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**Community business: The uses and requirements for internet services in remote  
Indigenous communities in South Australian and the Northern Territory .**

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**Abstract**

This paper reports on the findings of a research project commissioned by the Department of Communications, Information Technology and the Arts, to examine patterns of usage of phone and internet services in remote Indigenous communities. The scant official and academic data paints a bleak picture of current or recent use of information technology by Indigenous communities. Our research in a sample of communities in the Northern Territory and South Australia found that the provision of internet infrastructure to remote Indigenous communities was not universal and use of services very unevenly spread between communities. Social disadvantage and community dysfunction meant that in some communities the provision and training of internet services was a low priority. We observed a 'best practice' example of internet use at one community, however, where strong leadership and a community focus had led to a high level of communal use of the internet and other computing services. A profile of internet users across the communities showed that they were predominantly women aged between 15-50, and some younger people. Internet use provided an important function in family budgeting, prompt payment of bills and fines, and a source of communal entertainment for young Indigenous people.

There is an urgent need for the Federal Government to take leadership in developing strategies for the training of community members in the use of the internet and the services it can provide to remote Indigenous communities. Funding for services needs to be on an ongoing basis, and the provision of infrastructure is of little use without the planned, co-ordinated, and ongoing provision of equipment maintenance and training for all community members.

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This paper uses data from the University of Canberra's telecommunications research project *The Patterns of Usage of the Phone and Internet in Remote Indigenous Communities* which was supported by the Commonwealth through the 'Grants to Fund Telecommunications Consumer representation and Research' program of the Department of Communications, Information Technology and the Arts.

## **Introduction**

Telecommunications services are recognised as important tools for socio-economic development of remote Indigenous communities and can have considerable impact on delivery of public services such as education, health and social security assistance. In addition to the Universal Service policies and general telecommunications development assistance programs such as Networking the Nation (NTN), the Federal Government has implemented special support programs to foster development of telecommunications services, including the Telecommunications Action Plan for Remote Indigenous Communities (TAPRIC). There is an important need to assess whether telecommunications service delivery programs in remote Indigenous communities are effective in achieving the Government's policy objectives. The identification of usage patterns is a crucial element of such assessment.

This paper reports on the results of a project that identified patterns of telephone and internet use in remote Australian Indigenous communities. Our aims were to assess the level of internet access and facilities available to remote Indigenous communities, to assess patterns of usage among members of remote Indigenous communities, and to advise on strategies for ensuring sustainability of internet services and their use. The project was funded by a grant from the Department of Communications Information Technology and the Arts (DCITA). Research for the project spanned the period 1 October 2005 to 30 June 2006 and involved intensive fieldwork in remote Indigenous communities throughout the South of the Northern Territory and the Anangu Pitjantjatjara Yankuytjatjara (APY) lands in northern South Australia (see Figure 1). We conducted surveys of facilities and usage of telephone and internet in each community, and interviewed individuals about their usage patterns, training and experience with phone and internet technologies.

Analysis of fieldwork data established valuable baseline information regarding internet use in remote communities. We developed a series of user profiles for both telephone and internet. This quantitative data is supported by explanatory qualitative material which illustrates the everyday uses and challenges faced by people living in remote communities when accessing services taken for granted by most Australians. In addition, we undertook a 'stocktaking' exercise to establish the level of facilities and services available in each community and use of those services by community members.

The paper first reviews existing Australian and international literature concerning the 'digital divide' and its application to remote Indigenous communities, concluding that additional research is required to better understand both access to technology and issues affecting the sustainability of its use in remote Indigenous communities. We then present case studies illustrating the geographic and social context, the facilities available and technology use in four remote Indigenous communities. Finally, we present the findings of a survey which profiled individual phone and internet users across the communities studied, and draw some conclusions about the conditions for sustainable introduction and use of new technologies.

