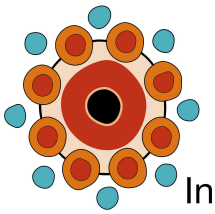

IRCA
Indigenous Remote
Communications Association

IRCA Submission to the Regional Telecommunications Inquiry 2015

CONTENTS

EXECUTIVE SUMMARY

The Indigenous Remote Communications Association (IRCA) is the peak body for remote Indigenous media and communications, representing the unique communication needs of Indigenous people and communities throughout remote Australia (Further information on IRCA in Appendix 1). This constituency is among the 3% of Australian households which will receive a satellite NBN solution. IRCA endorses the submission by the Broadband for the Bush Alliance, to which IRCA contributed.

IRCA strongly believes that the NBN is only part of the solution – not the full solution. Remote Indigenous people remain the most digitally excluded part of the Australian population (ABS, 2011; ACMA, 2008) and this is unlikely to change with current infrastructure planning and policy.

There are about 130,000 Aboriginal and Torres Strait Islander people living in over 1,100 discrete communities across remote Australia, with the employment to population ratio averaging about 45%. Half of this population is under 24 years old. Over 75% of remote Indigenous households still have no access to Internet (less than in Sudan[1]), with the majority of these still without basic telephony services. Remote Indigenous people have most to gain from being connected to address the widening digital divide.

Effective communications is essential to the ongoing viability of remote Indigenous communities. In the rapid transition to e-government and online service delivery and retail, communications reduces the tyranny of distance by providing remote people with access to services that urban populations take for granted (e.g. banking, health, education, libraries, news, entertainment, shopping). Effective communications expand the opportunities for Indigenous social and economic development, enterprise, employment and connection to the broader economy. It enables dispersed families to remain connected and Australia's unique Indigenous culture and languages to continue and develop.

Equivalent levels of affordable access are the key to reducing the digital divide and closing the gap on Indigenous disparity. For many remote Indigenous people, a home telephone or mobile telephone service is the highest priority to enable unmediated communications with services and social networks across vast remote regions. Yet this need for basic telephony infrastructure is not being addressed by the NBN.

As the previous RTIRCs identified (and numerous other reviews, e.g. Telstra, 2013), mobile access is the primary area of demand for remote Australia. The huge unmet demand has been identified by the audit undertaken by Department of Communications in 2014 prior to the Mobile Black Spots Program (MBSP). IRCA welcomes the second round of the MBSP program but notes that the lack of fibre optic and limitations of the program to areas of sustainable market demand have limited the possibility of many remote communities receiving mobile services under this program. Further, the NBN satellites and products have not been designed to support backhaul of mobile, a major oversight. More needs to be done, including expansion of terrestrial networks and scalable mobile equipment (e.g. micro-cells) to reduce capital and operational costs for increased sustainability. Low-cost technologies are being used in other countries but telco preferences and ACMA licensing currently limit their potential use in Australia.

Terrestrial broadband delivery (via fibre optic or microwave) is needed, rather than satellite backhaul delivery, for remote areas with high data use in order to reduce latency and congestion, improve reliability, provide future capacity and address current infrastructure deficits. Terrestrial backhaul is particularly important in northern Australia where communities can be cut off for up to

[1] Ref: http://crc-rep.com/about-remote-australia

6 months of the year due to monsoonal weather and are unable to receive any satellite-delivered communication, including emergency information (by internet, radio or TV), during critical periods of cyclones and storms due to rain fade.

IRCA also urges that existing fibre networks in remote areas (many installed through previous government-funded broadband programs) be linked into the NBN and be built upon to extend the reach of terrestrial broadband. Further, there should be a terrestrial network expansion program during the 15 year lifetime of the LTSS. Data about this infrastructure should be publicy avialable.

