



# The Impact of the Mobile Telephone in Australia

## Social Science Research Opportunities

### *A Discussion Paper*

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*The Australian Mobile Telecommunications Association Conference  
September 2004*

## Introduction

This Discussion Paper has its origins in a January 2004 meeting between representatives of the Social Research Subcommittee of Australian Mobile Telecommunications Association (AMTA) and the secretariat staff at the Academy of the Social Sciences in Australia (ASSA). That discussion was initiated by AMTA, who suggested that too little is known about the impact of the mobile telephone on the people and institutions of Australia and would ASSA, through its links to the social science community, be interested in facilitating the development of a research agenda to assess the impact of the mobile phone on Australian society and institutions? That meeting was followed by three others in March, April and May. These talks led quickly to an agreement that AMTA would fund ASSA to convene a workshop of social science scholars to prepare a Discussion Paper. Two Study Directors, Professors Judy Wajcman and Stuart Cunningham were appointed. Dr. John Beaton, Executive Director of ASSA provided the social engineering and a workshop was convened on 16-17 May attracting twenty two contributors from twelve universities , four AMTA contributors and two DCITA participants.

ASSA, through the work of its Fellows, has a long and distinguished history of contributing to national debates on virtually all aspects of Australian society. But the mobile phone is far too much of a newborn creature to have a storied history, or even much of a reputation in social science research. Its advent and rapid evolution have bypassed most researchers who are deeply engaged in their own research pursuits, but few if any social scientists would fail to recognize the impact this technology has had on all of us and on aspects of our behavior. Similarly, the little phone has outpaced the capacity of businesses and whole industries to fully accommodate it and to exploit its capacities. For both private concerns and public ones, there have been a few notable growing pains, some due perhaps to

the inability of society and industry to read each other correctly. We hear the tales of the crashed teenage parties, the misused phones etc., but for each of these we hear of rescues, tragedies averted and lives enhanced, all of this driven not necessarily by design, but by circumstance and the capacity of technology to provide utility, rather than the voice of society to identify its needs and demand them.

Each of us has anecdotes and opinions about the mobile phone, but few of us can boast a truly informed view, much less a data base upon which to think, or act, about the best use of mobile phone technology. We recognize the incapacity of the elderly to embrace the utility of mobile phone technology, we have some feel for our individual limitations and we must all be stunned at how we middle aged adults lag frustratingly behind our children who manipulate the phones as if they were born with them. How do they do it? Should we control it? How can we make this technology work best for them (and us) and how can we contribute to a future where this profoundly useful technology maximizes social and economic good for all the citizens and institutions in Australia? This Discussion Paper begins that ambitious dialogue guided by a few important principles. These are;

1. The mobile telecommunications industry will be enhanced in utility, and advantaged economically if the needs of individuals, social groupings and institutions are considered with equal weight to that given to technology and its ability to provide capacities.
2. To be efficient, social science based research should contribute along several fronts where complementary and even integrated research agendas make use of data collection strategies that are both unifying and have cross-utility to a wide range of researchers within and outside of the social sciences.
3. To be effective social science based research should proceed in such a way as to keep pace with the evolving innovations and uptake of the technology. Thus we advocate a research strategy that promotes a longitudinal component to research, one that can respond to changes and anticipates emerging and future social and technological developments.

Importantly, this Discussion Paper specifically avoids concerns such as health and safety issues, and industry regulation matters, recognizing that these are being considered widely and elsewhere.

The ASSA working group also recognizes that the issues with which it now concerns itself are part of an international debate that is in its infancy. We think this provides Australia and its commitment to the Knowledge Economy with an opportunity to become world leaders in understanding how to make this truly remarkable technology serve the multiplicity of needs in a pluralistic society, and to ensure that its providers have a sustainable and bright future.

It is salutary to reflect on that great industrial-age phenomenon, the electric light, the now-mundane appliance that is so integral to all of our lives. In its own infancy it transformed the human condition profoundly, changing sleeping habits, patterns of work and leisure, transportation, communication, family interactions, public proceedings and countless other significant aspects of life. We can see how the mobile telephone has provided us with new abilities to be more mobile, and sometimes not to have to be mobile. This has unarguably changed our lives and will continue to, perhaps increasingly so for our children. We join AMTA in recognizing our responsibility to understand how this is, and how it will be. This Discussion Paper may be a key to building our understanding.