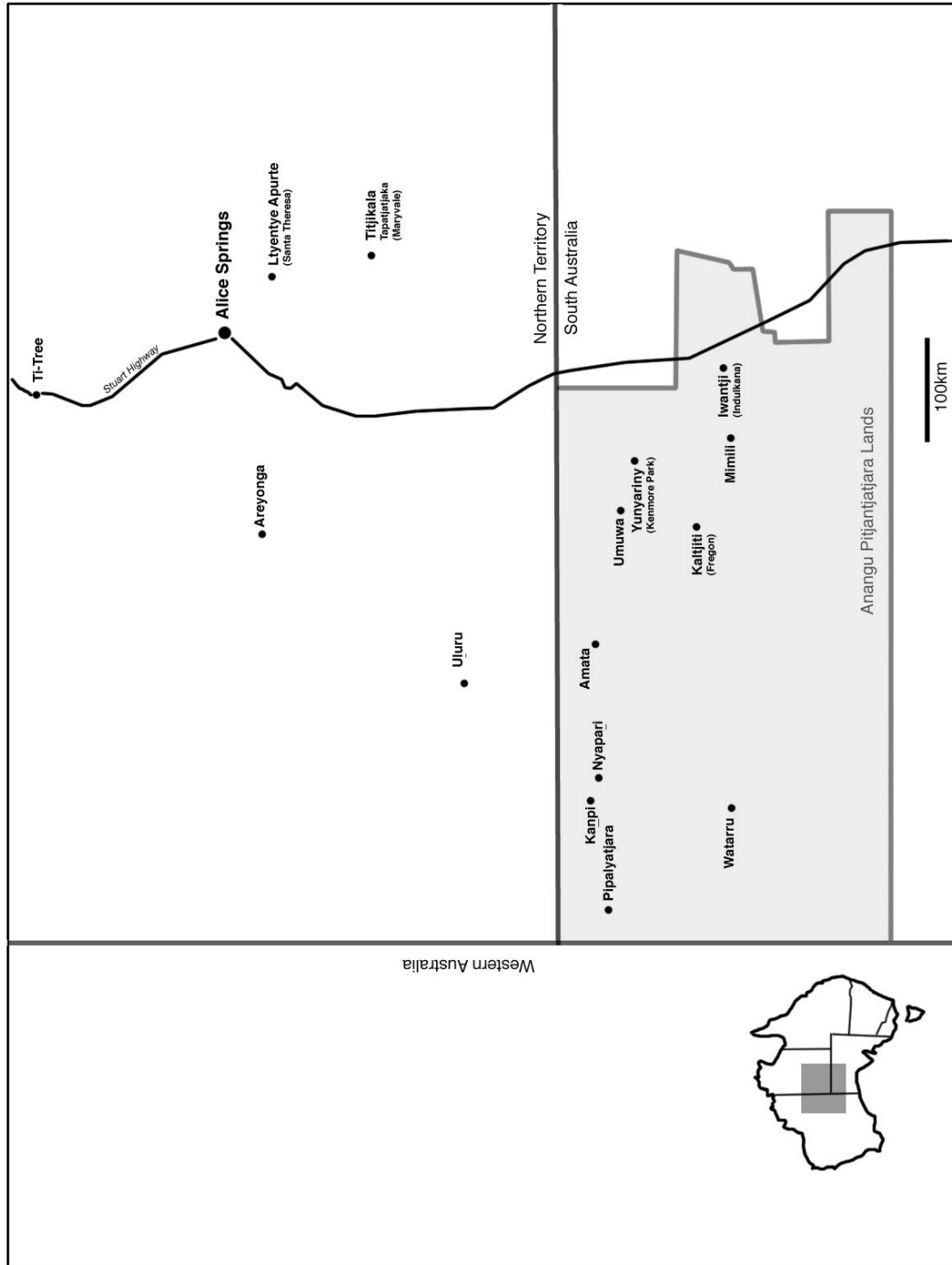


Figure 1: Communities visited in NT and SA

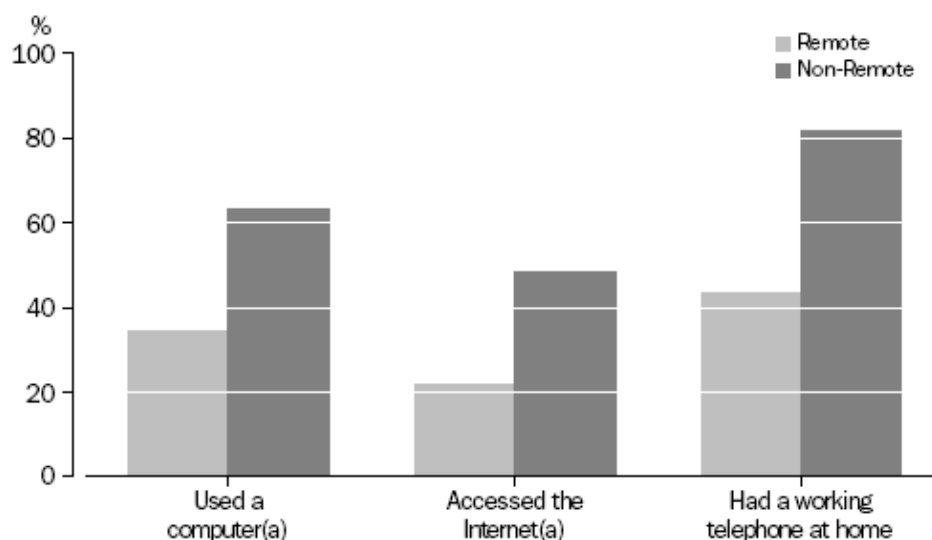
### Literature regarding remote Indigenous telecommunication use

