject from a sociological perspective have done. While this technique worked well for his book, this thesis will take a more 'real world' approach to the topic, and while it will not be a sociological analysis, it will draw upon the opinions and experiences of people involved with the development of mobile media in Australia.

Nonetheless, I will use Levinson's concept of the 'mobile hearth' (2004: 49) as a point of departure in explaining the contemporary use of the mobile phone. In order to compare the mobile phone as a media device in Japan and Australia, I will situate the device within a history of media and communications. From the printed book to the portable transistor radio, media devices have been introduced and their technology has subsequently altered the way people interact with media. The mobile phone is arguably the most sophisticated media device ever seen, with its multimedia abilities, and to fully understand the impact of the device, it is necessary to compare it to historical media devices. The evolution of the mobile phone has already been touched upon earlier in this chapter, but Chapter Two will expand upon the subject and give a general overview of mobile media, from early text based services delivered via SMS to contemporary services that can sense a user's location and provide media based on that criterion.

In order to contextualise the use of mobile media, I will conduct a case study of its use in Japan. Mobile media has been in use in Japan for a considerable period, beginning with the 'pager phenomenon', where youth adopted the device that was previously the domain of the business and executive classes for their own communication needs. The 'pager phenomenon', which led to a much earlier use of mobile media by Japanese users than those in other parts of the world, can be seen as the reason why other mobile media services have been more successful in Japan than in other parts of the world. Chapter Three will analyse the culture that has formed around the use of the mobile phone in Japan, and look at the use of different mobile media services by Japanese users, to create a characterisation of Japanese mobile media use.

Chapter Four will look at the evolution of the mobile phone in Australia. Despite being enthusiastic users of mobile phones, Australians have not embraced mobile media in the same way that Japanese users have. In the Australian context the mobile phone has remained a tool for voice communication, with text messaging also being popular. Numerous mobile media services based on WAP and a local version of the Japanese *i-mode* service, have been launched with a muted response from Australian mobile users. However, mobile phone use is not as mature in Australia as it is in Japan, and there are predictions from industry experts that it could be several years before mobile media services achieve a significant take-up rate amongst users. Based on patterns that are already emerging, I will look at how Australians are likely to use mobile media services as

they become more accustomed to the experience, and what the culture surrounding Australian mobile phone use will be like in the future.

Synthesis of my argument will involve a direct comparison of the use of mobile media in Japan and Australia. This will provide an indication of the different roles that technology and culture have played in the success and comparative failure of mobile media services in these two countries. Considering that very similar mobile technology is available at present in both countries, it would suggest that culture is a major factor in shaping the use of mobile media. Chapter Five will compare the use of different mobile media services that are available in both countries, such as mobile Internet services like *i-mode* as well as location based services and mobile television. Based on this comparison and the research undertaken for this thesis, I will hypothesise on the future direction of mobile media in Australia and Japan.

The ultimate aim of this thesis is to prove that, at least in terms of mobile media services, cultural factors are more important in their adoption than the technology that drives them. This is a sentiment shared by authors that have contributed to *Personal, Portable, Pedestrian* (2005) and *Perpetual Contact* (2002). The work of these scholars, which I will discuss further into this thesis, concludes that mobile phones are used in different ways and for different reasons throughout the world. However, I believe that this some of the earliest work that has compared the use of mobile media in different parts of the world. Considering NTT DoCoMo's push

to export *i-mode* worldwide, and the willingness of local mobile network operators to license the service, it seems that there is a belief that mobile media is a worldwide phenomenon, like the Internet. Hopefully the following chapters will convince you that mobile media is a local phenomenon, more personal and intimate than the Internet, and those responsible for its construction and implementation should keep this in mind.

A Short History of Mobile Media

Paul Levinson's concept of the mobile phone as a hearth was introduced in the previous chapter. The hearth is the centre of a home where people and objects converge. If the continuum that is the history of media is the home, and other media technologies that have come before the mobile phone are the objects, then the mobile phone is the hearth of media. Just as Gutenberg's printing press made the written word accessible for the first time (Neumann, 1996: 55), the mobile phone continues to transport text through technologies such as the short message service (SMS) and the wireless application protocol (WAP). But the technology contained within the current generation of mobile phones that makes it possible to create, receive and store video, audio, text and graphics, means that almost every current form of media has found a place within the mobile phone.

This chapter will trace the evolution of the mobile phone from its beginnings as a portable telephone, to its current status, where it is on the verge of becoming a truly convergent media device. The reason that the mobile phone is becoming a convergent media device is because of technologies that have been introduced to it, such as short message service (SMS), wireless application protocol (WAP)/*i-mode* and more advanced third generation (3G) technologies. In this sense, media will be defined as any content that the mobile phone is capable of creating, sending, receiving and storing. While voice is a type of content that can

be created and sent using a mobile phone, a voice conversation cannot be stored on the mobile phone itself, making voice content a form of communication rather than a form of media. Rich Ling has dealt extensively with the sociological implications of voice based mobile communication in *The Mobile Connection* (2004), and his work makes an excellent place to begin a study of the mobile phone as a voice-based communication device. This chapter will make a study of users and their interactions with the mobile phone that has been the catalyst for its emergence as a media device. This will be done within the context of the technology and content of mobile media, as the relationship between mobile phone technology and culture is unravelled.

The mobile phone began purely as a communication device, and its origins can be traced back to Guglielmo Marconi, who invented wireless telegraphy – the ability for Morse code to be sent and received without wires (Agar, 2003: 6). The invention of various technologies over the course of the twentieth century contributed to the emergence of the mobile phone, the most significant of which was probably the ‘cellular idea’ which enabled the extremely limited radio spectrum that was available for mobile communication to be shared in such a way that many users could communicate at once (Agar, 2003: 19). Jon Agar’s book, *Constant Touch* (2003), provides a succinct account of the developments that led to the emergence of the mobile phone, and that should be consulted for more information on this area.

The first media content to be delivered to mobile devices was text based, and delivered using the short message service (SMS) protocol, introduced with the Global System for Mobiles (GSM) specifications in 1991 (Agar, 2003: 62). At the time of its introduction, the mobile network operators could not see the importance of SMS, and it was not considered a major part of the GSM protocol (Agar, 2003: 105). It was designed for mundane tasks like informing mobile phone users that they had received a new voicemail message.

In spite of the lack of foresight by mobile network operators, users (particularly those who were young or poor) soon discovered the power of SMS, and the technology caught on (Agar, 2003: 105). Since that time 'texting' has emerged to alter the culture of communication practices, making it possible to coordinate social and political events in real-time (Goggin, 2006b).

SMS is also one of the few mediums that no corporation can gain complete control over. While a user can subscribe to a service like Telstra's *PocketNews* and have news and information sent to their mobile that has been created by big media organisations, they can also become a virtual media organisation, feeding their own take on news and information to others. While other mediums, such as blogging, make this same process possible, SMS is arguably much more immediate and therefore the message becomes more powerful. The ability to organise mass numbers of people in such as way, has seen SMS emerge as a

truly spontaneous form of media, and its power is being harnessed by political and media organisations alike.

Howard Rheingold calls the process where mobile users form their own media distribution network in this way 'swarming' (2002, 157). The process of 'swarming' has altered the relationship between people and the media, and Vincente Rafael argues that it allows users to bypass 'the complex of broadcasting media' (cited in Rheingold, 2002: 157).

Indeed, one could imagine each user becoming a broadcasting station unto him or herself, a node in a wider network of communication that the state could not possibly even begin to monitor; much less control.

Hence, once the call was made for people to mass at Edsa, cell phone users readily forwarded messages they received, even as they followed what was asked of them. (Rafael, cited in Rheingold, 2002: 157)

Kirstin Drotner argues that the transformation of the relationship that people have with media is a trend in the emergence of 'portable, personalised and interactive media' (2005: 53).

This has been from stability to mobility, from a situation in which the use of media devices was restricted to a location and to a time, to a situation in

which media objects may accompany individual users across shifting settings and times of the day. Thus the increased *individualisation* and *mobility* of contemporary media culture invites conceptual reconsiderations of the time, spaces and social relations within which media practices develop and become institutionalised (Drotner, 2005: 53- my emphasis added)

Drotner is referring to media devices in general, but my argument is that the mobile phone allows for the most individualisation and mobility of any media device ever seen. Paul Levinson goes as far as to say that the mobile phone is unique amongst media devices because it allows both reception of media and production. (2004: 52) I would argue that the Walkman and MP3 player have allowed production of media for decades, in that they can play and record sound, however I agree with both authors in arguing the significant role that the mobile phone has played in the changing nature of media. Despite its simplicity, SMS has probably facilitated this change better than any form of mobile media that has subsequently been developed. The 'coup d'text' (Pertierra, cited in Goggin, 2006b) that brought down President Joseph Estrada of the Philippines, and the race riots precipitated by an SMS message on Cronulla beach in Sydney, Australia, are testament to this.

As Gerard Goggin (2005) argues, SMS has precipitated a substantial shift in the relationship between people and media. While other technologies found on the

mobile phone may deliver more exciting media content to the mobile phone user, one of the legacies of SMS will be its ability to create a symbiotic relationship between the mobile phone and other forms of media, thus making older forms of media more responsive to the individual wants and needs of users.

As an example, television is regarded as a passive medium by media theorists, because until now there has been no possibility of interactivity with it. Unlike a newspaper, magazine, or website, content choices are not made by the viewer but instead by the producer of the program. The only impact the viewer normally has on the program is whether they watch it or not. The use of SMS is changing this.

White Line Fever is a program on Foxtel's *Fox Footy Channel*, where a panel of journalists and former players discuss the news and issues concerning the Australian Football League (AFL) for that day. Previously, the exact content of the program would have been set before the show went to air each night. Thanks to SMS, viewers can correspond with the panel as the show is going to air and play an active role in setting the content for the show. The same process takes place on music video channels such as *MTV* and *Channel V*, where viewers can SMS in the video clip they want to see, and it can be put to air within minutes. This process has always taken place with the likes of *MTV* but previously it would have taken a phone call or the sending of a letter, making the process more involved, and creating a longer lead time.

So the SMS capable mobile phone could possibly go down in history as the first personal, portable media device that is capable of creating media and sending it out to a wider audience, whether that be to a friend, a radio station, a television program or even an electronic billboard that allows the reception of SMS. The use of 'texting' to create a personalised medium where a user can promote opinions without being subject to censorship from others has spawned a more recent form of mobile media called 'mobile blogging' that lets users send text, images and video from their mobile phones to an Internet site, and essentially create their own media publication. This vein of mobile media is likely to have the greatest impact on the media landscape, because while other forms of mobile media that have emerged since SMS have sought to integrate existing mediums into the mobile phone, SMS has created a new medium that is spontaneous and interactive. Not only that, but its simplicity and low cost make it one of the most accessible mediums. In the Philippines, a personal computer costs twenty times as much as a mobile phone and only one percent of the population own them. SMS is inexpensive, and this makes it the most accessible form of personal electronic communication (Rheingold: 2002, 158).

SMS and other related forms of 'texting' have been universally popular as a form of mobile media, but efforts to develop mobile media further have seen content and applications emerge that are far more 'dazzling' than simple text. Considering the popularity of the Internet, where the World Wide Web has

become established as an extremely versatile medium capable of hosting text, graphics and multimedia content, efforts were made in the late 1990s to develop a cut down version of it to be used on mobile phones. Two competing technologies that enable this have emerged, WAP and *i-mode*, and the full possibilities of what a 'web-enabled' mobile phone will be capable of are still emerging. This is particularly the case with the introduction of third generation (3G) cellular networks that enable high speed transmission of data.

