



Centre for
Appropriate
Technology

CENTRE FOR APPROPRIATE TECHNOLOGY
SUBMISSION TO
REGIONAL TELECOMMUNICATIONS REVIEW
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INTRODUCTION

The Centre for Appropriate Technology (CAT) is making this submission in response to the Regional Telecommunications Independent Review Committee's 2011 Issues Paper and invitation for submissions.

CAT is a non-profit Indigenous organisation with specialist expertise in technology for remote Indigenous communities. CAT's vision is of happy and safe communities of Indigenous people and its purpose is to secure sustainable livelihoods through appropriate technology. CAT provides information and practical assistance with housing, water supply, energy, waste, telecommunications, transport and other infrastructure issues. CAT supports communities through community development, planning, training processes and project management. CAT was established in Alice Springs in 1980, and a regional office for North Queensland was established in Cairns in 1994. A regional office for north-western Western Australia was established in Derby in 2000.

In responding to the Issues Paper, CAT has focused its submission on aspects relating to our specific area of interest, that is the adequacy of services for communities of Indigenous people, and particularly those located in remote areas.

Access as a key challenge - extreme gap in central Australia

The issues paper states that access is a key challenge, with only 20 per cent of Indigenous households in remote and very remote Australia having an internet connection in 2006 compared with 60 per cent of non-Indigenous households in the same statistical area.

We wish to emphasise that the situation in some very remote areas, such as central Australia (not including Alice Springs) where take-up was only 2.2% for Indigenous households at the 2006 census, is even more extreme.

CAT and partners (Swinburne University Institute for Social Research, Central Land Council and the Australian Communications Consumer Action Network) are currently undertaking a longer term research project which is examining the success factors and constraints that affect the take-up and use of computers and the Internet at home level in remote central Australian communities. Please refer to the submission to the RTIRC by our project partner the Swinburne University Institute for Social Research for a comprehensive treatment of the issues being addressed by this project.

Indigenous Communications Program -alternative regional model with funding for ongoing supervision and support

The issues paper makes reference to the Indigenous Communications Program (ICP) (p9-*Access to high speed broadband*). In the Northern Territory, the Internet access component of this program has provided some computer and networking equipment for new or enhanced shared access facilities in remote Indigenous communities, and a limited amount of initial training to people in up to 40 communities to date, through a contract with the Northern Territory Libraries (NTL) Service. Funding for the facilities and training has been shared equally between the recipient communities. In locations where NTL has an established presence, particularly in the Top End, this delivery model benefits from the presence of existing trained and otherwise remunerated library staff, who are then able to provide in situ support and supervision of the facilities, and assist computer users on an ongoing basis. However in other areas, notably in central Australia where there are only one or two libraries in remote communities, the model has limited value because no or very limited funding has been provided through the program for ongoing supervision and support. This has also been a consistent feature and shortcoming of past government programs including Networking the Nation, TAPRIC and Backing Indigenous Ability (BIA).

History has shown that after dedicated building space, ongoing funding for supervision and mentoring is by far the biggest issue in Internet centre sustainability - the BIA round of 2 days of formal computer training for residents in central Australian communities funded and organised by DBCDE took place only 3 years ago, and there is now little to show for it.

We suggest two significant changes to the current ICP approach:

1. Overhaul of the existing funding model to provide greater funding for ongoing supervision and support staffing.
2. Changing the funding distribution model so that funding is not allocated equally to each community.

On the surface equal funding seems to be fair and equitable, but does not suit the reality on the ground. The majority of central Australian communities do not have the infrastructure (including secure community building space) or support for the allocations to make any ongoing difference. In fact, if training was delivered in the majority of the communities in that region, access to computers subsequently would just not exist, making the training largely irrelevant. Likewise the allocation for equipment would have little or no value to a community that does not have any other infrastructure or ongoing support. There are communities where there are computers that no-one uses or are locked away because of this lack of ongoing support. The Shires in this region are aware of this but in most cases do not have the resources to undertake support for such facilities.

We propose that funding be modified to reflect this reality. In our view, a regional model where a person or persons are funded to open, supervise and mentor people's use of the computers and Internet at those existing centres with established facilities for a regular day or days each week, over as many communities as they had the capacity to cover, would have the best prospect of a sustainable outcome, and would also represent the most cost effective use of the available funding. The primary costs would be salary related, accommodation and vehicle costs for those persons.

Assisting people to obtain access

Complementary plans should be developed to support other communities in developing internet capacity over time. This would include the provision of practical administrative assistance to small organisations and individuals who want to access the internet through the NBN Interim Satellite Service. This guidance is needed because the existing application process (like the previous Australian Broadband Guarantee Scheme process on which it is closely modelled) assumes that applicants already have a working knowledge of the concepts involved, including estimating their usage requirements, internet quota control, billing arrangements, comparative features of ISP/RSP offerings, and in the case where they want multiple computers to share the internet – how to go about connecting those computers to the satellite link. The challenge for these organisations and individuals is compounded by the fact that often their only access to advice and guidance is a single public phone line that frequently doesn't work.

Frequently, the information people require includes a combination of administrative and semi-technical information. The advice given need not extend to recommending

particular proprietary solutions, but should include advice on which types of product will work in a given situation.

Hard copy information with illustrative graphical content should be made available wherever possible as part of the advice package, as this format is more suitable for many Indigenous people than material weighted towards text-based information.

The DBCDE Digital Hubs program, which has similar goals though with a more 'how to use computers and broadband' emphasis, has thus far been targeted to the early release NBN fibre rollout locations. Noting that the NBN interim satellite service is now operational, we recommend that the Digital Hubs program should be complemented by an equivalent advice and training service targeted at prospective satellite internet users in remote areas.