In the pages that follow the contributors have sought to frame the issues while being cognizant that their boundaries are permeable, and that the skeletal structure of the corpus of issues is not yet fully articulated. Thus, you will see some sets of Research Questions, grouped thematically into four sections. The sections are titled;

- A. **The Structure of Social Groups and the Impact of the Mobile Phone**
- B. **Work, Home and Leisure**
- C. **Social Innovations in Digital Context**
- D. **Patterns of Use of the Mobile Phone**

We ask the reader to appreciate that the contributors clearly understand the overlap in some of the sections and indeed in the questions (note our calling for an integrated research program), that the questions as they are posed contain many sub-questions and linkages that can not be

developed in this document. These questions and the text that accompanies them are the product of several hundred person hours of discussion between scholars representing the broadest collection of social scientists and humanists that the Project Directors could muster. These questions, then, are the bare essentials leading to what we consider should be the next step: a call for formal research proposals that address issues of import, relevance and complementarity that can be pursued in a structured but fore-seeing plan that provides a platform for a major research agenda. That agenda will address academic and industry interests in understanding the mobile phone and its impacts.

It is to a degree ground breaking in Australia that an industry body engaged in the communications industry has sought a direct partnership with independent social scientists to help understand how their product penetrates and transforms the lives of their customers. We think this is a refreshing, encouraging and timely contribution to the much-heralded but seldom effected collaboration across disciplinary boundaries. If sectors within industry ask “What could we learn from social scientists” then we will answer “Let us find out”. Equally, social scientists will gain useful insights from what they learn about how this industry goes about its mission, and we hope that as the mobile phone changes society, society will have its say in altering the design, capacity and contribution of the mobile phone.

The contributors are unified in expressing their great appreciation to AMTA and welcome the opportunity to join with AMTA and each other in advancing our understanding of this most compelling new technology and its impact on Australian life.

## **A. The Structure of Social Groups and the Impact of the Mobile Phone.**

### **Research Context**

One research direction is designed to deliver an understanding of the ‘communities of use’ that characterise mobile phone communications in Australia and can provide the industry with important tools for understanding how it may best serve the needs of society. The research considers geographic, socio-political, inter-cultural and demographic groupings and promotes research that recognizes the need for continuous review and monitoring of evolving social and economic climates.

The research begins with a simple question: who communicates with whom? It is concerned to identify the structure of social groups that are established, enhanced and maintained significantly through mobile telephone, and to measure how those groups fit with larger social institutions and contribute to private and public good.

There are many models that set out to represent contemporary social formations or collectivities. Families of various shapes and sizes are of obvious importance. Of non-family groups, community is the most venerable, and speaks of geographically located aggregations of people that are more or less stable; that share commitments and obligations; that are rooted in tradition, language and local culture. Membership is a default position, identity is derived from membership, and opting in and opting out is severely constrained.

Recent transformations of urban western societies require more complex models that account for transient and fluid rather than stable and fixed groups. In this evolving social climate one's membership and status in the social network are a consequence of personal achievement rather than any ascribed or inherited position. Thus, whom you talk to may no longer be dependent on who is close to you in terms of your immediate neighbours, your workmates, or your family friends. There are new groups, facilitated largely by the capacity for increased ease of communication, including the mobile phone. Social science recognizes the new complexity of group affiliation; any individual may affiliate and identify simultaneously with numerous and diverse groups. Think of the Harley-riding, footy-following, wine-groupie lawyer who also manages her daughter's soccer team. Such affiliations may have both local and global links requiring easy communication.

'Communities of Practice' and 'Communities of Interest' are related concepts that focus on social formation, emphasizing shared interests or experience in a given problem, domain or pursuit, a commitment to resolving common issues, and assisting and advising one another in this context. These communities are often work-based, but also cut across particular places of employment, and particular problems and roles. The related term 'Communities of Use' emphasizes how usage patterns can be understood through research

into the crucial role of this technology in bringing people together and emphasizes the new forms of fluid or transient social structures, which depend on the facility to communicate quickly and mobilize informally.