WAP was the earliest protocol developed to allow mobile phones to access simple web sites that contained mainly text based content. This was not due to limitations in the technology, but rather limitations in the capability of mobile phones at the time, with their low memory and processing power. WAP used a version of hypertext markup language (HTML) adapted for use on small screened devices such as mobile phones called wireless markup language or WML (Evans, 2001).

i-mode was developed later than WAP, but the two protocols are very similar in their functionality. NTT DoCoMo, the inventor of *i-mode*, simply made a decision to develop an in-house technology based on a variant of HTML called compact HTML or C-HTML, rather than join the consortium developing WAP into the worldwide standard for web-based media content on a mobile device (The independent *i-mode* FAQ, 2004). *i-mode* is now regarded as the more successful of the two protocols because it has 42 million users in Japan, and approximately

10 million users throughout the rest of the world (*i-mode* Business Strategy, 2005). Because of this success, a hype surrounding *i-mode* has been created, but this is largely due to its commercial success, and has little to do with the capabilities of the protocol. This thesis has no interest in the commercial success of *i-mode*, only in its cultural ramifications, and for an insight into the commercial story of *i-mode*, *i-mode Strategy* by Takeshi Natsuno (2003) may be consulted.

As far as the evolution of personal media devices goes, the web-enabled mobile phone has been a giant step forwards in terms of what someone can do with a device that fits in their pocket. The introduction of the transistor radio in the 1960s allowed teenagers to take their radio places with them, and made listening to radio a much more personal experience than previously, when the ‘wireless’ took pride of place in the home, and the family would gather round it to hear their favourite programs (Vertigan cited in Bartley, 2005:10). In a sense, the web-enabled mobile phone is having the same effect on the way people use the Internet, where it is no longer a case of having to gain access to the family computer to browse the web. In this age, someone with the latest mobile phone can access the Internet from any location where their mobile phone has reception, meaning they have more privacy in their use of the Internet, and this will surely affect the type of content they choose to access.

However the analogy to the transistor radio does not account for the true potential of the web-enabled mobile phone. With WAP or *i-mode*, it is possible to

access rich content such as video, or even download music to your mobile phone, and in the evolutionary terms of the portable media device, this is a remarkable step forward from a pocket-sized radio. Using another technology that is related to WAP, the multimedia message service (MMS), users can create rich content such as digital photos, video or audio which can then be sent from their mobile phone to another mobile phone or computer via email. Just as with SMS discussed earlier, it gives the user the power to create and distribute their own rich media content to a network of people, bypassing official channels such as television or radio that are tightly controlled by major organisations. It also allows these very same major organisations to create rich media in places where it wasn't previously possible. When war broke out in Iraq in 2003, major news organisations like CNN had journalists embedded with the frontline troops reporting back with the aid of a mobile phone that allowed video calling (Levinson, 2003:138).

Mobile network operators, who had been surprised by the popularity of SMS and the revenue streams it created, hoped that users would take up new media services that were being added to mobile phones such as WAP and MMS. (Economist, 2003) It soon became apparent that users were (outside of Japan at least) unexcited about accessing web-based content on their mobile phones. WAP was hyped as the 'Internet on your mobile' and owing to problems to do with poorly performing mobile handsets, limited content, the slow connection speeds that mobile phone users have had to contend with, and the high costs

involved with accessing this type of content, it simply did not live up to expectations, and is now largely ignored in America at least (Halvey, Keane and Smyth, 2006: 78). When it was obvious that these mobile media services had failed to attract significant users the next big hope was 3G networks which offered faster rates of data transfer that made content such as video possible on a mobile phone for the first time. The vision of the 3G mobile phone by network operators who had invested great sums of money in licenses which permitted them to offer these services, was of an ‘indispensable “life tool”, carried everywhere by everyone, just like a wallet or purse is today” (Economist, 2003).

The 3G device will function as a phone, a computer, a television, a pager, a videoconferencing centre, a newspaper, a diary and even a credit card...it will support not only voice communications but also real-time video and full-scale multimedia...It will also function as a portable address book and agenda, containing all the information about meetings and contacts...It will automatically search the internet for relevant news and information on pre-selected subjects, book your next holiday for you online and download a bedtime story for your child, complete with moving pictures. It will even be able to pay for goods when you shop via wireless electronic funds transfer (Economist, 2003).

Despite the technology being in place to make all this possible, it was not what users wanted out of their mobile phones (Economist, 2003). Even in Japan,

home of the most frenetic users of mobile media in the world, the biggest use for *i-mode* and the similar services offered by Japan's other cellular networks is email (Miyata et al, 2005: 147). So despite the great potential of the mobile phone as a portable multimedia device that can receive, store and send content, all users really want from their devices is the ability to send and create simple media content. It is the reason why SMS has become so popular, because it is so simple and yet so effective.

Other technologies like WAP were not helped by the marketing campaigns that were used to launch them, and in the case of WAP it was presented as a platform capable of delivering 'the Internet on your mobile', when the content was not in place to be able to make that claim (Economist, 2003). Any media device that has been successful has achieved this success because of the content it offered. Radio was a successful medium because of the entertainment it provided in the family home, with shows such as *Amos and Andy* entertaining a whole generation of Americans (Czitrom, 1982: 83). Television was a success because it improved on radio and provided visual entertainment in the programming it offered (Cashmore, 1994: 12). Network operators are now thinking less about the technology and more about what kinds of content they can offer (Economist 2003), which has arguably been the central lesson of the *i-mode* success story.

At present the most popular content found on mobile media services are ring tones and games, and this is the case in Europe, Australia and Japan

(Economist 2003, Okada 2005: 54). Users have been encouraged to use these services through a customized approach where they receive a phone pre-configured by the network operator that has special menus and bookmarks that make it easy to download ring tones, games and access information (Economist, 2003).

I-mode is the most advanced service of this type in the world and offers location based services as well as the ring tones and games that other operators include in their portals. Location based services are possibly the only type of mobile media that truly utilizes the unique characteristics of the mobile phone. The most popular location-based service in Japan is the dating service, known as *ImaHima*, where users can locate others within a particular area who are looking to meet that special someone in their life (Rheingold 2002, 166). Other location-based services display stores and restaurants in a particular area, give traffic reports, provide information on local history and culture and environmental information about weather, animals, plants and landscape (Kohiyama, 2005: 70).

Perhaps then, the best metaphor for the mobile phone isn't the hearth, or indeed the wallet, but the Swiss Army knife (Hjorth, 2005:9). To some mobile phone users it may always be a portable phone that allows them to make phone calls wherever they go. To others it may be the cheapest device available for electronic communication, and to a third group of users who come to embrace its handling of rich media content, it may indeed become a wallet where all content of a personal nature is kept. As its uses remain uncertain at this point in time, the

ubiquitous Swiss army knife with its bevy of handy tools for any circumstance may indeed be the best analogy for the mobile phone.

The next chapter will look at how the culture of using mobile media has developed in Japan, from the time that Japanese youth claimed ownership of the pager from business people and developed their own pager language which began the Japanese fascination with text based communication. The chapter will trace the situation up to the present, where thanks to *i-mode* and similar services, the mobile phone has permeated Japanese life to such an extent that it is not uncommon to see users walking the streets, staring at the screens of their mobile phones (Rheingold, 2002: xi). Japanese users are even expected to watch television on their mobile phones in the future; such is their fixation with the mobile phone.

The Japanese Experience of Mobile Media

The Japanese are the world's most prolific users of mobile phones. As Howard Rheingold found out when he was researching for his book, *Smart Mobs* (2002), Shibuya Crossing in Tokyo is the most mobile-phone-dense neighbourhood in the world, with eighty percent of the 1,500 people who traverse the square at any one time carrying a mobile phone in their pocket (Rheingold 2002, xiii). The popularity of the mobile phone in Japan has led to the country becoming a virtual barometer for trends in the development of the mobile phone, and many of its successful technologies end up being exported worldwide for use by mobile phone users in other locales.

Much of the early development of cellular systems, the technology which allows so many users to share limited radio frequency, took place in America and Europe, with the first cellular network built in Chicago, and Scandinavia's Nordic Mobile Telephony (NMT) system being the first in the world to allow roaming between networks (Agar, 2003:37,50) Since the concept of the mobile phone was introduced to Japan and taken up so rapidly, the country has seized the initiative in mobile phone development, and the rest of the world now follows. This has occurred with 3G networks, where the very first was built in Japan by NTT DoCoMo in 1999, and the technologies employed in building it have since been adopted by network operators throughout the world, and codified as the

official standard for 3G networks, known as UMTS or Universal Mobile Telephony System.

Japanese users have also played their part in Japan's domination of mobile phone development, adopting technology such as *i-mode* and WAP at a rapid rate, while users in other parts of the world have been more reticent in their use of these technologies. As a consequence, a number of academics have been fascinated by how people in Japan use their mobile phones. Howard Rheingold began his book, *Smart Mobs* (2002), in Japan and was looking at how emergent technologies such as 3G mobile phones were impacting on people's lives (2003). Mizuko Ito, Daisuke Okabe and Misa Matsuda have also edited *Personal, Portable, Pedestrian* (2005), which takes a quantitative and sociological approach to the use of mobile phones in Japan.

This chapter will look at the mobile phone's ability to create, store and receive media content – whether that be text, graphics or video – and how Japanese people have integrated these capabilities of the phone into their everyday lives. The evolution of Japanese mobile culture will be traced from the use of alphanumeric pagers prior to the introduction of the mobile phone through to the present where Japanese people are using their phones to access media content more than they do to make phone calls. The introduction and subsequent success of *i-mode* will be traced, up to the present where location based services are perhaps emerging as media content that is uniquely tailored to the mobile

phone. From this, the role that mobile media content has played in the take-up of mobile phones in Japanese culture can be gleaned.

A background to mobile media use in Japan

The Japanese relationship with mobile media begins with the pager. Although the pager is associated more frequently with business people and medical professionals who have to be reached at any time of the day or night, in Japan it was adopted for use as a personal communication device, after NTT introduced a pager that was capable of displaying digits on a liquid crystal display in 1987 (Okada, 2005: 43). Just as Gerard Goggin invokes Latour in an attempt to explain the unexpected popularity of SMS in other mobile cultures, (2005: 12), Latour's whirlwind model of innovation is also useful in explaining the rise of the pager in Japan:

...The initial gadget moves only if it interests one group or another, and it is impossible to tell whether these groups have petty interests or broad ones, whether they are open or resolutely closed to technological progress. They are what they are, and they want what they want...
(Latour, cited in Goggin, 2005:12).

This particular gadget, the pager, interested Japan's youth, in particular female university and high school students (Okada, 2005: 44). Of course the pager was

not designed as a media device, its only function was to receive a phone number that the pager's owner could use to return a call, and this would be displayed on the LCD display; no other information could be conveyed by the pager. This limitation did not perturb the pager's new user base.

The youth who adopted the pager as their chosen communication device created their own language to transform it into a more personal medium. Instead of leaving a return phone number they would enter a series of numbers that had some meaning attributed to it within their group. Through their own ingenuity, they created a form of mobile media on a device that was never intended for such (Okada, 2005: 50).