IRCA urges a regional telecommunications policy approach to recognise the unique challenges and needs across remote Australia. A whole-of-community (or region) approach can identify the high-demand consumers and applications which enables prioritisation, cost-sharing through aggregated use, and tailored solutions to reduce the risk of congestion and ensure ongoing performance. Partnership approaches are needed to address specfic needs of communities and regions, with State/territory governments, local government and regional agencies as active partners in further extending the reach and outcomes of the NBN. The current Network Extension program puts the whole cost to the consumer instead of a shared cost approach.

IRCA sees the rollout of the National Broadband Network LTSS as a critical opportunity to promote digital engagement of remote communities. This requires more to be done in the areas of mobile expansion, last-mile distribution, access facilities, digital literacy, skills development, technical support, cost-sharing mechanisms, and development of culturally relevant content and applications. It has been found that where mobile and internet access is established, remote people are rapid adopters (Brady & Dyson 2009; Kral 2010, Telstra 2013). The 2013 Telstra research into digital inclusion found 5 key barriers to digital inclusion: 1) Infrastructure (network reach); 2) Hardware in the home; 3) Affordability (of equipment and services); 4) Propensity (including awareness and relevance); and 5) Appropriate web services (need for user-friendly interfaces, especially for people with limited English and text literacy). IRCA is disappointed that question relating to local access and digital literacy have not included in this review, as infrastructure is clearly only part of the challenge of digital inclusion.

IRCA is happy to provide further documentation in support of this submission upon request. We look forward to the outcomes of this review.

RESPONSES TO RTIRC QUESTIONS

Q1. Do people in regional Australia believe their reliance on telecommunications differs from those in urban areas? How does it differ and can you provide examples?

Remote Australia is increasingly reliant on telecommunications and ICT for accessing essential services that are physically accessible and taken for granted in other parts of Australia. Typically, people in remote communities do not have access to many key services (hospitals, specialists, post office, banking, secondary and tertiary education), retail and entertainment (movies, concerts etc) due to remoteness and small populations. Market failure limits their choice of telecommunications services and providers, especially due to lack of mobile network coverage. As more government services move online (health, education, training etc), quality internet becomes more critical to enable access[2].

Despite the , Indigenous people choose to live in these communities in order to maintain connections with custodial country and homelands, family, social and cultural networks and customs. While travel to and from regional centres for services and visits is common, relocation is rarely an aspiration due to language differences, marginalisation, and higher incidence of social issues resulting from limited employment, housing shortage, alcohol and discrimination. While remote Indigenous communities and peoples vary widely across Australia, there are unique needs and challenges for many remote Indigenous Australians. These are outlined in Appendix 2.

In general, Remote Indigenous communities have different needs, household make-up, socio-economic conditions, environmental challenges, and usage patterns to other households in Australia. More community-wide and regional solutions are needed such as WiFi sharing to enable pre-paid services using mobile devices and shared models of access across a region. Very mobile populations are less likely to be house or office-based.

There is low digital literacy in most remote communities due to ESL, limited access to Internet and ICTS, and lack of relevant content and services. However, where access is provided, there is typically rapid uptake of mobile and ICT use.

Social networks are more dispersed meaning less opportunity for direct social interaction, requiring more online communications. The same issue applies for service delivery to dispersed remote client base.

Telecommunications is critical to provide safety (e.g. distress calls, notification to family/friends etc) when travelling in remote areas. Emergency information and weather information is critical in areas with high cyclone prevalence and for people travelling on remote dirt roads and at sea.

Q2. For those users already connected to an nbn network service, has the service met your expectations?

No. The ISS was over-subscribed and became slow and unreliable, according to many of the remote users. It was good that additional capacity has been recently added (6000 extra services), but will has not adequately address the need of remote consumers prior to the LTSS availability.

The 9000 services provided under NBN Satellite Support Scheme (NSS) uses a different satellite service provider (previous ABG supplier), service quality, download limit and pricing structure. This was a poor policy decision as it provides a lower-grade interim service even to the ISS. Even

[2] Under Government 2.0, government services are moving to on-line delivery wherever possible.

though it is an interim arrangement, this is inconsistent with the model of NBN providing equitable quality and price of services across Australia.