Thus, we see how highly complex and adaptable social constellations, that have no historical roots and formal structure, are driven by rapidly changing social needs. They are constituted by members who may never meet, but their behaviour has significant consequences. Such groups of individuals may seek to connect and communicate with equal informality, even serendipity. Mobile telephony is uniquely suited to their needs. Individuals belonging to one or more of these new constellations of communication exploit their opportunities across the ever-more blurred boundaries of work and play, public and private, home and away.

All of these dimensions have direct and indirect implications for the use of the mobile phone. Equally, we can see how the mobile phone may act to make such constellations possible. We do not know the mechanisms by which this is currently achieved, nor can we point to the fundamental logic of how society produces the need for what the mobile phone offers. We need to understand these phenomena through a program of integrated research that captures the complexity of modern social communication and modern mobile capacity.

### **Key Research Questions**

**Question 1.** How does the ownership/use of a mobile phone contribute to an individual's sense of identity, or even citizenship? Does the mobile phone validate identity in terms of life-stage, age, ethnicity, sex, social class, status of employment, moral standing, cultural and aesthetic affiliations?

**Question 2.** How does the mobile phone contribute to the power and influence of social groups in contemporary political, economic and social conditions?

**Question 3.** Does the mobile phone provide new opportunities for broader and stronger social connectedness? Is social capital enhanced by the use of mobile phones and is this

measurable in terms of better health, enhanced employment opportunities and educational outcomes, better government performance, stronger communities and lower crime rates?

**Question 4.** Does the mobile phone offer a competitive advantage to users in economic environments of limited resources and high demand? Is enhanced access to information crucially effected through mobile phones?

**Question 5.** How can the telecommunications industry best identify the perimeters and overlaps of social groups and map the relationships between market segmentation and social constellations?

**Question 6. Where does the mobile phone substitute for other communication media for our society's social and economic groups? Where can it not, and why?**

## **B. Work, Home and Leisure**

### **Research context**

This research area concentrates on three core aspects of contemporary life – the organization of work; the interface between work and family; and people's key leisure activities. Traditionally the two spheres of the public world of work and the private family were clearly separated in terms of time and space. The mobile phone has radically transformed these boundaries, making them increasingly permeable. It is widely suggested that people are increasingly staying in touch with work while at home, and vice versa. While for some commentators these developments represent a threat to the quality of modern life, for others, it represents new opportunities for integrating work and family life. Feelings of time pressure and time poverty are increasingly reported by Australians, yet we know little about how the experience of time is affected by the mobile phone. Here we will examine the impact of the mobile phone on how work, family and leisure activities are organized..

Let us begin with the workplace. The introduction of new technologies has historically had profound impacts on the nature and organization of work. While much of the focus to date has been on computerization, the spread of mobile phone may have profound

consequences for when and how work is done. Mobile phones increase the ability to coordinate activities, especially across remote sites. This means that it is no longer necessary to conduct communications from an office desk. For example, trades-people were enthusiastic early adopters. The painter could order supplies and schedule new jobs from a ladder. There was a greater opportunity to combine tasks, such as travel and communication. They were a boon to the sales forces in the field. Builders, for example, were able to schedule the activities of their subcontractors. In these ways, mobile phones make it easier to streamline the flow of work. This is the case in more conventional, large-scale organizations too. Here, the mobile phone can make work more flexible and also enables management to fine tune the performance of tasks.

This capacity of mobile phones to save time is of direct relevance to the home and family life. However, recent research findings cast doubt on the assumption that domestic technology simply saves labor time at home. Instead, it may be that the salient characteristic of modern technological devices is that they share the property of offering greater control over the scheduling of events. For example, mobile phone message banks allow one to defer and consolidate the process of responding to telephone calls. Tasks and parts of task sequences can be delayed, consolidated, programmed in advance, and performed from a remote location. This *time-shifting* property also expands the possibilities for multi-tasking – completing a task in the background while concentrating one’s direct attention on another activity. Control over timing aids the coordination of disparate demands from all the family members and promises to significantly alter the experience of time pressure. Given the increasing number of married women in the workforce, the ability of parents to synchronize home and work via mobile phone communications will become increasingly important.