There is a paucity of both official data and academic literature on telephone and internet use in remote Indigenous communities. The information that is available generally presents a bleak picture of low usage often arising from both inadequate access to infrastructure and disadvantaged socio-economic status.

#### *Statistical data and Government reports*

The most recent statistical information available from the Australian Bureau of Statistics (ABS) shows that in 2002, 56 per cent of Indigenous people reported they had used a computer and 41 reported they had accessed a computer in the previous year (ABS 2004a). Figure 2 shows that the use of technology by Indigenous persons was far lower in remote areas than non-remote areas of Australia. Earlier data from the ABS reported that in 2001 only three per cent of Indigenous persons in very remote locations had a computer at home (2004b; see also ABS 2004c; TSI, 2000).

**Figure 2: Telephone Access and Information Technology Use, by Remoteness, Indigenous persons aged 15 years or over, 2002**



Notes: (a) Respondents may have indicated more than one response category.  
(b) Includes other locations.  
(c) Includes persons who did not state the main purpose of their Internet use.

Source: ABS (2004a)

There have been several policy interventions to remedy the disparity between Indigenous and non-Indigenous telecommunications access and use, most notably the Telecommunications Action Plan for Remote Indigenous Communities (TAPRIC). Released by the Department of Communications, Information Technology and the Arts in 2002 at a cost of \$8.3 million over four years, TAPRIC aims to improve both access to and usage of telephone and internet usage in remote Indigenous communities. Subsequent reviews (RTI 2002; *Connecting our Communities* 2003; DCITA 2004; ACA 2004) found that while public telephone access had been improved in remote communities, internet access remained far below that available to other Australians. *Connecting our Communities* (2003) developed strategies to establish sustainable online access centres providing a wide range of services in

remote Indigenous communities. Despite these initiatives aimed at improving services, the general consensus seems to be that telecommunications services available to Indigenous people living in remote communities lag far behind those of other Australians.

#### *Academic literature*

Many studies in Australia and overseas have explored the social factors that contribute to differences in the level of access to modern telecommunications services. The majority have focused on the differences between access to technology based on race, gender, class, income and education, through the theoretical framework of the 'digital divide'. Landmark studies in the United States on the digital divide noted major disparities in access to technology by different socio-economic groups (NTIA 1999, 2000; Benton Foundation 1998; Norris 2002). These studies did not specifically address access to telecommunications services by Indigenous communities, but a number of studies have extended these findings to Native American communities. Anderson (1999) found that compared to most Americans who enjoyed a high level of telecommunications services, many Native Americans did not even have access to a basic telephone network, and that Government measures to address the divide 'often suffer from insufficient understanding of the social, economic and technological realities on tribal lands' (Anderson 1999).

In Australia, the digital divide has been addressed in studies by researchers at the National Centre for Social and Economic Modelling (NATSEM), whose findings reflect many of the same issues and concerns raised in the American context (Hellwig and Lloyd 2000; Lloyd, Given and Hellwig 2000). They found that regional differences in the take-up of technology can be explained by differences in socio-economic factors, particularly educational qualifications and income levels. Bandia and Vemuri (2005) note that various Government reports in the past decade have cited inadequate infrastructure, lack of service provision, high cost of access and 'thin' markets as key impediments to telecommunications access in rural and remote areas in Australia. These difficulties are seen as impacting disproportionately on the adequate provision of important services such as education and health to regional communities. The importance of social and cultural factors to technology usage is also stressed in Daly (2001), who examines the implications for Indigenous Australians of changes the technological and regulatory environment in the telecommunications industry. She concludes that Indigenous Australians living in remote and rural areas, because of their geographical location and their low socio-economic status, are particularly vulnerable to falling on the wrong side of the 'digital divide'.