For most remote and rural towns, NBN seems a very long way off and yet the need for reliable internet is immediate and more critical to business and service provision needs. There is a lack of transparent information about when NBN services will be delivered and the technology that will be applied.

Q3. Having regard to the technical solution likely to be used in your area, do you have views on the adequacy of that solution in terms of meeting needs now and into the future?

- Without the ability to test the NBN satellite solution's capacity to support high-bandwidth two-way applications for tele-health, education, videoconferencing, mobile, VoIP and other applications, it is difficult to predict the adequacy of the service.

- The lack of backhaul infrastructure (especially fibre optic and/or microwave) limits expansion of mobile coverage, videoconferencing and other two-way applications. The LTSS is not currently designed to enable expansion of mobile coverage, which is a key area of demand in remote areas.

- What is less difficult to predict is the rapid increase in usage of Internet and communication services once the backhaul is in place. Therefore the key issue is sustaining quality of service over the 15-year life of the satellite, given the relatively fixed capacity of the spot beams. There will be a particular issues with heavy users of on-demand movies and other large content, requiring a management systems that prevents this impacting on quality for other users (this is an issues with the ISS).

- The 15 year life of the LTSS requires an incremental process of terrestrial network expansion to address increase in usage over time.

- IRCA suggests that a fibre optic network expansion program be implemented in regional Australia during this period (beginning by Year 5 after launch) to take up the demand for extra capacity and high-speed services, including mobile expansion, and to maintain the quality of service for other satellite users.

- Broadband services should be "high-speed, symmetric, affordable, reliable and ubiquitous" (Dr Ian Opperman, CSIRO). Broadband delivery to remote areas should enable symmetrical upload/download and sufficient speed for two-way real-time applications such as videoconferencing. While this will be possible with fibre and wireless areas, the satellite does not have symmetric products available.

- In Alice Springs there is no clear information about NBN rollout dates even though some cabling is apparently being rolled out currently. It seems that most of Alice Springs will be fibre-to-the-node, however this does not extend to the southern parts of Alice Springs south of the gap. In particular this includes key research and educations sites at Desert Knowledge precinct, Yirara College, CSIRO, and the airport. It also excludes a major new sub-division Kilgariff which under NBN policy should be considered a green field estate with an FTTP solution.

Q4. Irrespective of the adequacy of your local access, are there issues with backhaul or long distance carriage that impacts on your use of telecommunications services?

- The ADSL and mobile services in Alice Springs are very slow and patchy, with high congestion and regular outages
- As outlined above, ISS and NSS services are slow and unreliable to the point of being unusable at peak use times. This is with nearly a year to go before the LTSS is available. Other ABG services and Telstra 2-way sat services (installed in early 2000s) are also very slow and unreliable. It is currently difficult to find an affordable quality satellite service.
- Satellite backhaul is not being seen as a viable delivery of 4G quality mobile services, despite this being common in other countries. NBN have yet to clarify if or when this will be possible via the LTSS.
- The use of high-speed microwave terrestrial backhaul and existing legacy fibre (through arrangements with Telstra) could be used to extend NBN and mobile services into remote areas from existing nodes.

Q5. For users living in areas without mobile coverage, what priorities, other than specific locations, do you consider should be recognised in future efforts to improve coverage?

- Program should include (and fund) backhaul options other than fibre, such as via microwave and satellite.
- Micro-cell or pico-cell technology should be encouraged for small communities, using existing infrastructure such as broadcast towers and facilities. This would reduce the capex and opex and enable scalable infrastructure and affordable services at a community level. Quality of Service requirements may need to be varied accordingly.
- Priorities should be:
    - Level of availability of home telephony services
    - Level of access to Internet services at home or via a community internet access facility
    - Areas of population density
- Requiring a 10-year business model for sustainable delivery by the telco prevented the $100 million Black Spots program reaching most remote Indigenous communities or sites without existing fibre backhaul.
- The Government should retain the 700Mhz spectrum for remote Australia and use this to provide backhaul and last-mile delivery options (has better penetration within communities than WiFi frequencies)
- Mobile extension programs such as microwave links to enable local repeaters in nearby communities or homelands should be eligible.
- Existing Telstra DRCS/ HCRC towers could potentially be used for backhaul or for providing local mobile repeaters or ‘hot spots’

Q6. What opportunities do the mobile network industry see for extending coverage in regional Australia and increasing investment in mobile networks?