Finally, mobile phones are not purely tools of the trade or means of organizing domestic chores. They are also crucially instruments of leisure. Outside the workplace and domestic sphere, the mobile phone’s role within leisure and an expanding consumer culture – most obviously amongst younger generations - is visible everywhere. In social research of recent years, the topics of ‘mobility’ and ‘consumption’ have emerged as ‘cutting edge’ themes. However, the mobile phone has not figured prominently within such research. Manuel Castells’ influential concept of the ‘network society’, for example, pays little

attention to the mobile phone, but celebrates ‘networking’ via new media as a key feature of ‘the information age’. Writing thirty years ago against the background of trends towards suburbanization and reliance on the family car, Raymond Williams more circumspectly recognized an increasing ‘mobile privatization’ – a prediction that anticipates the development and diffusion of the mobile phone.

### **Key Research Questions**

**Question 1.** Has the mobile phone facilitated changes in the organization of paid work? For example, to what extent has it improved flexibility and productivity, permitting tailored solutions to stock control, staffing, and time management across small, medium and large firms? Has the mobile phone become an instrument of managerial authority, increasing the pace of work, and extending the hours of work outside the workplace?

**Question 2.** How has the mobile phone affected the interface between work and home? For example, does it contribute to the breakdown of boundaries between family and work, enabling work to spill-over into family time but also enabling better family coordination – both between spouses and across generations? Does the domestic multi-tasking facilitated by the mobile phone change people’s experience of family life?

**Question 3.** Does the mobile phone enable greater social connectedness or a more screened, self-sufficient and isolated existence? For example, what leisure pursuits are associated with mobile phone ownership? Where and in whose company are the leisure pursuits of mobile phone owners undertaken? Have mobile phones affected the quality of leisure?

**Question 4.** How does the mobile phone contribute to vertical and horizontal social mobility in work and family life? Are organizational status firewalls breached by mobile phones? Are social or organizational groups’ defining barriers permeated by mobile phones? What are the lines of resistance? Are these reflected in the structure of industry pricing and service plans?

**Question 5.** What are the dimensions of emerging mobile phone etiquette and responsibility of ownership? What is mandatory, allowed, tolerated or prohibited? How is this different in family, leisure and workplace environments?

## **C. Social Innovations in Digital Content**

### **Research Context**

Current developments in mobile phones exhibit convergence between telecommunication services, the Internet, media content and broadcasting. New generation phones now combine media and information products with digital broadband networks, increasing the 'scope for interactivity and user customization of services'. As digital technologies penetrate more intimate domains of personal and business life, it is reasonable to expect significant and unforeseen innovation. We are using the term innovation in its full social sense rather than just a technological or economic sense, and the *raison d'être* of this research direction is the study of social innovation emerging from mobile telephony. We argue that social innovation is the most appropriate focus because not only does it encompass technological and economic issues, but it is anticipatory, adopting a pre-emptive approach both to the social issues and market opportunities.

Mobile telephony penetrates new geographical spaces that enable the consumption and communication process to be applied in new social, cultural and psychological spaces. The implications of the complex interdependencies of the knowledge economy, services industries and cultural citizenship in the post-broadcasting environment of mobile data services in Australia are as yet undetermined. Personal (voice, SMS, video) and group communication (SMS chat, MMS), mobile content (entertainment, information and data) and the ability to synchronize everyday life with home or work will evolve in as yet undetermined ways. Content, regulatory and M-Business implications will become increasingly located in the mobile/WAP/MMS world, as is the case in European and Asian territories. It is predicted that mobile data service spending will grow at 24 percent per annum with spending in Asia, Europe and the USA to reach \$92US billion in 2007 - compared to \$339 billion on voice services. Limited research has been undertaken, particularly in Australia, as to the economic and policy implications of standard as well as 2.5G and 3G mobile phones, which major service providers and handset manufactures are investing in. This innovation will result not just in new technologies but new social innovations.