Progress since the 2007/8 review

A number of the areas of need that CAT identified in our submission to the 2007/8 RTIRC have not progressed significantly in the intervening period:

Mobile phone coverage

Apart from their obvious convenience of use, mobile phone services are the only voice and broadband capable services that are proven to lend themselves to rapid take-up by individual Indigenous people, as they are relatively free of the administrative and installation related complexities that form one of the barriers to take-up of fixed services. Mobile phones are also commonly shared.

In central Australia it remains the case in 2011 that mobile coverage is very limited, with only 7 of 31 larger remote communities and a small proportion of the approximately 320 outstation communities receiving coverage. While we note that the Minister announced funding for extending coverage to a number of additional central Australian communities in mid 2008, implementation has not occurred in any of the then identified locations to date.

Terrestrial (ADSL) broadband coverage

Of the 7 central Australian remote communities with mobile phone coverage, only Yuendumu and Hermannsburg have publicly available ADSL services¹. Only Hermannsburg has been added to the list since 2008.

Home phone service

¹ Status obtained from the NBN Co Broadband Locator website November 2011

There is no rent free home phone service generally available to people in Indigenous communities.

Quota on ABG and NBN Co subsidised satellite services

While the ABG and now NBN satellite quotas have been increased from 1GB per month to 3GB per month since 2008, this increase has not kept pace with the demand for service and the increased prevalence of image-dense websites, both of which contribute to higher download volumes. This factor affects the population in general, but is particularly evident at shared community facilities in Indigenous communities, where typically multiple users are sharing the same Internet service.

Voice quality criterion for USO/STS services

In 2008, we proposed that in light of emerging and future technologies affecting the quality of voice services in various ways (latency, distortion in satellite and VoIP services), there is a need for a quality criterion to be built into the USO /STS definition, for the particular benefit of non-native-English-speakers including many Indigenous people, and older Australians. While this proposal was supported through the recommendations by the RTIRC at that time (Recommendation 3.1.1), it does not appear that the change has been reflected in subsequent legislation or regulations.

Community Phones as an alternative form of USO public payphone

The provisioning and maintenance of Community Phones for Indigenous communities are currently managed through targeted funding programs administered by DBCDE. Increasingly since 2008, these programs have flexibly fulfilled particular needs that go beyond the stipulated eligibility conditions for USO payphones to very small Indigenous communities of less than 50 residents, which have quite variable service location, relocation and removal requirements. These programs should therefore be continued. Nevertheless, for USO payphones more broadly, Community Phones (of both the fixed network and satellite connected varieties) could be presented as an alternative option to the existing Telstra card phone where new services are being considered, allowing communities to choose the type they prefer.

Characterising NBN applications

Most Indigenous people in remote settlements will necessarily use the satellite service if they connect to NBN. These people will be affected both as clients of professional applications (particularly health and educational), and as direct users of consumer applications.

Many people who have prior experience with satellite internet services will have already experienced the effects of latency and limited and variable speeds and quotas on the experience, either as professionals or consumers. This is particularly the case with real time interactive applications such as the range of video conferencing based services and VoIP.

While it is clear that NBN satellite will be dimensioned to guarantee a much lower level of contention than existing commercial satellite services, just how that translates to the quantitative and qualitative performance of applications on NBN has not been publicly addressed. Performance has been expressed in terms of low level engineering factors such as latency, jitter and loss whose impact on the performance at individual application level will vary widely.

Many tele-health and distance education applications exist already and are familiar to professionals working in those sectors, and their performance over NBN satellite will be critical to deployment decisions. At consumer level, effective uptake of interactive consumer applications will also depend as much on their performance as their features.

While there will need to be live application pilots on the actual NBN satellite service to confirm their performance, we recommend that NBN Co in conjunction with other providers take steps to characterise the performance of a suite of common and important applications in advance for planning purposes, using a combination of calculation and controlled empirical trials on existing or simulated satellite services. Such information if well publicised will lead to a higher level of planning confidence and more rapid take-up, and would seem to be in the interest of providers (NBN Co, RSPs, application developers and suppliers) and users alike.

More pressingly, there is an argument for doing this for the Interim Satellite Service, given that this service will be in place now for the next 4 years before the NBN satellite service becomes available.

Need for a public web-based comprehensive mobile coverage map

Increasingly, mobile phones are being seen as a substitute for fixed line services, and in particular USO payphone services. This trend is visible in the phone use behaviour of the community at large, and is progressively being reflected in government policy.

For example, the recently circulated DBCDE *Universal Service Payphone Location Rules* consultation draft presents criteria for the placement of public payphone services, including a criterion that *the extent to which there is adequate mobile phone coverage in the relevant area where [a] payphone is proposed to be located [or removed]* must be taken into account in assessing whether a payphone is required at that location. The draft also includes provision for the Universal Service Provider to maintain a publicly accessible web-based register of the location of all USO payphones, which we endorse.

This is particularly relevant to people (including Indigenous people) travelling in remote areas, where reasonable proximity to a phone service of some kind is necessary in the event of breakdown, accident, adverse road conditions or other situations.

In light of this growing use of the presence of commercial mobile services to justify the dilution of fixed line Universal Service Obligations, we believe that the time has come where it is important that there be a publicly accessible web-based system showing in geographic (map) form the areas of Australia that are deemed by ACMA to have adequate mobile phone coverage, so that anyone involved in making representations or decisions about USO services can be well-informed. Existing individual mobile carrier public web maps of this type are often of poor quality, low resolution and not necessarily up to date. Furthermore, it is a cumbersome task to compare the maps for different carriers and service types.

Such a map would also be of great public value, and would directly assist in emergency call coverage planning, since all mobile handsets have the ability to select any available carrier network if using the 000/112 service.