Not applicable

Q7. Do you have any views on co-investment approaches that might help to improve the broadband technology outcome in your area?

- Co-investment models have been demonstrated to work. Examples include:
  - the Ngaanyatjarra Lands Telecommunications Project (see TJA article on www.irca.net.au/images/stories/documents/186-1072-7-PB.pdf), co-funded by Australian Government under CCIF program;
  - the $110million mobile expansion program in WA (2012-3);
  - the NT government's joint project with Telstra and mining companies for $34million fibre extension to Gove in Arnhemland (2010);
  - NT Government/ Telstra mobile and ADSL rollouts to remote communities (2013);
  - TSIRC/TSRA/ Telstra upgrade of mobile telephony in Torres Strait islands (underway);
  - The 2015 Mobile Black Spots program which resulted in over $240 million of leveraged investment by states and telcos;
- See the B4BA policy paper on partnership models: http://broadbandforthebush.com.au/wp-content/uploads/2013/05/B4BA_Remote-Partnership-Model.pdf.
- Communications services should be tailored to meet local needs. Regional communications strategies provide useful information such as needs analysis and identify stakeholders, including those with high-use communications needs (clinics, police stations, schools, training facilities, access centres/ libraries, industry, research centres). They also provide a level of ownership in the solution.

Q8. How might new applications and services that utilise mobile networks for voice and data transform the way you live and work?

- Apps on smartphones and tablets are being increasingly used by Ranger land management programs for flora and fauna surveys and GIS mapping, School truancy officers, interpreters, community journalists and many other remote workplaces.
- Remote monitoring of essential service facilities (generators, bores, water tanks, broadcast facilities, security devices etc.).
- Cloud-based storage and data backup is increasingly important in remote communities.
- Access to central workplace servers from any location.
- Community organisations often have dispersed workforce using cloud-based project management and collaboration tools.
- Where there isn't mobile coverage, mobile devices can be used via WiFi or LANs to access internet and local servers
- VoIP, Videocon (e.g. skype) and messaging are effective and increasingly normalised means of communication where connectivity and quality allows. Cost of data use via pre-paid mobile

currently makes these services expensive to use over 3G/ 4G networks however, and there are no data only mobile plans available from Telstra to enable VoIP as a primary service.

Q9. What communications barriers have you experienced in expanding or operating your business or providing services, such as health or education? Have you been able to overcome these barriers and if so, how?

- Key obstacles can be summarised under 4 headings:
  - Affordability
  - Accessibility/availability
  - Awareness (digital literacy, knowledge on services available)
  - Appropriateness (of technologies, interface, content, ESL users)
- Inconsistency of internet connections can make it difficult for workers/users to complete online tasks and access services.
- For regional service providers, the communication barrier is primarily at the user/client end in remote communities where there is limited access to phone, mobile or internet/email.
- Accessing repair and maintenance and technical support are key issues in remote areas. Over the phone support is limited by language barriers and technical understanding.
- There is a growing digital divide as people in urban areas and large towns get high-speed services, leaving remote and rural users even further behind in digital literacy and access to the digital economy, creating a two-speed economy.
- Ways to overcome key obstacles to digital inclusion include:
  - Community WiFi hubs – enables affordable access including pre-paid use;
  - Online access centres - provide affordable access, local support and training facility;
  - IT training and support programs - skills development and awareness of online tools, applications and services;
  - Relevant content and apps.

Q10. What communication functions (e.g. speed, mobility, reliability, data, etc) would best suit your needs, noting the limitations of each technology (e.g. mobile, wireless, satellite, fibre)?

- Mobility and reliability are critical, followed by speed and download limits.
- Therefore, effective means of last-mile distribution of satellite need to be considered (via mobile, WiFi, micro-cell mobile or WiMax) that are scalable to the local population and coverage area needs.