A second theoretical perspective addresses the impacts on traditional culture of the introduction of new technologies. James Casey (Benton Foundation 1999) conducted a five-year assessment of integration of telecommunications and information technologies into Native American activities and lifestyles. He noted that modern technology can alter communities as they evolve in today's society and may create conflicts between old and new ways of living. He concludes that only with respect for tribal wishes and existing relationships will new technologies succeed and thrive among Native American communities.

A small number of studies have examined 'best practice' examples of the introduction of technologies to remote Indigenous communities. Buchtman (2000) examined the successful adaptation by the Walpuri people of central Australia of modern communication technology. She found that Walpuri was able to maintain control of the content provision of their media services and subsequently used the technology to enhance rather than destroy links to traditional social structure, language and ceremony (Buchtman 2000, p. 71). Daly (2005) studied the introduction of community online access centres in New South Wales, finding that a strong commitment by the community and a close integration of the centre with community activities were important factors that made some more successful than others. Adequate support for training of centre staff and community members was also critical to the effectiveness of access centres. Farr and Papendrea (2004 and 2005) concluded that dimensions crucial to the success of access centres included financial resources, community empowerment, and efficient operations and support systems. All three dimensions require careful assessment and analysis in the planning of access centres if the centres are to have a reasonable chance of long-term sustainability.

Our study took as its foundation an understanding that there was indeed a deep digital divide between remote Indigenous and other Australian communities when it came to access to and use of telephone and internet services. While there have been some Government interventions to provide communities with additional services, these require consideration of the unique cultural factors pertaining to Indigenous Australian communities. Provision of communication infrastructure in itself will not lead to the improvements in education and health that such facilities can potentially bring.

### **Research design**

The aim of the project was to collect information on the availability and use of telephone and internet services in remote Indigenous communities. We felt strongly that the research needed to be field-based rather than, for instance a mail-out survey or telephone survey. While we do not claim that this was an ethnographic study due to the short periods spent with each of the communities, our approach to the research meant that we were able to experience each community first-hand, and contextualise the academic and statistical literature underpinning the study.

Extensive consultation and preparation, undertaken prior to our field trips, ensured that we worked closely with community leaders in the design of the project and secured access to staff and community members to participate in the study. The research was granted approval from the University of Canberra Committee for Research with Human Subjects, giving extensive consideration to the sensitive nature and expertise needed for research undertaken in Indigenous communities. We obtained agreement for the project from community leaders and from relevant staff working in each community, and obtained permits to enter Aboriginal lands where necessary.

### *Data collection and analysis*

There were two aspects to the data collection. First, for each community in the sample, community-wide data on telephone and internet facilities available within the community were collected in personal interviews with the Chief Executive Officer (CEO – in NT communities) or Municipal Services Officer (MSO – in SA

communities), the Chair of the community council or other knowledgeable community leader. In part this was intended as a stocktake of the range of telecommunication services present and potentially accessible to community members. The primary aim was to use the data to produce a brief case study of the situation in each of the communities included in the study. Each interview took one to two hours and covered a broad range of issues relating to the community's use of telephone and internet services and its capacity to sustain internet facilities.

The second aspect of the research involved the collection of data relating to individual users in personal interviews with adult members of the community. Potential interviewees were identified with the assistance of community leaders and, where practical, a list of potential interviewees was compiled. Those agreeing to be interviewed were then provided with an outline of the nature and purpose of the research and were advised that participation was entirely voluntary. Before the start of interviews, interviewees signed individual informed consent statements to confirm their willingness to participate. In total 48 interviews were conducted with individual community members. Data was recorded on two structured questionnaires and was used to develop an overall picture of telephone and internet facilities and their usage in remote Indigenous communities.

### *Limitations*

There were a number of ethical and methodological issues that arose during the planning and execution of the project. The collection of information from Indigenous persons in remote communities is a considerably difficult task and carries with it certain limitations. Many of the standard procedures used to ensure reliability of survey tools are largely inappropriate in the social and cultural environment of remote Indigenous communities. For example, sampling issues meant that we were able to visit communities in only two regions of remote Australia. While we are confident that these two regions are representative of many of the issues faced by remote Indigenous communities, a longer period of fieldwork may have enabled us to visit communities the Torres Straits, Western Australia or Northern Queensland.