This research area then asks a number of foundation questions: What are the unique characteristics of information and content innovation enabled by mobile phones? That is, what is different about mobile information and content and why is it important in the knowledge society? What are the layers of innovation in the mobile phone? What are the evolving patterns of use? Once these questions have been investigated, we will consider barriers to innovation, such as, evolving technology expectations, intellectual property regimes, privacy concerns and illegal activities. These considerations will inform the development of an agenda for the identification and exploitation of mobile telephony innovation in business, services, government and social enterprise.

We are particularly interested in the characteristics of information and content enabled by the mobile phone. Firstly, in terms of mobility, the phone has implications for social networks, invigoration of social sharing, and makes physical location uncertain. Secondly, it has implications for the micro-management of time, ‘forced accessibility’, limiting social/physical interactive spaces, as well as being ‘time-enhancing’. Thirdly, the mobile phones allows for significant personalization, for example, ringtones/backs, downloads, design, and phone number, and well as linguistic features (e.g. mobile specific grammars, sub-group discourse, and user interface). Fourthly, the intersection of the mobile phone with other media such as film, television, music, graphics, and publishing enables innovative new information and content to be created and accessed. For example, owners of camera phones using them to create e-picture albums rather than utilizing the MMS capability to send the photos to other mobiles, connections of the mobile content (ring tone) to original use (hit songs).

From the standpoint of creative industries it becomes theoretically possible to develop strategies that aim to support the development of cultural content for mobile media. This includes, but is not limited to, commercially developed and branded content. Creative industries also admits the prospect that people are important in the content creation processes of new media environments not only or exclusively as consumers, but as creators in their own right, as cultural citizens.

## **Key Research Questions**

**Question 1.** What are the implications of this cultural understanding of mobile information access and communication for the identification and exploitation of innovation in business, services, governance and social enterprise? Does the ‘life recorder’ and moblog, 2.5 and 3G mobile phone have ‘positive effects’ on sociability in the family and broader social networks?

**Question 2.** What are the social, technological, and economic barriers to innovation? Network owners consider a range of relationships with a diversity of potential suppliers in content creation and branding strategies to support growth in mobile data usage. Do these relationships put new data and content platform at risk of market failure due to an over-reliance on commercial communication?

**Question 3.** What are the key contextual factors to consider that promote content innovation, for example, marketing, evolving technology expectations, intellectual property regimes, privacy concerns, and illegal activities?

**Question 4.** To what extent should personal, social group and industrial needs inform customized innovations in technology and its delivery? Do major geographical and demographic sectors of the continent differ significantly in their demands for content and its delivery. If so, how are these to be resolved?

**Question 5.** How can we resolve the complex needs of complex societies with the capacity of industry to provide for the sorts of utility presently desired and provide flexibility for utilities still to be discovered? How much capacity for user-configured utility can be provided, and what do users really want?

**Question 6.** In the delivery of content, how can the mobile phone provide maximum media complementarity to other institutions and devices contribute to a knowledge society and economy. What configurations do the educational systems of the future demand and what are the social innovations that will drive this?

## **D. Patterns of Use of Mobile Telecommunications**

### **Research Context**

Mobile phones are important means of communication. They are emerging as multi-modal channels and as important repositories for personal information and content creation. From their commercial availability in the early 1980s, mobiles have moved from being an expensive means of voice communication for business users to a device that has become intricately woven into everyday life. Understanding the multiple, overlapping consumption and uses of mobiles in social and cultural life, and their many meanings, is, therefore, essential to questions about the future of mobile devices. In sum, this research area will explore the social and cultural uses of mobile devices.

There are various approaches to the study of information and communication technologies. Firstly, it is important to place the mobile phone within the history of communication and media, particularly because of the rapid pace of change in the use and character of the mobile phones. A historical perspective on the mobile phone could assist us in understanding the way the use of the telephone has changed. Secondly, from the perspective of education and literacy, it is well accepted that literacy needs to be pluralized, as many media occur not only on paper, but also on screens of various kinds. Literacy involves both individual skills and social practices, and for adolescents, literate activities occur in schools and outside. This role will become increasingly important as the features of mobile phones increase.