Considering that in 1993, 70 percent of new pager subscribers were youth (Okada, 2005: 44), many of whom would have been using an ad-hoc numeric language as described above to communicate, the pager manufacturers were forced to respond and release models that could receive text messages (Okada, 2005: 44). When a new group becomes interested in a project, it transforms the project. Hence, the youth of Japan's interest in the pager transformed it into a device capable of creating, sending and receiving the simplest form of mobile based media, text messaging.

Text messaging is popular in Japan, as it is throughout the world, but the difference is that in Japan people use text based communication on their mobiles

more than they use voice (Okada, 2005: 54). While Filipinos are heavy users of SMS because many of them survive on low incomes and SMS is the cheapest form of communication (Rheingold, 2002: 158), cost is less of a consideration for Japanese mobile phone users. Tomoyuki Okada interviewed a 21 year old man in Tokyo who preferred using email because it was cheap, but also because it was 'an easy way to communicate' and he didn't have to 'worry about the time of the day when [he sent] a message' (2005: 54). Japanese mobile users' preference for using text based communication, is perhaps why they are more willing to adopt mobile media than mobile phone users located elsewhere.

Certainly the Japanese penchant for text messaging was a reason for NTT DoCoMo's development of the *i-mode* system. As mobile phones began to overtake pagers as the preferred communication device, the problem facing users was that text messages could only be exchanged amongst people who were on the same network. So while an NTT subscriber was able to send text messages to another NTT subscriber, they could not communicate with a J-Phone or KDDI subscriber by text message (Matsuda, 2005: 35).

The problem was each network used a different protocol, rather than relying on the Global System for Mobiles (GSM) standard as was the case in other countries, making inter-network communication impossible (Matsuda, 2005: 35). The J-Phone network (which is now Vodafone) introduced Internet email for mobile phones in November 1997, and users began to choose it over text

messaging because it allowed for communication between users on different networks, and users who had computers rather than mobile phones for that matter (Matsuda, 2005: 35).

J-Phone's *SkyWalker* service that allowed Internet email to be sent and received on a mobile phone made it the most popular cellular network in Japan for a time, and the introduction of email precipitated a shift by Japanese youth away from the pager to the mobile phone (Okada, 2005: 53). Okada cites Takahiro to argue that the exchange of text messages with LCD equipped pagers was merely multimedia-like communication, and it was only with the introduction of the mobile phone that mobile communication became multimedia (2005: 53).

Mobile media became a reality in Japan when the *i-mode* service was introduced in 1999 (Okada, 2005: 53). The cultural success of *i-mode* can be traced back to the 'pager revolution' that preceded the uptake of the mobile phone in Japan. Because such a rich culture of text messaging was established by the youth of Japan during the era of the pager, these habits were transferred to *i-mode* and the similar services established by NTT DoCoMo's competitors that allowed the exchange of Internet email and web browsing. The use of *i-mode* for web browsing is growing, but sending and receiving emails is currently the most popular type of content used on the *i-mode* platform (Kohiyama, 2005: 68).

It could almost be said that *i-mode*¹ is the Internet in Japan. Unlike in other countries, many Japanese internet users had their first 'online' experience through a mobile phone rather than through a personal computer (Matsuda, 2005: 33). The low rate of growth for computer based Internet services has been attributed to slow connections, high costs, and low penetration of PCs (Matsuda, 2005: 33). Paul Green, Technical Content Manager at Ericsson Australia, has suggested that greater demands on space in Japan, where the population density is so great, has created an environment where a family PC isn't necessarily that practical, and a pocket-sized mobile phone is a more practical tool for accessing the Internet (2006, interview with the author). Whatever the reason for it, *i-mode* has driven the growth of Internet in Japan. Before the service was introduced in 1999, Internet penetration stood at 21.4 percent; by the end of 2001 it had doubled to 44.0 percent (Matsuda, 2005: 33).

According to Mari Matsugna, a developer for the *i-mode* service, the service was based on the concept of a 'regular telephone' (Matsuda, 2005: 33). In other words, a very simple approach was taken to presenting the Internet to users, and the impact that this has had is that many users who might be described as having low technical literacy can competently use the Internet through *i-mode*. Dentsu Soken has found that those with high technical literacy are more likely to use a PC to access the Internet, whereas those with low technical literacy are more likely to use a mobile phone. Soken's report concludes that this latter group

¹ Each of the three major networks, NTT DoCoMo, KDDI and Vodafone offer mobile Internet services. Due to its market dominance, the term iMode will be used from now on to refer to any Internet-based mobile media service in Japan.

will 'lead the evolution of the Web phone world' (2000, cited in Matsuda, 2005:33).

Current mobile media use in Japan

The way in which Japanese mobile subscribers use *i-mode* is characterised by email exchange, and the use of the web browser to download ring tones and wallpapers, which are used for the creation of personal identity. As is typified by the work of Kenichi Fujimoto (2005), personal identity is important in Japan, and particularly in youth culture. The right ring tone can express a person's personality, and is a reason why ring tone downloads are one of the most popular uses of *i-mode* (Okada, 2005: 55). The aesthetic appearance of the mobile phone is also important in Japan, and some users attach stickers and colourful straps and accessories to make their handset more individual (Okada, 2005: 59).

Personalisation is a running theme in the Japanese experience of mobile media. Emails sent over the *i-mode* system are a personal form of media where users can create content that is intended only for their friends and family. In the realm of media that can be created by an individual, email is less constraining than a webpage or blog, where information can be obtained by people who are not known to the creator, therefore usually constraining the creator in what they might share on such a public space.

Ring tones and wallpapers can be seen as a continuation of the theme of personalisation. While a ring tone might simply be a recording of a song that is popular in the charts at the moment, attached to a user's mobile phone it becomes an expression of their personality. Tomoyuki Okada argues that the ring tone on a mobile phone should have become redundant over time:

In a household or an office the telephone rings in order to notify someone in the area to pick it up. However, since the [mobile phone] is almost always attached to an individual, it has only to notify the owner. No sound is necessary if the owner can catch the signal by the vibrations in "manner mode" (silent mode). By this logic, the [ring tone] function should eventually become obsolete. Instead, the [ring tone] function has steadily expanded: devices that could at first only play monophonic sounds can now play three-chord and four-chord melodies (Okada, 2005: 55).

Instead ring tones have become increasingly popular and in 2002, revenues from the royalties paid to artists for ring tones were seven billion yen² (Okada, 2005: 54). The need for having a personal ring tone is related to the concept of 'playing one's preferred music outdoors; Gary Grumpier identifies this concept as the creation of an acoustic environment around oneself or the formation of one's "turf" with an "acoustic wall" (Gumpert, cited in Okada, 2005: 55).

² This equates to approximately \$80 million Australian dollars.

Another concept related to personalisation that permeates Japanese mobile media and the way it is used, is the confined spaces of Japan. Because of the high population density which forces people to live in small spaces, it is more difficult for an individual to own a pet for instance, than it would be in other parts of the world, so the mobile phone becomes a substitute for this (Fujimoto, 2005: 87). Kenichi Fujimoto argues that to a Japanese user, the mobile phone is more than just a tool:

It is something they are highly motivated to animate and to customize as a dream catcher, a good luck charm, an alter ego, or a pet. I might even call it an idol or a fetish and regard it as an animistic handy object stretching a spiritual barricade around the body (Fujimoto, 2005: 87).

Just like one might share their most intimate experiences with an idol, so the Japanese use their mobile phones to capture their most intimate experiences and relationships, thanks to the built-in digital cameras that are found in many mobile phones at present, and the ability to transmit those images using *i-mode*. Belinda Barnet talks of the mobile phone as 'a device for the production and distribution of memories' (2005) and this sentiment would seem to typify the Japanese use of this particular form of mobile media.

The Japanese concept of *puri-kura* has fuelled the popularity of digital photos and video exchanged via mobile phone. *Puri-kura* was originally the practice among teenage girls of taking snapshots of friends to keep as mementos. These snapshots were printed on stickers which could be kept in their diaries or special mini-albums. (Okada, 2005: 58) Because mobile phones with in-built digital cameras could store photos of friends and loved ones, and display the images as wallpapers, the mobile phone has come to assume the role that *puri-kura* stickers once played, making the mobile phone very much a device for the distribution of mementos in Japan (Okada, 2005: 59). This ability to create and transmit digital images instantly from almost any location would seem to be one of the unique aspects of the mobile phone as a media device, when so much of its functionality is borrowed from the Internet and other earlier media devices.

The mobile phone is possibly the first media device that is required to connect to a network that can calculate the mobile phone's position down to a fine degree. This technology is in place because it is a necessary part of the calculations made by the cellular network to share the limited amount of radio frequency amongst so many users. It also provides an opportunity for media content to be created that utilises this technology found in every mobile phone. Media content that takes advantage of this is known as a location based service.

One of Japan's most popular location-based services is *ImaHima*, which is a variation on Internet-based personals services that are used to find friendship or

romance. *ImaHima*'s advantage over these services is that it is GPS aware (Rheingold, 2002: 165). A mobile phone user who has *ImaHima* will have a buddy list that is similar to the type used in Internet-based instant messaging programs such as *MSN Messenger*. From there a user can see where the people on his or her buddy list are currently located, and look to meet up with them if they are nearby (Rheingold 2002, 166).

In its other guise, *ImaHima* allows strangers to meet. Upon joining, a new user will create a profile listing his or her interests, which then allows other users in the same area to find the user and attempt to initiate contact (Rheingold 2002, 166). The problem of stalking was a consideration when designing the service, and according to *ImaHima* founder, Neeraj Jhanji, 'If you request permission and the other person denies your request, the system blocks you from communicating with that person again' (cited in Rheingold, 2002: 166).

The concern over privacy has dogged the use of location-based services in Japan, and at one point the media was writing extensively about concerns over privacy that the use of the services would create (Kohiyama, 2005: 69). As a result, surveillance-oriented uses of the technology, such as mobile phone applications that notify companies where their sales reps or service technicians are currently located, are unpopular in the public eye (Kohiyama, 2005: 69). Ultimately however, the concern over privacy has been seen as one for the individual mobile phone user, and in some cases surveillance services can be

extremely useful, like services that locate the elderly if they get lost or injure themselves (Kohiyama, 2005: 69).

On the other hand, users are completely comfortable with using location sensitive information services that help them access local information based on positional data (Kohiyama, 2005: 70). For instance the 'i-motion' service allows 3G users to find information relevant to the neighbourhood or building they are in at the time (Rheingold, 2002: 11). Other services have been developed that provide information on shopping, restaurants, history, culture and environmental data for a particular area. Paul Green believes that location based-services will be the future of the mobile phone as a media device because they utilise the capabilities of the phone better than other types of content such as video that have been transferred to the mobile phone from other mediums (interview with the author, 2006).

Future developments in mobile media coming to Japan

Of all the content to find its way onto the mobile phone from other mediums, mobile television is creating the most excitement at the moment, with a deal recently signed between NTT DoCoMo and Japanese national television broadcaster Nippon Television to develop the necessary content and technology for a mobile television service (United Press International, 2006). The technology is seen as a natural fit for Japanese mobile users, with many having to make

long train trips to get to and from work each day (United Press International, 2006).