Issues relating to interviewing raised a number of obstacles. There was a natural suspicion of strangers (researchers) asking people to answer questions. Some community members were unwilling or reluctant to participate and we did not push them to do so. This meant that participants were largely self-selected. Cultural and social protocols needed to be observed when approaching people, particularly women, and when formulating questions. Some of the women interviewed expressed feeling 'shame' in talking to the researchers. Personal questions that are common in other circumstance, such as age, income, employment and marital status are often considered to be intrusive and, if asked, seldom elicit reliable responses. We do not speak the Pitjantjatjara language and some conversations were conducted through an interpreter, a factor which at times limited communication. While extended fieldwork may have alleviated some of these problems, we were aware of the need to exercise considerable care in the collection of our data.

We were, however, able to apply some unique and culturally appropriate approaches to our data collection. Fieldwork in the APY lands in South Australia was incorporated into a round of community consultations known as 'Rolling Thunder' with the community controlled media organisation, PY Media. The approach taken by

PY Media could be considered a best practice example of Indigenous community consultation and information gathering (Tafler 2005). Each community visit was organised in consultation with the community Chairperson and advertised extensively via community radio 5NPY and two-way UHF radio in the preceding weeks. The meeting centred on a community barbeque and proceedings were amplified to the community and broadcast across the APY lands on 5PY. The meeting was conducted in Pitjantjatjara and English, with most community members speaking only Pitjantjatjara. This research approach meant that the whole community was involved in the meeting and as a result most were accessible to participate in interviews.

### **Indigenous internet use – Community data**

This paper focuses on four case studies from the 14 communities we visited in the NT and the APY lands of northern South Australia - Ltyentye Apurte (Santa Teresa), Titjikala (Tapatjatjaka or Maryvale), Indulkana and Mimili (see Figure 1). Our interviews with the CEO/MSO and community Chairperson enabled us to build a picture of internet services and their use within each community. The following case studies illustrate that overall, phone technology has become more accessible to these communities in recent years, but that internet facilities are at best embryonic and their use limited. Internet facilities are almost exclusively publicly owned and administered and should remain within the control of individual communities.

#### *Ltyentye Apurte (Santa Teresa)*

Ltyentye Apurte is a community of 109 Indigenous households and a population of 603 people. A former Catholic mission, it is located 80 km South-east of Alice Springs. The community's infrastructure includes a Community Council office, primary and secondary school, library, community centre, health clinic, Centrelink office, recreational hall, arts centre, tourist accommodation facilities and community store.

Approximately half of the Indigenous households of Ltyentye Apurte have a fixed telephone service. At the time of the research visit Telstra was recruiting applicants for its *Country Calling Line* and *Country Calling Card* trial telephone services in remote Indigenous communities. There was concern and confusion, however, about the conditions of the service and the ability of community members to afford ongoing costs associated with telephone rental. This is indicative of the ad-hoc planning of telephone services to remote areas of Australia, as phone connection to APY communities through the earlier *iConnect* project had not incurred ongoing costs to individual users. Most members of the Ltyentye Apurte community relied on five public telephones, which were subject to ongoing vandalism and poorly maintained. The main users of the public telephones were working-age adults (15-50 years) and the main reasons for using both the private and public telephones were keeping in touch with friends and family.

None of the Indigenous households in Lyente Apurte had an internet service connection and at the time of the research visit there were no community-based internet facilities. Although a public internet access facilities had been previously established in the community library (attached to the school), the equipment had been in non-working order for some months at the time of the research visit and when operable, the internet service was said to have been in working order only for about 50 per cent of the time. Public access to internet facilities was limited to a single

computer terminal at the library. Despite the limited facilities for use of the internet in this community, local web-sites had been established for the Community Council, arts centre and school.

Community representatives at Santa Theresa felt there was a case for the provision of public access internet facilities in the community, with a particularly strong need to provide access after school hours and weekends as a leisure alternative for younger adults. We were told that discussions were being held between the school administration and the NT Library Service to establish a Knowledge Centre, with public access, within the library, but an agreement had not yet been reached. There was also a need to improve awareness of internet services within the community. Some internet training was available from Charles Darwin University's Mobile Adult Learning Unit that had been at Lyente Apurte for some four months providing a range of vocational training. This case study illustrates that even in large Indigenous communities within close distance from major centres, technological facilities can be limited and their use minimal.

#### *Titjikala (Tapatjatjaka or Maryvale)*

Titjikala is a community of approximately 260 Indigenous people located on the western edge of the Simpson Desert about 130 km on the Maryvale Road south of Alice Springs. There are 34 Indigenous households in the community (plus 9 households for non-Indigenous staff employed in the community). Titjikala's community infrastructure includes a community Council office; primary school; knowledge centre; women's centre; Centrelink agency; arts centre; tourist accommodation facilities and a community store.

