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Communication Services in Remote Indigenous Communities

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Abstract

Access to and use of modern communication services in remote Indigenous communities in Australia lags considerably that in the rest of Australia because of inadequate supply arrangements and prevalent economic and social. This paper presents some findings of research on the availability and use of telephone and internet services in remote Indigenous communities in central Australia. The research involved the collection of community-wide data on the availability of telephone and internet services as well as details of individual user experience in the use of those services. In evaluating the findings, the paper suggests potential improvements to programs for the delivery of better communication services in remote communities.

Keywords: Telephone; Internet; Indigenous; remote Indigenous communities.

Communication Services in Remote Indigenous Communities

1. Introduction

In today's information age, access to modern communications services is increasingly becoming indispensable to the ability to share in opportunities for social and economic development and in democratic political processes. Equitable access to a range of communication services is enshrined in public policies, such as the traditional universal service obligations (USO) giving all Australians a right of reasonable access to equitably priced standard telephone services. With the World Wide Web increasingly used to deliver a wide range of commercial and public services, equitable access to the Internet has become essential for effective social, economic and political participation, and the notion of a 'digital divide' has been used to differentiate between well and not-so-well served groups in society.

Remote Indigenous communities in Australia face unique difficulties in accessing and using modern communication services. The difficulties stem from both inadequate infrastructure and supply arrangements and from economic and social disadvantages that are prevalent in remote communities (Telecommunications Service Inquiry, 2000; Australian Communications Authority, 2004; and Department of Communications, Information Technology and the Arts, 2004). While government initiatives have brought some improvements, much remains to be done. The Australian Communications and Media Authority (2006), for example, reported that at June 2006 only 57.7 per cent of remote Indigenous communities had access to at least one standard telephone service (fixed or home telephone) and only 52.5 per cent had at least one

payphone; 29 per cent of communities had access to neither type of service. In addition, only 26.2 per cent of communities were reported as being within terrestrial mobile telephone coverage. Similarly, in 2006 78.7 per cent of Indigenous people in remote communities did not have access to the Internet and 92.2 per cent in very remote communities did not have access to the Internet (Australian Bureau of Statistics, 2008).

Access to modern telecommunication services is closely correlated to the level of economic and social wellbeing of consumers. As Indigenous people in remote communities are among the most economically disadvantaged in Australia, it is not surprising that their access and use of modern technology is much lower than for the rest of the population. While affordability is a critical factor, it is not the only important determinant of use. Even in cases where public access facilities are available, use is not necessarily assured unless potential users are aware of the benefits to them and have the requisite skills to use the technology.

A range of initiatives have been implemented to facilitate and promote increased ICT use in remote Indigenous to help increase opportunities for social and economic development. Improvements, however, have been slow and the available infrastructure is consistently poorer than elsewhere. Furthermore, appropriate initiatives to promote and support community use have not always followed infrastructure improvements.

This paper reports on research into access and use of communication services in remote Indigenous communities. The research findings are based on data collected in 14 communities in central Australia and in a series of interviews with Indigenous residents

in those communities. Overall, the findings highlight a low level of engagement by Indigenous people with the communication services and facilities largely due to poor awareness of services and the benefits they confer, and undeveloped skills necessary to access the services. Also, the facilities in most of the communities visited were often inadequate or poorly maintained, and were seldom provided in locations that encouraged increased use. Drawing on the research findings, the paper also outlines some conclusions on desirable attributes of policy initiatives to promote sustainable improvements.

2. Evaluating Indigenous Use of Communication Services

Information on use of communication services by remote Indigenous people and factors that might influence their use is scarce and what is available relates mainly to the adequacy of technical infrastructure. Studies of determinants of technology access and use, including those of the US National Telecommunications and Information Administration (NTIA, 1999; 2000) and the Benton Foundation (1998), consistently associate low access with low income and low educational attainment. Similarly in Australia Hellwig and Lloyd (2000), and Lloyd et al. (2000) concluded that educational qualifications and income levels were major causes of regional differences in communication services take-up. Bandia and Vemuri (2005) point to inadequate infrastructure, lack of service provision, high cost of access and 'thin' markets as causes of poor service, while Srinivasan and Han (2000) argue that inability to use the technology if often for low take-up.