Despite Japan's well established affinity for mobile media, there are doubts about the success of mobile television worldwide. Craig Matthias believes that the grainy images, slow frame rates and the variable nature of the radio channel means that mobile television is doomed to failure (Glasner, 2005). Robert Frieden, Cable Pioneers chair and a professor at Pennsylvania State University believes there are two schools of thought on mobile television, "one school is bring it on and the other is I just want a phone" (United Press International, 2006a). Considering that NTT DoCoMo and Nippon TV have invested a total of \$84 million³ to ensure that mobile television is successful in Japan, it could just be that their apparent faith in the technology will be justified (United Press International, 2006).

Robert Thompson, a professor from Syracuse University, believes that the introduction of mobile television will ultimately create a new form of media where programming will resemble the module format of drive time radio (United Press International, 2006). Thompson agrees with other experts in their assessment that mobile television will suffer from lack of picture and audio quality, but believes that 'there will be a huge explosion where television is breaking out of the living room into portability [when] there is already so much appetite and demand to watch TV outside the living room' (United Press International, 2006a).

³ Figure is in American dollars. This equates to approximately \$110 million Australian dollars.

Television programs that have been designed especially for mobile television have already been named 'mobisodes'. Generally they are only a couple of minutes in length, and in the US, popular shows such as *Lost* and *24* have been 'spun-off' into mobisodes with different cast to their network television cousins but the same plot lines, designed to give mobile phone users who are fans of the show a 'quick fix' between episodes of the main show (Fitchard, 2006). The Fox Network is planning a completely original line-up of mobisodes, and the CBS network is planning on premiering a mobisode soap opera (Fitchard, 2006).

So whether the school of 'bring it on' or the school of 'I just want a phone' prevails in the argument over mobile television being the emerging form of mobile media content is too early to tell. Robert Frieden believes that the key to the success of mobile television will be 'in creating an efficient method to compress video and technology that could withstand playing the format' (United Press International, 2006a). Given that people in Japan are likely to spend half an hour on the train (United Press International, 2006), watching a mobisode could make the journey more tolerable for those with mobile phones, although the most popular forms of mobile media in the Japanese experience have been those that allow personalisation, and it is difficult to see where this comes into mobile television.

Despite the ascendancy of the vision (and fears) of a Japoneseque mobile future for the world, there are reasons to question an eventual global technology upgrade to the latest and greatest Japanese vision (Ito, 2005: 3).

The 'Japanese vision' of mobile telephony has been followed at least since the success of *i-mode* became apparent. The success of NTT DoCoMo's mobile Internet service cannot be questioned for out of 49 million subscribers on NTT's cellular network, 42 million are subscribed to *i-mode* services (*i-mode* Business Strategy, 2005). However, the question that remains is whether *i-mode* and associated mobile media services in Japan have been successful because of the unique Japanese culture of communication, or because Japanese network operators have been better at doing business than their counterparts in other parts of the world.

NTT DoCoMo is optimistic that their business model is a large part of the reason for their success, and consequently they have licensed *i-mode* to a network operator in each of the major markets for mobile phone use (NTT DoCoMo, 2006: 39). The terms of their agreement with other network operators has been seen as restrictive, with the foreign network operators required to sign up 1 million customers within three years, and DoCoMo must sign off on everything involved in the *i-mode* partnership, from new content providers to advertising for the service (Leyden, 2005). Considering that there were 5.8 million *i-mode*

subscribers outside of Japan in April 2005, NTT DoCoMo must be disappointed at the results from exporting the service (*i-mode Business Strategy*, 2005).

Mizuko Ito's argument is that people use their mobile phones differently in each culture, making it impossible to apply the lessons learned from the way mobile phones are used in Japan on a worldwide basis (2005, 3). She cites Hsain Ilahaine, whose paper, *Mobile Phones, Globalization, and Productivity in Morocco* details how the Moroccan urban poor who have turned to freelance service work as the means to make a living, use their mobile phones to organise their subsequently networked working life, which can result in income increases of over 200 percent (2005:3). *Ito's* argument is that in the Moroccan context, mobile phones are as indispensable as they are to Japanese teenagers, but are used in an entirely different way, for entirely different purposes (2005: 3).

Similarly, James E. Katz and Mark Aakhus's edited collection of case studies, *Perpetual Contact*, demonstrates that from Finland to Bulgaria, the development of mobile phone culture has been unique in each society.

Katz and Aakhus's work predates the international expansion of *i-mode* and the interest in mobile media services and the culture that surrounds them. The strategy of *Personal, Portable, Pedestrian* (of which *Mizuko Ito* is an editor) is to examine the social and cultural diversity in mobile media and mobile phone use 'through a multifaceted and sustained engagement with one national context', i.e. Japan (Ito, 2005: 4). In the next chapter I will turn my attention to Australia, which

has a very high incidence of mobile phone use. There are over 12 million subscribers to mobile telephony services in Australia, out of a population of 20 million. In 2005, *i-mode* was introduced to Australia and joined a long list of mobile media services that have failed in the country. The chapter will look at the peculiar way mobile culture in Australia has developed, and the role that mobile based media services have played in the evolution of Australian mobile culture.

The Australian Experience of Mobile Media

Australians rank amongst the most enthusiastic users of mobile phones in the world. Despite its small population and therefore small marketplace, mobile phone penetration in Australia has been greater per capita than in Europe, and is now at about 80 percent of the population of 20 million, meaning that there are about 16 million handsets being used in the country (Sinclair, 2005: 17).

Australians also have more mobile phones than fixed line phones (Goggin, 2005a). Australia's reputation for mobile phone use has meant that network operators have been keen to introduce users to the same technologies prevalent in the larger markets of Europe and Asia.

This thesis has already established that mobile media services such as *i-mode*, WAP (Wireless Application Protocol) and MMS (Multimedia Messaging Service) are at the cutting edge of mobile phone technology today. However in Australia these have received a muted response from users who have shown that they prefer to use their mobile phone to have a voice conversation. The only form of mobile media that has been successfully adopted by Australians has been SMS (Short Message Service).

Services that have promised to bring an Internet like experience to the mobile phone, or that have tried to go beyond the type of functionality that SMS offers,

have all failed in Australia. Notable amongst these failures is *i-mode*, which was established in the previous chapter as the most successful mobile media service in Japan. In Australia, its take-up has been sluggish and it appears as though it will be shutdown in the very near future (Jenkins, 2006: 29).

This chapter will follow the history of the mobile phone in Australia, from its beginnings as a ‘yuppie’ toy, to its status today as an almost universal communication tool, as the statistics mentioned above would suggest that it has become. The prominence of voice-based communication will be addressed, as well as the reasons why mobile media has failed. Australian mobile phone culture is still evolving, and the increased take-up of third generation (3G) services is expected to alter the way Australians use their mobile phones. With this in mind, the impact that mobile media has had on the take-up of mobile phones in Australian culture will be assessed.

Through this historically based analysis of the impact of the mobile phone in Australia, I hope to bring increased knowledge to a subject that has been mostly overlooked in the scholarly study of Australian culture and history. Michael Arnold and Matthew Klugman have produced a literature review entitled *Mobile Phone Uptake* that bemoans the lack of published research on the use of mobile phones in Australia (2003, 16). Gerard Goggin has produced a succinct history of the mobile phone in Australia (2005) and points out that ‘there has been a relative lack of social and cultural research on mobiles’ (Goggin, 2005:1). The situation

prompted the Australian Mobile Telecommunications Association to release a discussion paper proposing opportunities for research into the impact of the mobile phone in Australia (2004). A nation that has more active mobile phone subscriptions than traditional 'fixed-line' telephones surely makes an interesting subject for research into mobile phone culture, and this overview will hopefully inspire others to tread down the same path.

Historical and current use of mobile media in Australia

The path to near universal mobile telephony in Australia began with 'yuppies' – wealthy types who could afford to pay \$4250 for a handset that worked on Telecom Australia's (now Telstra) original analogue cellular network (Goggin, 2005: 3). These were the same people who could afford handsets on Australia's original public automatic mobile phone system (PAMTS), which was launched in 1981 (Goggin, 2005: 3). The analogue network would prove to have more universal appeal than its predecessor, and as Gerard Goggin recounts, a new group of users would soon be taking up analogue services;

In Australia the cellular mobile, as opposed to its predecessors in Australia, quite soon moved beyond the circle of wealthy business users, executives, and the reviled figure of the merchant bankers, to be avidly consumed by tradespeople.

The mobile phone became an indispensable tool for these people. As Beaton and Wajcman recount;

“The painter could order supplies and schedule new jobs from a ladder. There was a great opportunity to combine tasks, such as travel and communication. They were a boon to the sales force in the field. Builders for example were able to schedule the activities of their subcontractors” (2004: 9). Considering that these users would have previously used a wired telephone to conduct their business, their move to the wireless world of mobile phones ingrained voice communication as the preferred mode of communication in Australian ‘mobile culture’. Consequently, these people loved voicemail, which enabled them to respond to telephone calls in their own time (Beaton and Wajcman, 2004: 10).

Their preference for voice communication set the scene for the methods that cellular network operators in Australia would employ to attract new users to mobile telephony. For example, in 1998 Optus introduced ‘yes’ *Time*, which enabled users on the Optus network to call each other between the hours of 8pm and midnight for a period of 20 minutes for free. It was designed to attract new customers to Optus’s products, create loyalty to the brand and increase off-peak usage on the network (Favero, 1999). According to Optus, the ‘yes’ *Time* offer altered the way customers used their mobile phones, with increased usage on

their network in off-peak hours with customers looking to utilise the free calls available.

Offers like *'yes' Time*, which were also offered by Telstra and Vodafone can be seen as stymieing the adoption of mobile media services by Australian mobile users. In countries like the Philippines, users turned to mobile media services such as SMS because they were significantly cheaper than using voice calls for communication (Rheingold, 2002: 158). In Australia, *'yes' Time* and the similar services offered by the other networks have created a culture where people see it as cheaper and easier to make a voice call than send a text message. A 22 year old female was interviewed about whether she preferred to call or send SMS to her friends; "I call my friends these days, because by the time we have worked anything out we have both sent five or six messages. We could have worked it out in one call faster and cheaper" (Herald Sun, 2004).

SMS had existed since the digital, Global System for Mobiles (GSM) based networks of Telstra, Optus and Vodafone were launched in 1993 (Goggin, 2005: 4). However, it was not a useful form of communication or media until the networks agreed to interchange messages, which they did in April 2001 (Arnold and Klugman, 2003: 52). Australians quickly took to SMS, and it has become the preferred means of communication for youth, with a Telstra survey showing that most users are in the 16 to 24 age group (Wallace, 2003: 8).

Paul Green believes that Australians just want to use their mobile phones to have a conversation, and that any form of mobile media that doesn't address this human need to converse is going to have a limited lifespan in Australia (2006, interview with the author). This rationale could explain the popularity of SMS in Australia, where users send more than 10 million text messages a day (Royall, 2003: 3). Conversation is the primary application of SMS, with most users in Australia 'texting' their loved ones, close friends and colleagues on a regular basis (Arnold and Klugman, 2003: 53).