About two-thirds of community members have a fixed telephone service and there is one public phone which is usually in working order. Most people use a pre-paid phone card system, spending between \$5 and \$10 per week on telephone services. Two families have internet service connection at home, and while there is no dedicated public internet access facilities in the community, members have restricted access to internet community facilities at the recently established Knowledge Centre based at the Council office.

According to the CEO of this community, who has considerable IT expertise, the current level of access to the internet is consistent with demand. Most community members do not have knowledge or expertise in the use of computers and virtually all internet access for community members is provided through an intermediary. There are no specific internet training facilities offered to the community. Like Ltyentye Apurte, there is a cycle of low literacy, including computer literacy, and limited access or exposure to computer technology, reinforcing low use of IT facilities.

The main users of the 'public' internet service are primarily adult working-age (15-50 years) women who use internet services mostly for banking and occasionally for sending emails. The community, through its CEO, has established its own web portal (<http://www.Titjikala.com.au>) with links to several community sites including the Arts centre, Gunya Tourism services and various links to themes or sites of interest to the community and details of a project to establish a database of plants in the area. Access to the community database is, however, restricted to authorised users and

therefore not publicly available to the community.

### *Indulkana (Iwantja)*

Indulkana is an Indigenous owned and controlled community in the North of South Australia. It is located 10 km west of Marla on the Stuart Highway, about 360 km due south of Alice Springs and 1200 km north of Adelaide. Indulkana's population, who refer to themselves as Yankun, is estimated at 386 and is made up of 38 community homes, 10 service houses, and a small number of people occupying outlying homelands. The population fluctuates radically due to movement of community members on 'business' or to and from larger regional towns.

In addition to the Community Council office, facilities in the community include a primary school, TAFE, arts and craft centre (not currently operational), 'Meals on Wheels' service, aged care service, Nganapa (community controlled) health clinic, access to Centrelink at the Council office and a community store.

At the time of the research visit, the Administrator (MSO) had been appointed for only two weeks, the TAFE and School were closed for school holidays and many of the younger community members were away on cultural business. This constrained the amount of first-hand information that could be gathered for this project. Services to the community had suffered recently, partly because of difficulties maintaining administration staff and poor maintenance of equipment. In addition, it was reported that there were significant health, substance abuse, and violence issues in the community.

Every home in Indulkana had a phone connection which had been established under the *iConnect* project, and most people use Telstra's pre-paid *PhoneAway* card to make outgoing calls. There was, however, heavy reliance on the phones located in the Council office which were used free of charge to the individual user. No Indigenous community members had internet connection in their houses, and there was very little public internet access available in Indulkana. At the time of our visit there had been no internet connection to the Council office for over two weeks, and establishing internet services was one of many issues confronting the new community administrator.

There were, however, internet services available at the Indulkana School, where the teacher had established an 'internet café' for access by students during their breaks. The teacher was able to provide training and minor technical assistance to other community members. These facilities were not publicly available outside school hours or in school holidays, and there appeared to be little co-ordination of these services with those offered to the wider community through the Council. Overall, the people of Indulkana had minimal access to internet services, with very little training available and no staff available to supervise computer use. Training of community members, some to a high standard of use in order to supervise and train others, was essential if general community use of internet services was to be encouraged.

## *Mimili*

Mimili community is located in the Everard Ranges on the APY lands in the north-west of South Australia, 70 km west of the Stuart Highway and 488 km south west of Alice Springs. The Mimili Community grew around the former cattle station Everard Park, before the land was returned to the traditional owners in 1972. The current population was estimated at 250, consisting of 46 community houses and 29 service houses. Community facilities at Mimili include the council office (Centrelink agent), primary school, CEDEP, Nganapa health clinic, Mimili Maku Arts and Craft centre, PY Ku rural transaction centre, Aged care service/Meals on Wheels, communal vegetable garden and an airstrip.

Mimili community has three public phones including a Centre for Appropriate Technologies (CAT) designed phone outside the Council office. There was also a phone in the Council office and a dedicated line to Centrelink. 20 Indigenous homes had the phone connected under the *iConnect* project and use the *InContact* service, which meant that they could receive incoming calls and make outgoing calls using Telstra's prepaid *PhoneAway* card. Public phones in Mimili, including the CAT phone, received little use and there were very few issues with telephone equipment, and only occasional vandalism of public phones.