According to Ramirez (2001) use of technology depends on past experience and a safe and comfortable setting for users to become familiar with it. Ramirez and Richardson (2005) focus on 'effective usage' and argue teledensity and other measures of technical dimensions are poor indicators of priorities of rural communities.

The Benton Foundation (1999) in a five-year assessment of how Native American communities had integrated telecommunications and information technology into their activities and lifestyles noted that community development may be affected by conflict between old and new ways of living. The importance of social and cultural factors to technology usage is also stressed in Daly (2001). Connecting our Communities (2003), stressed the critical importance of community involvement in both the planning and establishment of online access centres in remote communities and in management of their ongoing operation. The importance of community involvement is also emphasised in the Farr and Papandrea (2005) evaluation of factors that impinge on the feasibility and sustainability of establishing broadband access centres in remote Indigenous Communities in Australia.

3.   The Study

The main aim of the study was to collect information on the availability and use of telephone and Internet in remote Indigenous communities. Data were collected in 14 communities in Central Australia in April 2006. Details of telephone and Internet facilities were collected in interviews with Community Administrators or Community Leaders. The selection of communities was guided by two principles: availability of some form of public access to the Internet; and ensuring that selected communities

represented a diverse range of population size and public access Internet facilities. Information on personal consumption of telephone and Internet services was collected in personal interviews with 48 adult (33 female and 15 males) community members. A little more than half (56 per cent) of the respondents were engaged in some form of paid employment (including community work in return for the dole scheme). A detailed description of the study and methodology is available in Papandrea et al. (2006).

The participating communities and brief details of their public telecommunication infrastructure are listed in the accompanying panel.

Summary of Communities and their Public Phone and Internet Services, 2006

Community	Indigenous Population	Households (with phone)	Public Phones (% time in working order)	Location Public Access Internet	% Time Internet Working
Areyonga (NT)	235	32 (22)	4 (<50%)	CO	90%
Lyente Apurte (NT) (Santa Teresa)	603	109 (55)	5 (<50%)	LKC	50%
Titjikala (NT)	260	34 (22)	1 (>75%)	CO	90%
Ti Tree (NT) (Pmara Jutunta)	350	52 (45)	3 (<50%)	LKC	90%
Amata (SA)	250	40 (36)	2 (>75%)	TAFE	90%
Kaltjiti (SA) (Fregon)	300	43 (43)	2 (<50%)	CO	70%
Indulkana (SA) (Iwantja)	386	38 (38)	2 (>75%)	CO	90%
Kanpi (SA)	60	12 (120	3 (90%)	CO	75-90%
Mimili (SA)	250	29 (20)	3 (90%)	RTC	75-90%
Nyapari (SA)	60	10 (10)	1 (90%)	CO	90%
Pipalyatjara	120	19 (15)	1 (75-90%)	CO	Less than 75%
Umuwa (SA)	Variable	NA	1 90%)	PY Media	90%
Watarru (SA)	100	25 (6)	2 (40-60%)	CO	Less than 75%
Yunyarinyi (SA) (Kenmore Park)	30	8 (8)	1 (50%)	CO	90%

CO = Community/Council office   Sat = Satellite
LKC = Library and Knowledge Centre   SatDU = Satellite Dial Up
RTC = Rural Transaction Centre   SatBB = Satellite Broadband
TAFE = Technical and Further Education Facility   LATIS = (NT) Learning and Technology in Schools Network

Source: Papandrea et al. (2006)

4.   Telephone Use

Various public policy initiatives, including universal service obligations, have sought to improve communication infrastructure and ensure that at least 'lifeline' communication services are available in all remote Indigenous communities. But even where standard infrastructure is in place, other factors such as the widespread economic disadvantage prevalent among remote indigenous communities, act as major barriers to ownership and use of standard telephone services. The cost of a standard telephony service, for example, can be a substantial financial burden on households that are highly dependent on social welfare. Initiatives, such as prepaid telephone cards that can be used to make calls via public payphones or privately-owned telephone provide a low-cost alternative for occasional use. But the prevalence of low English literacy, low levels of education, inexperience with technology use, and cultural traditions can still act as barriers to use particularly among the older generations.