The rise of SMS has seen it become a new way for finding love amongst Australian mobile users. A Virgin Mobile poll conducted in 2003 found that 50 percent of users regularly flirted using SMS, and 53 percent of singles had used SMS to ask someone out on a date (Wallace, 2003: 8). Users enjoy the freedom that SMS brings, because they can be cheeky with other people and the text-based nature of SMS lets them get away with it (Wallace, 2003: 8). A 34 year old user said that with SMS, "You're not showing your real self and you can get away with it because it's just fun and games. If they confront you the next day, you can say, 'Well that was just an SMS, it's not serious'," (Wallace, 2003: 8).

Aside from being used to get a date, SMS has been commoditized, and an industry has emerged to provide ring tones, games, advertising, and information alerts (Goggin, 2005a). SMS has also developed into an interactive medium that allows users to contribute to some of Australia's most popular television

programs such as *Big Brother* and *Australian Idol*. Watchers of these shows are encouraged to use the SMS functionality on their mobile phones to make decisions on the outcome of the show. In the case of *Big Brother*, they must decide who to evict from the house and with *Australian Idol*, they must vote for their favourite contestant, in the hope that they will make it through to the next round.

This is an expanding area for the use of SMS, and Steve Watson from Legion Interactive, which provides many of the interactive SMS services on television, believes that viewers enjoy the opportunity to sit at home and play along with contestants (Watson, 2005). Watson believes that the popularity of SMS in this context will create opportunities for more mobile content to be offered that is associated with these popular television programs (Watson, 2005).

The future of mobile media in Australia will see strong growth to WAP portals offering content downloads, according to Watson (Watson, 2005). Predicting the future growth of WAP based services is ironic, when WAP was introduced before the take-up of SMS in Australia but failed to capture the attention of users and has largely been forgotten about until now.

Optus launched their WAP service, known originally as *Networker* in 1999 and among its initial content was the ability to access share prices, breaking news, sports news, horoscopes and weather. No doubt having expectations from the

way Japanese mobile phone users took up *i-mode*, Optus executives predicted that email access from a mobile phone would be WAP's 'killer application' (Woodhill, 1999). In a press release, Paul O'Sullivan, Managing Director, Mobile at Cable and Wireless Optus claimed that, 'Networker means freedom for people who are on the move and want to stay in touch. Now you can check your email in a taxi, at the airport, by the beach or in the pub' (Woodhill, 1999a). O'Sullivan's assessment did prove correct, with Optus releasing a statement one year later confirming that email was the most popular *Networker* service (Ingram, 2000).

Most of the information surrounding the Optus WAP service comes from press releases aiming to spruik the service, so the information they provide on WAP is difficult to assess when corporate spin is so carefully applied to everything written about the *Networker* service. Nonetheless, these releases from Optus indicate that the most popular uses of WAP was for checking email, obtaining share market information and finding out movie times (Ingram, 2000). Optus also released early location-based services with *Networker*. These weren't as sophisticated as those discussed in the last chapter, they were only able to detect what suburb the user was in, and provide results based on the postcode. (Optus, 2000b). Reading between the lines, Optus must have been disappointed with the response to their WAP service, for they were quite willing to provide actual user data for their successful SMS service (Ingram, 2002) but when it came to WAP the press releases contained meaningless data pointing to a

tripling of sales of the WAP service in the preceding three month period without giving actual figures to illustrate the point (Ingram, 2000).

In 2005, Optus claimed to have one million subscribers to its WAP service, which has now been renamed Zoo (Leyden, 2005: 39). The other cellular networks have launched similar services, but as Citigroup analyst Tim Smeallie says, “WAP was held out as the great white hope for mobile data – and to say take-up has been underwhelming is probably an overstatement (Sainsbury, 2004: 30). Vodafone launched their *Live* service in 2003 and now have 400,000 subscribers (Leyden, 2005: 39), but Telstra has had two failed WAP services that have cost the company \$50 million (Sainsbury, 2004: 30). The most recent of these was *Loop*, which had a strong emphasis on games that were available to download (Manktelow, 2003: 3). Downloadable games are one of the most popular types of mobile media content among Australian users (Mackay and Weidlich, 2005), but the fact that *Loop* was only available on Telstra’s less popular CDMA network, and was dependent on only one handset from one manufacturer (Manktelow, 2003: 3; Sainsbury, 2004: 30) hindered the take-up of the service.

Telstra’s third attempt at establishing a successful mobile media service in Australia involved licensing *i-mode* from NTT DoCoMo for \$10 million, and paying an undisclosed percentage of all content revenues from the services to DoCoMo (Sainsbury, 2004: 30). Telstra held out high hopes for *i-mode*, and was aiming to have 200,000 handsets within the market in 12 months from its launch

(Sainsbury, 2004: 30). Part of Telstra's agreement with DoCoMo was to sign up three million subscribers within three years (Leyden, 2005: 39), and as this looks unlikely, Telstra will not be able to keep its exclusive license to *i-mode*.

Telstra was hoping that the *i-mode* brand that has been so successful in Japan would pique the interest of users in Australia, when many would already be curious about what the *i-mode* service entailed exactly. However industry experts like Paul Green believe that *i-mode* was marketed incorrectly for an Australian audience, as too much was made of it being 'the Internet on your mobile phone'. Green believes that this sent a confusing message to users over what the *i-mode* service actually was. Despite the ubiquitous nature of the Internet in Australia, Green believes that it is not necessarily seen as a good thing by all people, and some people may believe that having the Internet on their mobile phone will only expose them more to some of the 'evils' of the Internet such as spam and viruses (2006, interview with the author).

As well as the perils of being connected to the Internet while on the move, most Australians have ready access to the Internet at home and at work (Hjorth, 2005: 28), and having additional access on a mobile phone that was not ergonomically designed for Internet access with its small screen and numerical keypad, did not prove to be a selling point for *i-mode*. The service's biggest drawcard in Japan, the ability to send and receive email was available in Australia when the Optus

WAP service was introduced (Woodhill, 1999) and was not able to drive significant uptake of mobile media services at that time.

Content was not a factor in the failure of *i-mode*, considering that the service featured 'mobile friendly' versions of some of Australia's most popular websites such as *NineMSN*, *eBay* and Sensis sites such as *Whereis.com* and *Yellowpages.com.au* (Telstra Corporation, 2005). Paul Green is involved with the development of Telstra's 3G WAP portal, *Bigpond Mobile*, which also features content from *NineMSN* and Sensis. Green believes that the take-up of mobile based media content in Australia has been held up because the services on offer have not utilised the properties of the mobile phone fully. Successful content will be services that take advantage of the intimacy and personality present in a mobile phone, and its role as a two-way conversational tool, rather than a one way 'media receiving device' like a television or web browser (Green, 2006: interview with the author).

The future use of mobile media in Australia

Mobile phones are intimate devices, and in this day and age are one of three things that users are likely to carry with them at all times – the other two are wallets and car keys. In this way they have become distinctly personal items, and mobile media that is personalised in its nature is ultimately what users are going to access most frequently on their mobile phones (Green, 2006: interview with

the author). The mobile phone is also a tool for conversation, and in Australia where the device hasn't really evolved beyond this purpose, mobile media that emulates a conversation is also going to capture the attention of users. The most popular form of mobile media in Australia is SMS which obviously allows users to carry on a conversation in text-based form.

Web browsing is a one way media form and is unlikely to become popular with Australian mobile phone users, however mobile based blogging might emerge as an extension of web browsing that is popular in Australia (Green, 2006: interview with the author). Hutchinson's *Three* network is already offering a blogging service in conjunction with Kodak that enables digital photos that are taken on a user's phone to be uploaded to their 'mobile website' for others to view and comment on. Shane Williamson from *Three* sees blogging as the perfect media service for a 3G phone, owing to its role as a personal content distribution system (Williamson, 2005).

Paul Green believes that the future of mobile media in Australia is in location based services because they take advantage of the personalised nature of the mobile phone. Location based services have already been discussed in this chapter, but the introduction of 3G services to Australia has included more advanced technology that makes location based services much more precise in their ability to pinpoint a user (Green, 2006: interview with the author). Sensis have already launched a product called *Whereis Navigator* that provides

navigation maps for any journey in much the same way that in-car GPS navigation systems do at present. The advantage that this application has on a mobile phone is that maps are downloaded in real-time rather than being installed with the system, so they can be updated to reflect changed conditions each time the service is used (Girgis, 2005).

Another compelling reason for Australians to use mobile media in greater numbers may be mobile television services, which are being introduced over Australia's 3G networks, where the greater bandwidth they offer over existing networks makes the delivery of the service more realistic. Mobile television isn't actually new to Australia; Optus launched a service in 2003 which offered CNN and retransmission of ABC and SBS (Graham, 2003). It is unclear how successful this service was.

Since the advent of 3G in Australia, additional mobile television services from Three, Vodafone and Telstra have been launched. Telstra offer news bulletins, while Vodafone offer 'mobisodes' of popular television shows such as *24* and *South Park*. Three offer the most complete mobile television service, with CNN, Cartoon Network, Sky Racing and clips from the ABC's popular music program, *Rage*, available for viewing on a compatible 3G mobile phone. Three also has a strategy of offering content that is popular with free-to-air television viewers in Australia, and a live feed from the *Big Brother* house and live coverage of the

summer's cricket action have been their biggest mobile television drawcards (Lee, 2006:17).

Both of these services offered by Three have proved to be popular, with large numbers of downloads recorded during cricket matches where spectators at the match have been using their mobile phones to download replays of the action (Lee, 2006: 17). Industry insiders call this type of viewing 'snacking', where people download small chunks of content to view, and it is becoming increasingly popular in Australia, with people accessing content on the Internet through their computers, and via their mobile phones. The length of viewing time can be as little as a minute, which is about the duration of a news report, or up to ten minutes in the case of cricket highlights (Lee, 2006:17). The demand for mobile television services in Australia is coming from users who are growing tired of 'network television' where viewing time is dictated to them, and instead prefer to watch their favourite content at a time of their choosing (Lee, 2006: 17).

As Australian mobile phone users take up 3G services in greater numbers, this model of television viewing that is possible with a mobile device may be one of the most utilised forms of mobile media content. With the concurrent trend of Australians buying increasingly large screens to view television and other content on, mobile phones may be used to download full episodes of television programs which will then be 'on-sent' via *Bluetooth*⁴ technology to the LCD screen at home

⁴ Bluetooth is a technology that allows devices such as mobile phones, PDAs and computers to exchange data wirelessly.

for viewing (Green, 2006: interview with the author). In this way, mobile phones will become a conduit for acquiring media to be used on other devices, rather than as a platform for consuming media (Green, 2006: interview with the author).

In this way, mobile phones will become 'wallets' that hold media content for users to utilise on their media centre at home, which in the future will more than likely be a computer that is connected to a large screen for viewing content (Green, 2006: interview with the author). Green believes that video content that is displayed directly onto a mobile phone has a limited future, and that only short clips featuring news or entertainment will be popular (2006: interview with the author). This is despite technology emerging known as DVB-H (digital video broadcasting – handheld) that will allow users to receive digital television on their mobile phones in much the same way as terrestrial television is – through an aerial that will be integrated into the device and will bypass the need to use a 3G network to receive the stream (Tsang, 2006: 6). Paul Green believes that users will never be convinced to watch video content on a mobile device for 30 minutes at a time (2006: interview with the author).