One Indigenous community home in Mimili had internet connection but internet use centred on the newly established and publicly available PY Ku Rural Transaction Centre. This community provides a 'best-practice' model for the introduction of internet services into remote Indigenous communities. Mimili is one of two centres chosen to pilot the new Rural Transaction Centres, an initiative established as part of a recent agreement between State and Commonwealth governments. Under this plan, community Councils will act as brokers for a range of services on a 'fee-for-service' basis. The successful introduction of the online access centre was due to a combination of administrative and community support for the project. The Mimili MSO was technically very capable and took responsibility for minor equipment problems and for notifying the relevant agency for more significant technical issues.

The Council had recently remodelled its office to house the new PY Ku access centre, making office facilities, including internet, publicly accessible. There were now four publicly available computer terminals. The PY Ku centre opens from 9:30AM-12:30PM and 2:00-4:00 PM Monday-Friday. Demand for the centre was high, with school students using the centre in their breaks, and indicating that they would use the service until 7:00PM if it was available. The centre has been promoted through training, radio advertising and discussion, teachers, and arts centre staff.

The role of the local (community-based) PY Ku officers were integral in the operation of the centre to encourage more people to access internet-based services. Their training had been an important part of the introduction of the centre, and at least two PY Ku officers, or 'community champions', were skilled enough to help other community members with internet banking, online forms and establishing automatic deductions, supporting phone-based services that the Council provides to community members. Further funding was being used for PY Media to train 4 PY Ku officers to work 10 hours per week.

Service staff at the health centre, school, and arts and craft centre also had independent, satellite-connected, internet services. At Mimili Marku Arts and Craft, community members maintained a database of artworks and appeared to have a high level of skill in database use.

There were two groups of internet users: women in their 20s-30s (70:30 Female: Male) who used the internet primarily for banking, and teenagers (60: 40 Male Female) who use the internet for leisure. Internet services that were regularly used included banking, paying bills, web-browsing, email (although the MSO believed email was not the preferred method of communication), and some web publishing.

The MSO believed the community had just ‘scratched the surface’ of internet banking, and could potentially access a range of other services such as licences, car registration, births, deaths and marriage certificates, fine payments that could enhance community financial management. Ultimately, the aim was to build community self-sufficiency in accessing a wide range of government services, reducing reliance on non-community administrative or service staff. Internet skill and access would merely enhance this use of services. The community had been involved in the development of a website on the [www.waru.org](http://www.waru.org) portal, and had had some involvement in posting news items on the site.

The cost of running PY Ku was absorbed by the Council and there was very little potential for revenue raising or reducing costs. The council administrator did not believe that charging for internet use was feasible as community members on very low incomes faces competing demands on their household budgets in the form of food, transport, fuel, clothes. He argued that fees for internet use would simply quash demand for the services.

### **Indigenous internet use – Individual data**

We conducted 48 face-to-face interviews on the use of telephones and internet with adults Indigenous respondents from 14 remote communities. All respondents were adult (over 18 years), 33 were female and 15 were male. Table 1 provides broad details.

**Table 1: Summary of Survey Respondents**

	<i>Male</i>	<i>Female</i>	<i>Total</i>
<i>Number</i>	15	33	48
<i>Age</i>			
Less than 30	4	13	17
30-40	3	10	13
40 or more	8	10	18

### *Telephone use*

The level of private telephone ownership was substantially higher than anticipated, with three quarters of respondents reported having a fixed line service in their household. This is a considerably higher proportion than the 2002 average of 43 per cent of homes in remote Indigenous communities reported by the ABS (2004a). Throughout the communities visited, there was a significant interest in the use of

prepaid phone services as a way of managing costs of having a telephone service (applicable to both fixed and mobile services). In large part this was due to the recent *iConnect* trial that provided incentives (subsidised installation) for connection of prepaid card services in remote Indigenous households in many of the communities included in the study, and to the current *Country Calling Line* trial by Telstra.

**Table 2. Principal Reasons for Using the Telephone**

<i>Reason</i>	<i>Per cent of respondents</i>
Communicating with friends and family	79
Communicating with government agencies such as Centrelink, the Tax Office	17
Communicating with health or other professionals	4
Employment related	10
Other (main stated reasons were: paying bills and banking)	17

Telephone usage by Indigenous people in remote communities is very low. About half of respondents had not used the phone at all in the week prior to the interviews, and most respondents had used the phone less than five times in the previous week. Telephones were used principally for communicating with friends and family, and use was often work-related (see Table 2). Reliance on public phones has diminished, but vandalism of public phones remains a significant cause of public phones being unavailable.