While all the communities in the research sample had at least one public telephone the service was often unavailable because of damaged or faulty equipment. Three quarters of those interviewed reported having a fixed line service in their household — a rate substantially above the average reported by ACMA (2006). In addition, a little more than a quarter of respondents indicated that a mobile phone was owned by a member of their household (this may underestimate potential ownership as some of the communities were not within the mobile telephone network coverage area). Only four of the 48 respondents did not have access to either a fixed or a mobile phone service in their household. Younger people generally and older males were more likely than others to have had access to a mobile phone.

The high rate of fixed telephone services in households in most of the communities included in the study sample was largely a result of their participation in then recent trialling of two special programs to encourage telephone take-up in Indigenous households. The first program (iConnect trial) subsidised the installation of rent-free, 'lifeline' telephone services in several of the communities which could be used to receive calls and to make calls using a prepaid telephone card. The second was a trial of the Country Calling Line service by Telstra (also a prepaid telephone card service) which offered rent-free connections for the period of the trial with automatic fortnightly rental deduction from the householders social security payments. The rate of private telephone ownership in communities not involved in these trials was substantially lower (for example in Watarru, less than 25 per cent of households had a phone).

The trials were in part a response to calls for the development of more culturally appropriate telephone services. Credit management issues were a significant concern to several of the people interviewed and also featured prominently in discussions of community-wide issues with community leaders/representatives. Some of the community leaders argued that the 'use now – pay later' feature of the standard telephone service did not provide a culturally adequate and effective mechanism to control use costs by Indigenous householders. Because of cultural and traditional obligations to extended family members and kinfolk, a private telephone subscriber in a remote community has little capacity for effective monitoring of use and exercise control of related costs. As a result, accumulation of large usage charges and consequential payment difficulties were not uncommon. Prepaid telephone services

such as those offered in the iConnect and Country Calling Line trials attracted significant interest in the communities participating in the study because they offered a more culturally sensitive capacity to control telephone use and a mechanism to avoid the accumulation of large unaffordable bills. Some community officers, however, expressed concern that a substantial number of those signing up for the Telstra Country Calling Line Service were likely to face difficulties paying the monthly rental and were of the view that a more limited 'lifeline' type of service such as that used in the iConnect trial was likely to be more appropriate to Indigenous needs.

The telephone was used only occasionally. In the week preceding the survey, about half of those interviewed had not used a telephone at all while most of the others had used a phone on fewer than five occasions. Isolated cases of higher usage were predominantly related to work activities. Younger males occasionally reported making five or more calls in the previous week for social reasons.

While most households had a private telephone service, in other than exceptional cases, the telephone was only used occasionally to make private calls. It was nonetheless highly valued as a means to receive calls. Business calls, were often related to health and social security issues, and banking. Intermediation by local service providers (health clinic, Centrelink agency, Council office) was often necessary to assist with these calls, and by and large, the calls were actually made by the intermediaries using their business telephones.

For most residents in remote communities the telephone is a much less important medium for social and everyday contact than in more urbanised locations. Face-to-face contact dominates social or other everyday interaction within a remote community where all households are located within short distances from each other. The telephone tended to be used mainly to contact people outside the community and typically the need to make such calls was not frequent.

The principal reason for using the telephone was to communicate with friends and family living outside the community. Other reasons for the use of the telephone included contact with government agencies such as Centrelink, health professionals and work-related reasons.

5. Internet Use

All communities participating in the study were connected to the Internet. Generally, the Community Council office, the School, the Health clinic, the Library (where available) and some of the more commercialised Arts centres were connected to the Internet. Informal arrangements allowing brief personal use of the internet by individual members of the community were not uncommon. Several communities had dedicated free-of-charge public access Internet terminals (typically one or two). In most cases the terminals were located within the Community Council office and were accessible only during business hours. In a couple of cases, the terminals were located in a library or a rural transaction centre.

Computer ownership among those participating in the survey was considerably below the Australian average. Less than 25 per cent had a computer, and less than half of

them also had an Internet connection at home. Consequently, most respondents were reliant on community facilities or their workplace for access to the Internet.

Consistent with Australian Bureau of Statistics (ABS, 2008) data on internet access at the time of the survey, Internet use in the communities studied was generally very low relative to the Australian average. Although 60 per cent of those interviewed reported using the Internet at least once in the previous fortnight, more than half of them estimated that they had used the Internet for less than two hours in that period. In many cases, particularly for older users, access seldom extended beyond checking a bank account balance. Female respondents (67 per cent) were more likely than males (47 per cent) to have used the Internet in the previous fortnight.