Widespread use of any mobile media services in Australia is still five years away in the opinion of Esther Bailey, New South Wales President of the Australian Interactive Media Industry Association;

If we look at broadband take up as a model we could expect another 5 years or so before we have serious penetration and widespread mobile content usage. Telstra said at Mobile Content World last month that it thought only 6-7% of their customers understood content. Initial findings from the AIMIA survey puts awareness in the general population nearer to 25%, but content consumption type is still fairly limited to info services, ring tones and logos and music, but as the phone evolves into a media device people's usage of it will diversify accordingly (Bailey, 2005).

This thesis has now considered mobile media use in two distinctive cultures, Japan and Australia, and demonstrated that people use their mobile phones in very different ways and for very different reasons. In Japan, the mobile phone is already a media device and Japanese mobile phone users interact with their mobile phones accordingly. In Australia, the mobile phone is still evolving and if experts like Esther Bailey are right, it will be five years before Australians are accessing mobile media content on their mobile phones in a manner resembling the Japanese experience. However, both cultures share many of the same technologies for delivering mobile based media content, and the next chapter will look at the reasons why that experience has been so different across the two cultures, when there is so much common infrastructure. This will paint a picture of the likely future direction of mobile media services in Australia and Japan.

Analysis: A comparison of the cultural impact of mobile media in Japan and Australia.

Numerous innovations in mobile phone technology have originated in Japan and found their way to other parts of the world. The mobile media service *i-mode* is an example of this, and 3G mobile technology is another. When this technology spreads worldwide, users everywhere share the experience of their Japanese counterparts, having access to similar networks and handsets that have the same basic functionality and technology built into them. However, to return to a discussion begun in Chapter Two, people everywhere have come to use mobile phones at different times, and for different reasons, making their patterns and methods of mobile phone usage unique. In Israel, users spend an average of 450 minutes per month talking on their mobile phones, double the time people do in Europe and almost four times the US average (Schejter and Cohen, 2002: 30). In France in 1997, 40% of users surveyed had a mobile phone strictly for private use, while 40% used their mobile phone for a combination of private and professional use (Licoppe and Heurtin, 2002: 94). In the USA, a survey in 1998 found that only 20% of users had given out their mobile phone number to more than ten people (Robbins and Turner, 2002: 82). These snapshots of mobile phone use throughout the world demonstrate the overwhelming role that culture has played in the adoption of mobile phones, when people with the same device can adopt methods of use that are considerably different from each other. The statistics gathered from these demonstrate the disparate nature of mobile phone

use throughout the world.

The situation is no different when comparing the use of the mobile phone in Japan and Australia. The aim of this thesis has been to gauge the role that culture has played in shaping the use of mobile media in Japan, and how the situation has been different in Australia. Despite Australia lagging somewhat behind Japan in its use of mobile media technology, it is clear that culture has played a greater role in shaping the use of the device than technology itself. In order to show this, the adoption of current and future technologies such as text messaging, Internet use, location based services and mobile television will be the focus of this comparison and through it, it will be determined just how much culture has influenced the way mobile media is used in Australia and Japan.

Comparing the use of mobile media in Japan and Australia might seem unfair, because on face value, they seem to have little in common as far as their use of mobile phones go. As a refresher to what has been already discussed earlier in this thesis, Japan is the world's largest mobile market, considering that NTT DoCoMo has 48 million users, KDDI has 19 million users and Vodafone Japan has slightly less than KDDI (Hjorth, 2006: 9). The total number of Australian users is approximately 12 million, less than the number of subscribers to Vodafone, Japan's smallest cellular network operator (Goggin, 2006: 4). However both Japan and Australia have fascinating mobile cultures, considering that Japanese are such prolific users of mobile media, and more mobile phones

exist in Australia than fixed line phones (Goggin, 2006: 4).

Despite apparent initial differences in their use of mobile phones, Japanese and Australian users share the experience of using a mobile phone handset with the same basic functionality, which makes this comparison possible. Their cellular networks function in the same way, and their handsets are made by the same manufacturers, and are very similar in their design and functionality. Yet because Japanese users were introduced to mobile communication through the pager at an earlier stage than Australian users, their use of the device is more advanced and more dependent on text communication. By comparing the usage habits of youth in both countries, this difference can be seen. Teenagers tend to look for the cheapest and most efficient way to communicate, but the different 'mobile cultures' that have emerged make this process very different. A Japanese youth might use a mobile phone to send his or her friends an email to arrange a social outing. In the same situation, an Australian mobile phone user is more likely to make a phone call, taking advantage of cheap or free off-peak rates or 'capped' plans that limit the cost of voice communication for average mobile phone users. This is despite the use of SMS being as prevalent in Australia as mobile email use is in Japan; Australia's 'mobile culture' has developed in such a way that voice is the preferred method of mobile communication.

On the other hand, Australians have taken up computer based Internet services more quickly than the Japanese have. Australia and Japan both have similar

Internet penetration rates, yet considering the popularity of *i-mode* in Japan, users would be less likely to access the Internet from a PC. This difference has made it more difficult to convince Australians to use mobile media services, because their preference is to access content from their computers.

Differences in the culture surrounding the use of mobile media in Japan and Australia can probably be best observed in the use of mobile Internet services. Japanese and Australian users have found themselves able to access these types of services at much the same time. When Japanese mobile network operators introduced Internet services on mobile phones in the late 1990s, their Australian counterparts were doing the same. Developments in mobile media are still progressing at much the same pace in both countries, despite the more fervent use by Japanese users of the content on offer. However a unique opportunity arose for conducting a comparative study of mobile media in Australia and Japan when *i-mode* was introduced in Australia, and subsequently failed when it had been so successful in its native Japan.

The *i-mode* service has the same functionality in Japan and Australia, as NTT DoCoMo maintain strict control over how their product operates outside of Japan. The only difference in the service is the actual content on offer and the cultural context it operates in. Considering that an almost identical service could be greeted so differently in Japan and Australia provides many clues about the nature of mobile media in these two countries, and reaffirms the belief of this

thesis that how well any type of mobile media content integrates into the existing 'mobile culture' is the biggest determiner of its subsequent success or failure.

There is no doubt that 'mobile cultures' have formed around the technology that is on offer and the way in which it has been adopted. Japan has always been an innovator in the realm of mobile phone technology, while Australia has been a follower, and this difference is apparent in the methods that have been employed to introduce new mobile technology in both countries. NTT DoCoMo's 3G network is proprietary and was implemented before standards for 3G networks were devised. NTT's original digital network did not follow worldwide standards either. Australia has always followed standards for its mobile phone networks. The first cellular network in Australia was based on the North American AMPS standard, while the digital networks that followed were based on the GSM standard invented in Europe and used throughout most of the world (Goggin, 2006: 3,4). Australia's 3G networks are based on the WCDMA standard that is being used to upgrade 2.5G GSM/GPRS networks to 3G.

These different approaches to the introduction of mobile phone technology have created consequences that have precipitated the development of mobile media services in Japan and Australia. One of the principal reasons why Internet services like *i-mode* were created for the mobile phone in Japan was because of the incompatibility between the various proprietary networks for text messaging. Considering that the network operators had to compete with the existing

popularity of pagers, it was essential to develop a text messaging system that could interface between the different networks, and *i-mode* was the result (Kohiyama, 2005: 69). Users then graduated from Internet email usage on their mobile to using other services (Kohiyama, 2005: 68). The introduction of text messaging in Australia was straightforward; all the network operators used GSM, and it was simply a matter of them agreeing to allow the interchange of messages between networks (Arnold and Klugman, 2003: 52).

If Australians had been forced to come to terms with sending email from a device that was designed for making telephone calls, then perhaps they would have moved onto other mobile media services more readily than has been the case. In Japan, users with access to an Internet enabled personal computer and a mobile phone, have shown a preference for using the mobile phone to send emails (Miyata et al, 2005:149); quite clearly the 'webphone' experience has been ingrained into them. Despite the computer being better designed for email with its full-sized, alphanumeric keyboard, old habits die hard.

Old habits can also be used to explain why the Japanese have accepted mobile media services more readily than mobile phone users in Australia. The Japanese made the transition to the mobile phone from the pager, so they were already accustomed to communicating using text messages, and receiving media content on a small display. In Australia there is no evidence of widespread pager use, so most mobile phone users would have had no experience of using a portable

device for text messaging prior to owning their first mobile phone.

Japanese youth adopted mobile communications much sooner than their Australian counterparts did, and this was because their adoption of the pager created a unique dynamic within the Japanese mobile communications market.

This youth-driven creation of a new communications culture was a rare occurrence, even when viewed internationally, and has left a lasting legacy in the history of communications (Kohiyama, 2005: 64).

Business users were the first to adopt mobile phones in Japan (Kohiyama, 2005: 63), and the situation was the same in Australia (Goggin, 2006: 6). However the intense competition from the pager in Japan forced the mobile network operators to lower the prices of handsets and subscription plans in order to compete (Kohiyama, 2005: 64). The lower costs involved in owning a mobile phone caused Japanese youth to switch over from pagers, and by 1995 most were using mobile phones as their preferred communication tool (Kohiyama, 2005: 64).

In Australia, the mobile phone's only serious competition was the fixed-line telephone. Gerard Goggin found that by the 1980s the fixed-line telephone had become unremarkable and very few homes in Australia could function properly without one (2006: 7). The prevalence of the fixed-line telephone, coupled with

the lack of any widespread use of mobile communications, meant that when the mobile phone was introduced, Australians had to be convinced that it was necessary to communicate wirelessly (Goggin, 2006: 8), rather than simply be convinced that the mobile phone was the best product for this purpose.

Tradespeople and salespeople who didn't have to work out of an office, were the first to shift the mobile phone away from the exclusive domain of the 'yuppie' in Australia (Goggin, 2006: 6; Beaton and Wajcman, 2004: 9). Youth in Australia were soon recognised as the highest growth segment for the local mobile phone market, and were aggressively targeted through advertising (Goggin, 2006: 9). While *i-mode* was used to lure young users in Japan (Okada, 2005: 53), network operators in Australia used free calls during off-peak hours to attract young users. There is no direct evidence for this, but a close reading of press releases relating to offers such as 'yes' Time (Optus, 1999) will show that they are squarely aimed at a youth audience.

Text messaging has been well received in Australia, and is now used extensively (Mackay and Weidlich, 2005). But the unique circumstances surrounding the pager in Japan has meant that the mobile phone was effectively adopted as a device for text communication, and even the design of Japanese phones is testament to this, considering that they have larger screens than models made for use in other parts of the world (Miyata et al, 2005: 145). In Australia, the mobile phone has superseded the fixed-line phone (Goggin, 2006:4) and as such

its main mode of communication is via voice (Arnold and Klugman, 2003: 5). The consequence of this heritage for mobile media services is that in Japan they are an expected part of mobile communication, whereas in Australia they are an accessory to the basic experience.

Despite the unique occurrence of 'pager culture' in Japan, it is the use of the mobile phone as the primary device for accessing the Internet that has caused Japanese mobile culture to develop in a way that is unique when compared to the rest of the world. Australia and Japan actually have very similar rates of Internet penetration, with the Internet now reaching 67.2% of users in Japan and 68.4% of users in Australia (Internet World Stats, 2006). However in Japan, users express a preference for using the Internet on their mobile phones, even when PC based Internet connections are available, with those surveyed finding the experience of using the Internet on a mobile phone more social than using it on a computer (Matsuda, 2005: 36). Considering this, and also that NTT DoCoMo's *i-mode* is Japan's most popular Internet Service Provider (Matsuda, 2005: 33), it would seem that most Japanese are using their mobile phones to accomplish tasks that Australians are more likely to do on a personal computer with an Internet connection.