#### *Internet use*

Internet usage of Indigenous people in remote communities is very low. Less than 25 per cent of Indigenous households surveyed had a computer, and less than half of those that had a computer also had an internet connection at home. While 60 per cent of respondents indicated they had used the internet at least once in the previous two weeks, most use was minimal. Internet usage was higher among female respondents with two-thirds of female respondents having used the internet in the previous fortnight. The rate of use among male respondents was 46 per cent. Nonetheless, these rates are considerably higher than the 2002 average of 22 per cent reported by the ABS (see Figure 1 above).

Internet use occurred predominantly outside the home. Place of work and facilities accessible to the public were about equally important as places of use of the internet.

**Table 3: Main Internet Services Used in Remote Indigenous Communities**

<i>Service</i>	<i>Number of times indicated</i>
Banking	29
Web browsing	21
Email	18
Pay bills	6
Web publishing	3
Order/purchase goods/services	2

Other	2
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Those who reported regular use of the internet, and those with higher usage, primarily used the internet at their place of work. In many cases, the use of the internet was a work-related activity. Banking, web browsing, and email were the main internet services used in remote Indigenous communities. While some people used multiple services, many respondents listed internet banking as their sole or main use (see Table 3) and in many cases, participants sole use of the internet was to briefly log on to their bank to check that their Centrelink payments had been credited to their account or to conduct simple banking transactions. Younger people, however, were more likely to spend more time using the internet for leisure purposes including web browsing and downloading music and football results.

The main reported reasons for using the internet are listed in Table 4. Respondents were permitted to indicate multiple reasons.

**Table 4: Main Reasons for Using Internet in Remote Indigenous Communities**

<i>Reason</i>	<i>Number of times indicated</i>
Banking	29
Communicating with friends and family	18
Leisure activities	16
Employment related	11
Communicating with government agencies	9
Education related	7
Communicating with health or other professionals	4

Our survey found that the level of technological skill varied considerably between respondents. Younger people had acquired their computer/internet skills at school while older respondents had acquired the skills from community training courses, on-the-job training or were taught by friends or relatives. Younger users, and those who had received on-the-job training and 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 and tended to make minimal use of the internet and restricted their use to those 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.

With regard to whether current internet availability was meeting individual's needs, our user profile findings accorded with the anecdotal evidence of the Community case studies. Some 44 per cent of respondents said they were using the internet as often as they liked. The more skilled the respondent, the more likely they were to have greater demand for internet services. Community respondents overwhelmingly called for the provision of training to empower people to start using or improve their capacity to make greater use of the internet. Respondents also called for more reliable and faster internet connection, greater availability of computing facilities and simpler access for people with poor literacy or IT skills.

## **Conclusion**

This survey of telephone and internet use in remote Indigenous Australian communities concludes that such communities are severely disadvantaged with regard to availability of internet technology, compared to the wider Australian community. The provision of additional services is therefore essential if this disparity is to be addressed. Government initiatives have begun to address this disadvantage, but the adoption of internet technology into remote Indigenous communities is slow. The current lack of demand for internet services reflects low usage and reflects a lack of awareness of the services available. Supply of facilities, reliable connections, regular maintenance and the introduction of community access centres will improve the supply of internet services, but regular training and promotion of the services is needed to increase the demand among users.

The mere provision of IT services to remote communities will not, in itself, be a panacea to the digital divide as it is currently experienced. As Pippa Norris (2002, p. 13) says: ‘...the heart of the problem lies in broader patterns of social stratification that shape not just access to the virtual world, but also full participation in other forms of information and communication technologies’. Sustainable introduction and use of the services accessed through the internet will only occur with appropriate training, increased computer literacy, and most importantly, increased general literacy and education among remote Indigenous communities. The apparent success of the Mimili PY Ku access centre supports earlier findings in the literature that a strong commitment by the community, community involvement in the planning, establishment and operation of the project, culturally appropriate content and integration of the centre with other community activities are factors required for successful implementation of community access centres (Daly 2005; Farr and Papandrea 2004 and 2005)

There is an urgent need for the Federal Government to take leadership in developing strategies for the training of community members in the use and understanding of the internet and the services it can provide to remote Indigenous communities. Funding for services needs to be on an ongoing basis, and the provision of infrastructure is of little use without the planned, co-ordinated, and ongoing provision of equipment maintenance and training for all community members.

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