Q11. Do we need to continue to guarantee the standard telephone service for all (or only some) consumers, and if so, to what extent?

- Yes, remote households are still highly reliant on the STS due to lack of mobile or alternate services

- Public phones also need to be maintained in remote communities.

Q12. Are there new or other services, the availability of which should be underpinned by consumer safeguards?

IRCA has concerns that there are efforts to dilute the Universal Service Obligation at a time when the safety nets need to be expanded to mobile, broadband and pre-paid services.

These have not been updated to reflect current telecommunications technologies and needs, with recent reviews of the USO having very limited scope and the abolition of TUSMA. We strongly believe the USO should include mobile telephony, pre-paid services and internet access in remote areas where commercial market imperatives fail. Internet, mobile services and pre-paid telephony services could be included under a revised USO- see ACCAN discussion paper.

We also believe that the Extended Zones contract could be expanded to mobile services to provide untimed pricing for people to connect to regional service centres and neighbouring regions. Most telecommunications infrastructure in remote Australia is currently owned and maintained by Telstra. If Telstra were to lose the USO or EZ contracts, would Telstra continue to provide site maintenance for remote facilities? Telstra could re-focus its attention on service delivery in urban areas where profits are highest and lose interest in remote areas. This is a major risk for remote areas, with a low likelihood of another telecommunications provider having the same interest (or experience) in remote service delivery without owning the infrastructure.

Q13. What standards should apply to your services? How might they best be enforced?

- The USO and Customer Service Guarantee is still needed in remote areas where there is a high reliance on STS and public phone services. Further, the USO should be expanded to include

- The Extended Zones costing needs to be retained to ensure affordable services from remote communities to regional service towns and between towns/communities in neighbouring zones.

Appendix 1: BACKGROUND ON IRCA

IRCA was founded in 2001, and has been operating now for 14 years. It advocates on behalf of remote Indigenous people with regard to media and communications services. IRCA specifically represents over 147 remote RIBS communities in Australia, supported by eight Remote Indigenous Media Organisations (RIMOs):

- Pitjantjatjara Yankunytjatjara (PY) Media
- Ngaanyatjarra Media
- Pintubi Anmatjerre Warlpiri (PAW) Media & Communications
- Pilbara and Kimberley Aboriginal Media (PAKAM)
- Top End Aboriginal Bush Broadcasting Association (TEABBA)
- Queensland Remote Aboriginal Media (QRAM)
- Central Australian Aboriginal Media Association (CAAMA)
- Torres Strait Indigenous Media Association (TSIMA)

IRCA also supports Indigenous Community Television (ICTV), a dedicated TV service by and for remote viewers. With ICTV, IRCA co-manages and moderates the online remote media showcase portal IndigiTUBE (www.indigitube.com.au).

IRCA facilitated the first 'Broadband for the Bush' forum which led to the establishment of Broadband for the Bush Alliance, an organisation committed to the digital inclusion of remote and rural Australia, which IRCA now auspices. IRCA is a key organiser of the annual Broadband for the Bush Forum and, with ACCAN, the Indigenous Focus Day.

BACKGROUND ON THE REMOTE MEDIA SECTOR

Remote Indigenous media and communications organisations have developed expert knowledge of remote broadcasting and media through over 30 years of experience in remote Australia. We have embraced convergence to reach over 110,000 remote Indigenous people via licensed radio, TV and online platforms. We deliver our services in local Indigenous languages, and via local Indigenous people employed in media jobs based in local remote communities. These services are key enables of all service delivery in remote communities.

Our job is communication:

- Communicating on matters that are relevant to local communities through news and interviews;
- Communicating through oral histories and documentaries the importance and relevance of culture and language for young and old people;
- Communicating health, social and educational messages from government;
- Communicating the value and richness of Indigenous culture to Australian audiences.