There are a number of conclusions that can be drawn from the Japanese preference for using the Internet on a mobile phone. The first is that it is simply a continuation of the 'pager phenomenon' that developed, where an entire group

embraced text based communication as their preferred medium to use, and as the technology has changed they have continued the process. While the obvious outcome of the 'pager phenomenon' is that Japanese users have had a much longer period than Australian users to become accustomed to viewing and creating media on a pocket-sized device, the less obvious outcome is that this practice has become more accepted in society. While the use of SMS has become incredibly prevalent in Australia, in some situations its use is considered unacceptable. In situations like asking someone out on a date, there is still debate in Australia over whether SMS is an appropriate medium to use (Wallace, 2003: 8). But in Japan, with *i-mode* applications like *ImaHima* that actively encourage mobile phone users to find love through the use of mobile media, there is a greater sensibility towards its use in Japanese 'mobile culture'.

Considering that Australians are less accepting of SMS use in certain situations than their Japanese counterparts, this sentiment might extend to mobile Internet, and explain why *i-mode* and the Internet-like mobile media services that have come before it have failed to capture the public imagination. In terms of content alone, *i-mode* should have succeeded, seeing as users were being offered the same content through the *i-mode* service that was popular amongst users of PC based Internet services. Based on figures obtained from Nielsen Net Ratings, the most popular websites used by Australians come from Microsoft, Yahoo, Google, Telstra and eBay (AC Nielsen, 2006). This more or less mirrors the content line-up that *i-mode* was launched with in Australia, with all the aforementioned

content providers launching *i-mode*-ready versions of their most popular websites.

People who are involved in the mobile phone industry in Australia like Esther Bailey believe that it will be five years before mobile media services achieve a significant penetration of mobile phone users, putting the Australian experience of mobile media a long way behind Japan. This can be attributed to the delay by Australian network operators to deploy 3G services, which has meant that the technology available in Australia is less advanced than what is found in Japan. However, in areas where the technology available is on a par, it can be seen that it is a distinctly Australian 'mobile culture' that has dictated the way mobile media has been received, and has little to do with differences in technology available.

Australian mobile phone users have had the ability to send and receive email on their handsets for many years. It was the case when Optus launched their *Networker* service in 1999, and was still the case with *i-mode*, which offered access to *Hotmail*, *Yahoo Mail* and Telstra's *Bigpond Mail* as part of its standard service. Email access through these services has not been successful, however other portable devices for accessing email, such as *Blackberry*, have proven to be popular amongst Australian users (Green, 2006: interview with author). The Blackberry is a mobile phone, but is purpose built for the process of sending and receiving email, considering that it features a QWERTY keyboard (Research In Motion, 2005). The popularity of the device in Australia would suggest that while

the ability to send and receive email away from the computer is an attractive proposition, Australians don't see it as part of the experience of using a mobile phone. While the technology exists to make the process possible, Australian 'mobile culture' has very much been grounded in voice communication. Consequently, users are reticent towards mobile media services like email that extend the mobile phone beyond a device for quick, personal communication and into the realm of a computer.

As Paul Green says, Australians want to use their mobile phones to have a conversation, and for mobile media services to be used prolifically in Australia, they must mimic that process (2006: interview with the author). Considering the overwhelming success of SMS in Australia, with more than 10 million messages sent per day (Royall, 2003: 3), it would seem to be a poignant observation. The exchange of 160 character text messages replicates the immediacy and brevity of a voice conversation, whereas an email allows a user to be more expansive, and so becomes less conversational.

Australian mobile phone users treat their handsets as more functional devices than their Japanese counterparts. In Japan, many users covet their mobile phones, downloading ring tones and wallpapers to personalise them, and adorning them with stickers, specially chosen carry straps and cases. This type of behaviour exists in Australia, particularly with ring tone and wallpaper downloads (Mackay and Weidlich, 2005) but it is less prevalent than in Japan.

This pattern extends to the direction that mobile media is taking in Australia, with applications tending to be more functional than personal.

Two of the most popular mobile media applications found on mobile phones in Australia are the Sensis and YourTime suites of services. Sensis are the producers of Australia's telephone directories, and have developed a WAP interface to facilitate the searching of these resources (Telstra Corporation, 2006). YourTime offers guides to restaurants, movies, concerts, television and horoscopes (HWW, 2005). So while a service like YourTime might promote fun by giving users the information needed to plan a night out for instance, the service has a functional nature, and there is no real entertainment value in using the YourTime service.

Japanese mobile media places more of an emphasis on fun. During video calls made in Japan, the user can choose to replace his or her own image with an avatar. The avatar is an interactive animated character, and the user can control its expressions and movements using the keypad on their mobile phone (NTT DoCoMo, 2006a). *Macromedia Flash*, the application that has been so popular in creating interactive Internet sites, is part of the *i-mode* platform in Japan, allowing mobile phones to feature interactive and animated content (NTT DoCoMo, 2006a). *Flash* could be implemented in a fun or functional manner, however the *i-mode* website chooses to highlight *Flash's* potential to make content more 'expressive', suggesting that a sense of fun is important to Japanese users of

mobile media.

There is a feeling that Japanese users expect to be entertained by their mobile phones, in a way that is not seen amongst Australian users. Considering the large sums of money that are being invested to develop mobile television in Japan, the expectation from those behind the development is that users will engage with their mobile phones over a long period. Ideally for these developers, a half hour trip spent on Japan's subway system will be spent viewing soap operas or comedies on a handset.

This is very different to how content developers see usage patterns developing amongst Australian mobile phone users. For these users, it is all about 'snacking', or being provided with brief clips that entertain but only require a short attention span (Wilson, 2005). Jennifer Wilson from HWW believes that bloopers, outtakes and deleted scenes from films and television shows will make fantastic mobile content for Australian users (2005). These clips will supplement the main programs that are available on other mediums.

Australian users, who have the space for large homes containing plasma screens for viewing television and desktop computers for browsing the Internet are always going to prefer to use these devices than a mobile phone handset that was designed for making phone calls and is now being crammed with extra functionality to make it an all encompassing media device. The goal for content

developers should be to develop content that makes use of the unique properties of the mobile phone and therefore can't be accessed through a home computer or television.

The comparison between Japanese mobile phone users and their Australian counterparts, and the way in which they use mobile media shows that culture has a greater influence over the way the device is used than the technology that is available. Australia has now more or less caught up to Japan in terms of mobile phone technology, with 3G services now being widely available and applications like location based services and mobile television being developed in both countries at the present. While it might take several years for Australians to adopt 3G services in numbers that will make its penetration rate similar to Japan's, it is clear that mobile media will take a different path in Australia.

Japan has been accustomed to mobile media for so long, and its confined spaces make people more accepting of accessing media on a small device, that the mobile phone may very well become the 'mobile hearth' that Paul Levinson talks about. If mobile television takes off, then the majority of media content that a Japanese user is likely to want will be available through a mobile phone. At that point it may become a truly convergent media device in Japan – capable of creating, sending and receiving almost any type of media content imaginable.

In Australia, the mobile phone is more likely to become an intermediary between

different devices than a 'mobile hearth'(Green, 2006: interview with the author).

The mobile phone will collect media that can then be outputted onto a more suitable device for viewing that particular type of media. When this isn't possible, it will be used to access the media, but always in a functional way. This may involve viewing a replay of the action at the cricket or football, or bidding on eBay auction lots. But Australians will always turn to their computers or television screens when possible, and so the mobile phone will only act as a substitute for this experience.

The way in which mobile phones are used in Australia and Japan has been quite different up until this point, and will continue to be so in the future. No matter what sort of technology is developed in Japan, and no matter how popular it proves to be over there, Australians have come to use mobile phones in different ways and for different reasons than their Japanese counterparts. They will treat any new technology in the same way, and find their own reasons for using it.

Conclusion

The real test of time for 3G will be when an older person says to a younger person "I remember when mobile phones could only do voice calls" and the younger person responds "What's a mobile phone?"
(Williamson, 2005)

The future for the mobile phone is that the distinctions that set it apart from the personal digital assistant (PDA) and the MP3 player will become blurred, and a 'super device' that has the functionality of all three will emerge. That day is drawing nearer, considering that a new mobile phone bought today would come with a built in camera capable of recording still images and video, an MP3 player and the ability to exchange data with a computer⁵. This is in addition to all the other functionality found in a mobile phone today that makes it more than just a phone. If that phone was connected to a 3G network, a user would have a broadcast centre in their pocket – capable of sending video, audio, text and graphics at high speeds to as many or as few people as they deemed necessary.

The possibilities would have Howard Rheingold salivating. His concept of 'swarming', where users bypassed conventional media outlets using text messaging to broadcast their news, would become a multimedia extravaganza in 2006, with the addition of video and audio to add colour and poignancy to the

⁵ This refers to most 2.5G phones made by manufacturers such as Nokia, Sony Ericsson and Motorola which are sold by the major vendors – Telstra, Optus and Vodafone.

message being sent. Personalised content is the future of mobile media, and whether that's the ability to update a blog with images and text while climbing in the Himalayas, or using more intelligent news services that are able to sense a user's location, it's the area that industry experts are most excited about. Belinda Barnet sees users becoming 'their own editors' and customising content on their mobile phones to suit the way they live their lives (2005a).

This is different to the vision that Paul Levinson had of the mobile phone, as a 'hearth' of information, that this thesis departed from in Chapter One.

Considering the development of mobile media that this thesis has traced, user-generated content like blogging, instant messaging or location based services seems like the most logical use of the device. Chapter Two demonstrated the popularity that SMS has attained amongst users, as well as its power in organising events like the race riots of Cronulla beach. Chapter Three found that the most popular use of *i-mode* in Japan is for sending emails, and in Chapter Four, Paul Green commented that Australians just want to use their phone to have a conversation, and any successful mobile media service is going to replicate this process. User-generated content is delivering media using a two-way process or 'conversation' between the user and the phone.

At the same time, this thesis has demonstrated that there is no universal service or application for the mobile phone, and many users will retrieve and store content on their phones as Levinson foresaw. Considering that mobile phones

now feature expandable memory cards, soon enough there will not be any type of content that they will not be capable of storing. It will be possible to maintain a significant music collection for that otherwise boring commute each morning, or download the latest episode of this year's hit television show, so long as the user is prepared to watch it on the mobile phone's small screen. With a *Bluetooth* connection, users can also send it to their computer that's connected to their plasma screen and watch it in glorious widescreen format with *Dolby* surround sound. A new metaphor has emerged in this thesis to describe the mobile phone – rather than a hearth, it is a 'media wallet' which keeps content safe until it can be accessed or manipulated in a more appropriate setting.

In this work, I have weighed the technological possibilities of the mobile phone against the implications that Japanese and Australian culture places on its use. I have come to the conclusion that a unique culture has developed around the use of the mobile phone in each of these countries has a greater impact on the use of mobile media services than the functionality found in the services themselves. Mobile media have been more successful in Japan than anywhere else.

Considering their predisposition to using pagers for text-based communication and the cramped living style of Japan, a compact mobile phone that can access the Internet fits perfectly into Japanese culture.