Place of work and public access facilities were about equally important as places of use of the Internet. Those reporting regular use primarily accessed the Internet at work in conjunction with work-related activities. Those with low usage were primarily accessing the Internet for basic activities such as checking bank balances (other uses, including email and web browsing were not widespread).

People in some form of employment were more likely than unemployed to have used the Internet. In all cases, females were more likely than males to have used the Internet. Younger people were likely to be more frequent users, to stay connected for longer periods and to use the Internet for leisure. Web browsing was popular and tasks such as downloading music and football results were quite common. A sizeable proportion of

younger users accessed the Internet several times a week. Younger users were more likely to request increased access to the Internet after hours and on weekends.

Overall, users were almost equally divided between those indicating that they were able to access the Internet as often or for as long as they desired and those that did not. Most of the older respondents, however, were largely unaware of the range of services available on the Internet, but expressed significant interest in learning about and using additional services.

Dissatisfaction with the level of access/use of the Internet was concentrated among younger people and those with greater awareness of services accessible on the Internet. Inaccessibility of Internet access facilities outside business hours was the most often cited barrier to additional use. Insufficient training was also cited as a barrier by many of the older respondents.

Community leaders generally were supportive of community-funded initiatives to provide free public access to the Internet as a community welfare improvement measure. The welfare implications of even a very basic service such as electronic access to a bank account should not be discounted. In one of the communities visited, for example, the community welfare officer explained that before Internet access became available individuals needed to use the local commercial ATM to check the crediting of social security payments into their bank account. On the scheduled crediting day, it had not been uncommon for some to access the ATM several times while waiting for the credit to be effected and incurred a $2 fee each time they did so.

For someone totally dependent on social security payments such ATM fees were not insignificant. Internet banking avoids such fees, and its popularity among users in all the communities visited was a clear endorsement of its benefits.

Given that access in virtually all of the communities participating in the study was available free of charge, use was not constrained by cost to users. The low level of use was largely due to physical constraints on access to internet facilities including hours of opening, lack of privacy and often uninviting ambience (for example, computer and screen placed behind a protective screen and keyboard on a bench-top in the foyer of Community Council office), limited knowledge of available services, and lack of skills to use the services. The popularity of services such as Internet banking demonstrated that when benefits of use are evident there is no lack of demand. From the research interviews with actual and potential Internet users it was apparent that low or inexistent demand for otherwise widely used services, such as email and web browsing was due largely to a lack of knowledge about those services.

The research study findings lend some support to arguments advanced by the Northern Territory Government (2002) in its submission to the Regional Telecommunications Inquiry, which contended that people in remote areas have not had the 'experience or understanding necessary to generate demand'. The study found that Internet services used in remote Indigenous communities seldom extended beyond banking, web browsing, and email. Respondents indicating more frequent and higher levels of access were much more likely than others to indicate the use of multiple services. Those with low usage predominantly identified a single use. This was primarily the case for those

indicating Internet banking as a main use. Only few of the users indicating banking as a main use also identified a second use, and in almost all such cases the second use was email or web browsing.

In almost all of the participating communities public adult training courses had been offered on at least once in the preceding two years. However, subsequent lack of opportunities to practice the acquired skills meant that skill retention was generally low. Retention was particularly low among older people with low literacy and numeracy skills. There were also indications that the effectiveness of some of the training courses had been questionable because they were not sufficiently suited to learning by people with low literacy and numeracy skills who predominantly rely on demonstration and hands-on practice rather than traditional methods of learning based on pre-set curricula. The least effective courses had been those that had not provided post-course help and support to reinforce the training.

6.   Improving Internet Access and Use

National and state governments have introduced a range of initiatives to improve internet access and use in remote Indigenous communities to ensure that they are not excluded from the benefits of modern communications services and from welfare improving opportunities generated by online delivery of education, health and a wide range of other services. At issue here is whether the needs of Indigenous people in remote communities are adequately catered for by the available facilities and services and whether users are adequately equipped to use them.