Thirdly, it is now widely accepted in the social sciences that there is an inter-relationship between technology, society and culture. Users shape the technologies as much as they are shaped by them. However, much of the policy and technological discussion continues to have the flavor of a one-way relationship – that of the impact of technology on society. The perspective recommended here encourages studying the design and use of the mobile phone as two sides of the same coin. Finally, there is an important body of work in media and cultural studies that emphasizes the importance of the social and cultural contexts of media consumption. Much of this work to date has been focused on studies of print media,

television, radio, and film, but there are also important studies in the area of new media and the Internet that are of direct relevance to the study of the mobile phone.

This research will draw on aspects of these four approaches to the study of technology. Overall, the questions below would lead us to explore different patterns of use across cultures and will fill a gap in the literature on mobile phones. Importantly, it will pose research questions premised on a bi-directional shaping of technology and society. This bi-directional approach is critical if we are to place use and users at the center of the design of mobile phones. Much previous research on the impact of new technologies pays insufficient attention to the way specific design features of artifacts predispose users to particular types of use while limiting alternatives. Moreover, some of these features may well deter certain categories of people from becoming users at all. The approach recommended here actively engages users as part of the participatory design framework, where iterations of design are based primarily on users' reaction to the initial prototypes and succeeding versions. This process aims not only to articulate user problems but also to propose possible design solutions.

### **Key Research Questions**

**Question 1.** What are the key attributes of the social and culture use of mobile devices in Australia? Who is using mobile phones? Why? How? Where? When? What is the nature of mobile phone usage?

**Question 2.** Is there a need for a major Australian survey about the users of mobile phones or can such data be gleaned from existing databases, such as NATSEM's household databases or industry/government sources? Can the data that is available be integrated to produce a national and regional map of the demographic and other characteristics of those using mobile phones?

**Question 3.** How does the above background mapping exercise contribute to our understanding of the reasons why some individuals or groups do not use or even resist adopting mobile phones?

**Question 4.** What are the deeper social and culture considerations that shape mobile take-up, use, and meanings? How have mobile phones changed the mix of communication devices used for communicating with specific audiences for particular activities? We envisage studying significant cultural sub-groups of users such as communities, where mobile phones have recently been introduced; schools where students use mobile phones; older persons; people with disabilities; cross cultural usage; and indigenous communities.

**Question 5.** how do social and cultural understandings of mobiles relate to technology, industry, and regulation. Here we seek to connect social science studies to design, business and policy. What is the relationship between the social and cultural dimensions of mobiles, on the one hand, and the processes of design, business strategy, and government regulation? How can we translate these social understandings to these strategically important processes of technological design and implementation?

## **METHODOLOGY**

Studies promoted by the Research Questions may focus on individuals, pair-comparisons, families or through to quite large social groupings, depending on how the issue is framed. Research methodologies appropriate to answering the questions require the application of both quantitative and qualitative methods employed through a set of strategies aimed at collecting relevant data in significant sample sizes. Different research projects will by their nature demand their own methodological strategies and data collection techniques. If, an integrated program of research projects was considered, a tailored set of complementary methods and techniques would be designed to maximize opportunities for cross-project data use and to achieve more robust results. Each question, or set of questions, would also have their own appropriate time signatures, both in the scope of the study's historical view, and in its time to completion. Consequently, we would expect to see some short-term "moment in time" studies and other more longitudinal studies requiring many months of observation. Research on most questions could (and probably should) be conducted in ways that foresee continuing and complementary studies that build on the results of research currently proposed.

## **Some Key Research Techniques**

Clearly, methodological approaches to research questions need to be tailor-made for individual projects, and much the same is true for research techniques and instruments. We can however point to several research techniques, acknowledging that each has several variants and all may be modified for programmatic needs of particular projects. Some techniques are;

- Questionnaire surveys
- Focus groups
- Cultural probes (utilizing probe packs; see Figure 1.)
- Organizational case studies, e.g. corporations, casual workers, estate agents brokerage firms, service industries, emergency services etc.
- Regional case studies, e.g. suburbs, rural towns, remote communities
- Time diary studies
- Ethnographic observation, including techniques such as Focus follows, (i.e. continuous observation of individual's patterns of usage).