This style of mobile media doesn't fit perfectly into other cultures, as NTT DoCoMo's efforts to export the *i-mode* technology are testament to. Telstra has

now all but abandoned *i-mode* in Australia, preferring their in-house Bigpond Mobile 'WAP' as the platform for bringing mobile media content to 3G users. As this thesis has proved, Australian users came to mobile phones from a background of almost universal 'landline' telephone use, and consequently a very strong 'voice' culture exists. Therefore mobile media has not been a natural fit for Australian users, although SMS has worked because it mimics a conversation in text format, and in some cases allows Australians to get away with saying things that would be more difficult in a voice conversation.

Chapter Six compared the culture that has been established around mobile media use in Australia and Japan, and found more subtle differences in the services on offer. Mobile media in Japan is very much about having fun, and in the services promoted on NTT DoCoMo's website, there is an emphasis on entertainment over information. For Japanese people, their mobile phone is a portable, personal entertainment centre. As an example, mobile television is expected to work in Japan, and users are expected to view full length television programs on their mobile phones.

Mobile media in Australia is still in its infancy, but functionalism appears to be paramount. Australians want mobile media that helps to go about their daily tasks with more efficiency. Gig guides and movie listings are popular services, and a remotely updated car navigation system is being developed that Australians are expected to appreciate. When it comes to video, it is all about 'snacking';

catching up on snippets from a favourite TV show or viewing a movie trailer.

There's no doubt that this type of content is entertaining, but it serves to inform users of what they are missing out elsewhere. Australians will continue to have specific sites of media enactment, whether it is the home or the local cinema, and the mobile phone will serve as an intermediary between these locations.

The most significant finding of this thesis is that successful mobile media services that are developed in one part of the world cannot be applied universally, because users everywhere have different expectations of their mobile phones. If a new mobile media service does not seem familiar, and does not fill some void within the particular culture of mobile phone use, then this thesis has proved that users are unlikely to adopt it.

The mobile phone will become a universal media device, but different cultures will still dictate how it is used. A piece of work like this one undertaken in five years time might find that mobile phones are being used primarily for exchanging video content and instant messaging and the functions of voice calls and text messaging have long since been forgotten. But it seems likely that a comparison of mobile phone use in Australia and Japan will still find the devices being used in different ways. There will no doubt be similarities as there are now, but subtle cultural differences will see devices that look the same and function the same, but the priorities and expectations of users will see them being used in different ways.

Appendix One – Interview with Paul Green

Paul Green is the Technical Content Manager at Ericsson Australia and is involved in the development of *Bigpond Mobile* for Telstra Corporation.

Interviewed by Hugh Macdonald on 3 May 2006

Hugh Macdonald: The average Australian mobile phone user, how do you see them using their mobile phones?

Paul Green: At the moment they're using their mobile phones mostly for conversations, and not so much for multimedia, they're using it a bit for cameras, and they're using it a bit for video but only in the first month while it's a unique, interesting thing to do, but it's mostly SMS, not much MMS, they're sort of browsing the web a little bit, but mostly conversations and that's what phones were only ever intended to do anyway so anything that's more than a replacement for a conversation is not really being used that often.

HM: Do you know any particular reason why it's developed that way in this country?

PG: No idea. I think it's just a human nature thing really. I mean with technology it's only ever replacing what was already there and if the phone is just helping us

to have conversations then browsing the web isn't having a conversation, it's a one way thing. Blogs might be successful and work a bit better because a blog is a conversation, people can feedback to what you've written on your blog. But yeah I don't know why it's turned out that way, I think it has more to do with human nature than any innate Australian-ness about using a mobile phone in a certain way for a certain function.

HM: Can you see a way that people will begin to use mobile media on their phones and what do you think is the best strategy to achieve that?

PG: I think once again it's based upon a conversation more than anything else, and having the phone personalised, and having the phone become more intimate, and having the phone become part of your wallet, or become your wallet. I don't think phones will be used to consume media as such, they'll be used to acquire it and then consume it on other devices so it then becomes a connectivity issue and it becomes a conduit rather than a thing you consume your media on.

HM: So it's more like you'll download a television episode and forward it onto a big screen?

PG: Yeah, I think that's a much more likely scenario. Anything that makes the phone more your own or personalises it, whether that's location based services

like I am here or I am having a conversation with you or I want something or how the phone expresses your personality will be a winner with phones because the three things you leave the house with are your keys, your phone and your wallet and you're more likely to go back and get your phone if you forget it than you are to get your wallet so I think that's anything that allows you to consume media on a personal level, or allows you to express yourself on a personal level, is where phone media will go.

HM: So the fact that in Japan they use more mobile media than voice calls, and are probably the only place in the world where that is the case, do you have any personal idea as to why that would be?

PG: Research seems to suggest that the Internet came a bit late to Japan and also I've read articles of Japanese homes being quite small and having a corner where you can set up a PC just didn't happen whereas a mobile, and again this is an example of the small, personal, intimate thing you carry with you, that's why it's worked in Japan, that's why something like *i-mode* has worked in Japan, it's a sociological, it's an environmental, it's almost an interior decorating issue more than power or anything like that or the sorts of media that's there. It happened to evolve in Japan that way simply because it's a small country and people live in small dwellings and a phone is much easier to manage access of data on that a large PC or even a laptop.

HM: How do you think mobile media is developing in Australia?

PG: Slowly. I think we're still finding out as the rest of the world is how to do it. MMS isn't working, video I think is going to show to be not the best use of the bandwidth. I think the sort of media that will be successful, and the sort of applications and content services that will be successful in Australia are, again going back to this personalised nature of the phone, so an application that uses your location, and can get your location to within a metre or two is going to be more successful than just trying to pump video down a phone to be viewed on a very low resolution screen. I think those sort of services that again take advantage of the intimacy of the phone, the personalities that people like to ascribe to their phone and the way that we use the phone to have a conversation rather than be told stuff I think that's where a successful media application will sit. I'm particularly interested in location based services because I think it's a very good way to take advantage of the personalised nature of the phone because it's where you are and it's part of your surrounds and it's giving you information about your surrounds and where you can hook off to next to do other things, based on your surrounds. So at the moment location based services on most legacy phones aren't that great, you might get to within half a suburb of where you are, so maybe 50, 60, 100 metres but once you're able to get within a metre or two then that's a much more accurate and a much more useful location based service. You can then provide media or data, probably more likely data, but I don't know, to the handset that the person has and that will be much more useful

than the current location based service which says if you'd like to see a movie within this suburb then click this button. I think, again the sort of services that use data to say where you are and are personalised are the ones that will be successful.

HM: And so are there any particular services like that being developed at the moment?

PG: I have some ideas but I can't say what they are right now. I think there are content providers that could take advantage of something like location based services. So a dating service for instance would find a location based service quite useful for people who might be out and about at an event and they might have their flirt button turned on. Now I know that's an application that worked quite well in Japan. Another one might be to do with real estate, so you might be out looking to rent a house or buy a house and you might say look I'm in Smith St, what's nearby within 100 metres of where I am that is \$200 a week, is one bedroom and has good views of the city. That kind of stuff. So that kind of application is more of a service and it's accessing data that is already available and what you're doing is plugging on this location based element and putting that through a filter based upon the location that you've got. And that makes for a much better result than having to scroll through a listing of 50 or 60 houses, you can just say this is all the ones within 100 metres and if you're clever, do a map so I believe in Sensis they're doing some stuff on that. I don't know specifically

what, it's called 'Mucking About' or 'Mucking In'. There's some articles in the IT press from the past week that you might want to have a squiz at that I've been reading. So using something like *Google Earth* even as a location based tool to send data to somebody, that's the kind of application that I think will work.

HM: And what do you think about mobile TV, because that seems to be the current trend, but you don't see it having a long term future?

PG: Ericsson has products in the marketplace that do mobile TV, whether they're successful or not I have my own personal doubts about but it's the space we need to get into and have a look at. I think if you are going to be a content partner that sends half an hour of video down a stream then I think you're not going to be terribly successful. If you're the type of content partner that is sending 2 minute or 1 minute shorts or clips I think you're going to be a lot more successful. There are just problems with fidelity, if you're in a media rich environment like Melbourne or Sydney or any Western democracy the advantage of being able to see something immediately versus waiting thirty minutes is really only of use for news stories, short clips, or for entertainment. I think that video needs to be very carefully monitored, I don't think that just broadcasting Channel 9 is the answer. Audio I think will keep working. Video can help itself along a little bit by making its codecs better and those sort of things and providing better quality streams but even that I think has a limited usefulness.

HM: And what about with better mobile devices, you can download your favourite TV show and send it to a better screen. Can you see a future in that?

PG: Absolutely, I think that that's a very clever way of using the device and again, it's using the device as a wallet and as a way of getting to the content but not necessarily consuming it on that device. You can consume it on a widescreen TV where you've got better quality, you've got to download a higher quality file but you know, you do that on the way home from work or whatever, and you download the half hour episode of Friends or Lost or whatever you want to watch and you *Bluetooth* it over to your media centre and you watch it that way. All sorts of questions are raised about DRM and how many times you can play it and those sorts of things which organisations like OMA and Safenet are trying to answer properly to the satisfaction of not just telcos and service providers like Ericsson but also content providers themselves like TV stations and production houses. So I think anyway you can use mobiles to get the media and consume it somewhere else is worthwhile on a screen that provides a better, more immersive experience because phones aren't that immersive on their own.

HM: Turning to *i-mode* now, what can you tell me about it? Obviously 30,000 subscribers was the last figure I heard compared to 42 million in Japan. Why hasn't it worked here?

PG: I think there's a lot of confusion in the marketplace about what *i-mode* is. My understanding is that *i-mode* is not going to be part of the 3G space in Australia so it's being wound down, is my understanding, so I think *i-mode* didn't work that spectacularly because there was just confusion in the marketplace about it. The devices may not have been right for it either, Australians like Nokias and I don't believe there was a Nokia for *i-mode* in the market and I think to say that it's like the Internet on your mobile, the Internet is not always a good thing to a lot of people and it could mean another way for them to be spammed with information. So I think that's one of the reasons it didn't work. Now Japan worked, I think I said earlier in this discussion that it was a much better way space wise, and economically for that population to access data services instead of having a PC. Australians have PCs, we've got nice big houses and we can have an office. We have laptops, we have space. We haven't crammed 120 million people onto a tiny island so that's why I believe *i-mode* didn't work. I don't believe necessarily that it was because the content wasn't very good or because the applications weren't right for the time because those same sorts of applications and content will be on the WAP services we're developing. But I don't think it was a content thing, I think it was a marketing thing, I think it was a social use of, ergonomic thing.

HM: So the fact that with *i-mode* you can receive email on your mobile, do you think if that had been marketed in a different way, Australians would have been

more excited about it? Because it seems like a good idea and a handy application to me.

PG: It does but there are lots of different ways you can do that, you don't need to have an *i-mode* phone to do that. You can do it on any phone you know, we've got a service, Yahoo you can do it, Hotmail you can do it, it doesn't just have to be an *i-mode* thing. I mean *Blackberry* as we know is working quite well in Australia, certainly with the business and executive classes, so that's a more efficient device, that's a device purposely built to do emails on, it has a keypad. *i-mode* phones don't have a QWERTY keypad so that's another ergonomic issue there, you've got a device designed to do email on the move. *i-mode* phones were designed to make phone calls plus extra stuff rather than designed to do all the extra stuff plus phone calls.

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