Our organisations provide *essential services* in remote Indigenous communities[3]. In many communities our radio services are the only radio service available. In most other communities we are one of only two or three radio services. With only a few exceptions we are the sole Indigenous radio service in language in our communities. We are vitally important for news, weather reports, safety messages, and government information messaging. Together we employ over 250 people in remote media jobs, of which local Indigenous people hold 207 jobs.

[3] Term used in *Digital Dreaming* report 1999, Productivity Commission report 2000, *Community Media Matters* report 2007, Stevens review 2010

Appendix 2: UNIQUE CHALLENGES FOR REMOTE INDIGENOUS COMMUNITIES

Some of the unique challenges include:

- Low socio-economic conditions with primary income for most people from CDEP or welfare;
- Higher cost of basic items such as food as fuel, leaving little disposable income;
- Limited access to secondary education (many schools only to primary level);
- Indigenous languages often spoken at home, with English a secondary language;
- Limited access to banking or government services, such as post office, police, hospital, child welfare or youth services, legal support;
- Limited employment opportunities or work options (being further eroded by abolition of CDEP);
- Limited adult education, training opportunities or access to library services;
- High incidence of chronic disease (diabetes, renal failure, heart disease, mental health disorders etc) and significantly lower life expectancy (up to 20 years);
- High rates of incarceration with young Aboriginal people up to 28 times more likely to be detained than non-indigenous juveniles (source: ATSIA Committee Inquiry);
- Lack of housing, leading to overcrowding and social issues[4];
- Indigenous people often live outside of a house, making fixed telephony or media services inappropriate;
- Unreliable water and power supply[5];
- Long unsealed roads with high incidence of accidents and wear and tear on vehicles;
- Roads subject to flooding and closure, disrupting supplies and service provision;
- Reduced local governance and community input into decision-making;
- Reduced municipal funding for local maintenance equipment and materials;
- Outsourced essential service provision to external service providers and contractors.
- On-line services are needed which recognise the linguistic and cultural diversity of indigenous Australia;
- Face to face or oral communication is more appropriate than written/ text-based communication. A lot of information is conveyed in body language and facial gestures;
- Highly dispersed and mobile populations, regular changes of address/community, with extensive travel for family, cultural and 'sorry' business.

These factors impact on the selection of appropriate communications technologies and media service delivery models.

[4] Shared housing also makes billed phone services problematic as many people use the phone but the bill is an individual's name. Pre-paid phone services are not currently covered under the USO with many requests for installation not met as a result.

[5] Pre-paid power card meters have been installed in Indigenous households in WA communities.

Appendix 3: ACRONYMS

ACMA	Australian Communications and Media Authority
DoC	Department of Communications
DPMC	Department of Prime Minister and Cabinet
DRCS	Digital Radio Concentrator System (microwave telephony)
DTH	Direct-to-home
HCRC	Higher Capacity Radio Concentrator (microwave telephony)
IAS	Indigenous Advancement Strategy
ICT	Information and Communications Technology
ICTV	Indigenous Community Television
IRCA	Indigenous Remote Communications Association
IPTV	Internet Protocol Television
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
ISS	Interim Satellite Solution
LTSS	Long-term Satellite Solution
NBN	National Broadband Network
NSS	NBN Satellite Subsidy Scheme
PAW Media	Pintubi Anmatjere Warlpiri Media and Communications
PAKAM	Pilbara and Kimberley Aboriginal Media
PY Media	Pitjantjatjara Yankunytjatjara Media
QRAM	Queensland Remote Aboriginal Media
R&M	Repairs and maintenance
RIBS	Remote Indigenous Broadcasting Service
RIMO	Remote Indigenous Media Organisation
RSP	Retail Service Provider
SBS	Special Broadcasting Service
TAFE	Technical and Further Education
TEABBA	Top End Aboriginal Bush Broadcasting Association
TSIMA	Torres Strait Islander Media Association
TUSMA	Telecommunications Universal Service Management Agency
USO	Universal Service Obligation
VAST	Viewer Access Satellite Television
VoIP	Voice over Internet Protocol
WiFi	Wireless Fidelity
WiMax	Worldwide Interoperability for Microwave Access