With a few exceptions, those interviewed had very limited skills and experience in using computers and the Internet. The mode of acquisition of computer/Internet skills was closely correlated with the age of the respondents. Most of the younger (less than 30 years) had acquired their computer/Internet skills at school. Older respondents had acquired the skills from community training courses, on-the-job training or were taught by friends or relatives. The level of skill varied significantly. Younger users, and those who regularly used a computer/Internet in their work, were more confident in using the Internet and accessing a variety of Internet services. Older users had much less confidence with a strong tendency to make minimal use of the Internet and to restrict their use to services they were familiar with (for example, banking and browsing). In many cases even access to those services was obtained with the assistance or support of another person with greater familiarity in the use of computers. Only few of the older respondents demonstrated more than minimal awareness of even basic Internet services such as email. An email address/account was uncommon among the older users.

By far the most often cited means for improving Internet access (59 per cent) was the provision of training to empower people to start using or improve their capacity to make greater use of, the Internet. In addition, gaining better understanding of the Internet and of the available services was proffered by 22 per cent of respondents. A further important means of improving Internet access was the provision of services outside office hours, particularly the weekend. Almost 30 per cent of respondents indicated that access could be improved this way. Other suggestions proffered by respondents included providing more access facilities, faster/better Internet connections, and simplifying access for people with poor literacy and technical skills.

7.   Policy Implications of Findings

Policies and programs which seek to improve the use of communication services in remote communities need to be culturally sensitive and take account of the unique difficulties arising from deep economic and social disadvantage.

Low demand for telephone and Internet services in remote Indigenous communities is largely an outcome of economic and social disadvantage. Being among the most disadvantaged in Australia, Indigenous households in remote communities face considerable affordability problems in maintaining a standard home telephone service. Telephone usage patterns also reflect that personal face-to-face contact dominates everyday social interaction in remote communities. The level of demand and patterns of use of home telephones in remote communities suggest that for most households a limited form of telephone service, along the lines of Telstra's *InContact* service, would be sufficient to adequately cater for their needs.

InContact is a limited home telephone service, free of monthly line rental charges, available to eligible pensioners or Health Care Card holders unable to afford a standard service. An InContact service can receiving incoming calls and can make outgoing calls to specific emergency service numbers. It is also has the capacity to make other outgoing calls using a prepaid telephone card. Telstra describes it as 'a really useful option if you are having trouble making ends meet and need to be able to stay in touch with support services, family and friends'. The evident popularity of the InContact service in communities that participated in the PY Media iConnect trial and suggest that

it could play a more prominent role in programs promoting telephone services in remote communities.

Given the state of economic and social disadvantage of the large majority of households in remote Indigenous communities, the provision of at least a basic set of Internet services cannot be isolated from other social policy obligations. The broad consensus among community leaders interviewed for this study was that the vast majority of community members did not have the capacity to pay for the services and that cost-recovery measures would simply lead to no usage. The reality of this situation is acknowledged by the fact that several Community Councils have set-up limited free public access to their Internet service during business hours. In most cases, however, these arrangements are rudimentary and in need of improvement, particularly where dedicated public-access terminals are unsuitably located or are not available. Also the facilities should be accessible outside office hours including weekends and public holidays.

Demand for services is unlikely to develop unless potential users are aware of the services and of the benefits of use. The identified popularity of Internet banking provides some evidence that awareness of the benefits of use is an incentive to use it. Initiatives to increase awareness of online services in remote communities need to take account of literacy and cultural factors likely to inhibit the efficacy of standard or traditional approaches that are successfully used elsewhere. To be effective, such initiatives should be tailored to the needs of Indigenous communities and be sensitive to culturally appropriate practices and information distribution channels. Attention should

be concentrated on initiatives that can demonstrate the attributes of services by focusing on their practical benefits to users. There is also a need to target demonstrations to attract likely early-users, and particularly those who hold positions of influence in the communities who can subsequently help others to acquire the necessary skills.

These considerations are also critical to the planning and provision of effective training. Individuals have little incentive to undergo training and acquire the necessary skills to use a service, if that service is not seen as addressing an existing or emerging need, or if they lack opportunities for regular access to the service. Consequently, it is important that training programs are developed in close consultation with communities and is reinforced with provision of local post-training help to resolve problems that inexperienced users may encounter in accessing online services.

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