## **Duration of Research**

All research projects have a duration defined by the budget, question, methodology, techniques, analytical demands and reporting. We consider the Research Questions, if pursued as research projects, would require between two to four, or even five years. A typical research project that we might envision would be conducted along lines similar to these;

1. Initial Development Stage: Background research, refinement of research design, data collection, sampling methods, measurement instruments, negotiation for existing data sources, preliminary test of techniques (6-9 months)
2. Data Collection Stage: Surveys, individual and group studies, case studies (9 months)

3. Analysis Stage: Analysis of new data sets, reconfiguring of existing data sets, tests of hypotheses/implications. Review of data applications, collection, if any, of additional data (one year)
4. Reporting Stage: Final analyses, contextualizing and reporting of results, recommendations (one year).

## **Some Outcomes**

We see several opportunities to heighten the impact of the research by promoting and disseminating the findings. These include;

1. Preliminary reports on the impact of mobile phone use in Australia A major conference on the Mobile Phone in Australia, partnership with DCITA
2. Publication of a monograph following a conference
3. Publication of papers in professional journals
4. Specialized industry briefings
5. Collaboration with international peak bodies and overseas researchers
6. Training of postgraduate researchers in this area of research
7. Promoter of Australia as the world leader in social impacts of mobile telecommunications technology.

Importantly, astute research conducted over any time frame in this industry and its social impacts/responses must, we feel, acknowledge three realities. First, it is important to trade off a degree of precision in results in order to maximize general application, and thus significance. Highly particularistic studies, no matter how elegant and precise, are not a priority in this new initiative. Second, research designs must be clever in anticipating the likelihood and even direction of rapid change in the industry and thus maintain a degree of methodological flexibility. In doing so, they can respond to changes in society/technology that may require modifications in the research question and how it is operationalized. Finally, the evolution of the relationship between Australian society and the mobile telephone is an ongoing process, so each project should be designed and reviewed as a precursor to future and

improved research. As the industry develops and society moves responds to it, research that informs all interested parties must keep pace. But this is no unusual challenge. Good research inevitably does more than address its driving questions; it discovers previously unimagined questions and opportunities, looks ahead, and thereby raises the level of inquiry, understanding and ambition well beyond its initial goals. We think research into the mobile phone's impact on Australian society is extraordinarily well-suited to this aspiration.

### **An Australian Mobile Telecommunication Data Base**

We suggest that the concept of understanding the use of the mobile phone through research also suggests an exciting opportunity now for AMTA (and other partners perhaps) to also consider how it might contribute to the establishment of an ongoing archive that archived and developed in Australian an ongoing bibliography of research resources into mobile telecommunications. Such a data base could contain national and international resources from the social sciences, humanities, engineering and the technological sciences, specifically;

- results and data from any social science research funded by AMTA and its adherents,
- results and data from any technological science research funded by AMTA and its adherents,
- bibliographic links to books, monographs and journals
- bibliographic references or links to online-available publications,
- bibliographic links to unpublished theses manuscripts, and conference proceedings,
- electronic links to consumer and user groups,
- electronic links to national and international R&D units,
- electronic links to public and private funding sources,
- other relevant literature or links

Such a database could exist in electronic form on a website made available freely to bona fide researchers. As such it would be an inexpensive and efficient way of providing researchers with reference material.

## **The Next Steps**

In order to achieve significant results in an efficient manner we see the following steps as important.

1. A critical review by AMTA of this DP and its Research Questions.
2. A survey of funding partnership opportunities with government (e.g. ARC Linkage, DCITA) and allied industries.
3. A call for formal research proposals.
4. Consider the development of a database for research into the mobile telephone.

In this Discussion paper we have tried to capture much of the breadth of how social science can contribute to understanding the impact, and future, of the mobile telephone in Australia. Inevitably, there will be gaps in our presentation and this paper has not attempted to be comprehensive in addressing all of the social issues and interest groups. Rather, we offer the questions in this Discussion Paper as examples of themes that encompass many more issues than we have space to discuss. The social science research community is well placed to consider both the explicit themes and the host of questions they imply, and we welcome the interest that AMTA has shown in supporting this debate. We look forward to building on this foundation.



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