

DIGECON
RESEARCH

Regional
Telecommunications
Independent Review
Committee Submission

July 2015

RTIRC Submission

The importance of telecommunications to regional Australia has been undeniable since the development of the Morse radio transmitter-receivers developed by Albert Traegar for John Flynn's development of the flying doctor. The pedal variety can even be thought of as the first "mobile phone."¹



Figure 1: Traegar Pedal Radio, Alice Springs

As recently as 1968 the view of the Australian Government was that these radio services were still the solution for the most remote parts of the continent. In a Cabinet submission relating to changing tariffs for telephone connection in rural areas the Post-Master General wrote:

In considering any liberalisation of the current conditions it is necessary to exclude the vast remote areas served by the radio communications systems of the Royal Flying Doctor Service and other Outpost radio networks. The capital cost of serving these sparsely settled areas with conventional telephone facilities would run into more than \$50m Strong pressures will continue to be exerted by those excluded but it would exceed all reasonable bounds for the Post Office to bear the huge cost of provision and maintenance of normal telephone services in such areas, especially as there would be the prospect of only very small financial return from most of the services. No other country in the world with anything like comparable areas accepts such a responsibility.²

Subscribers in the most remote areas of Australia were later provided with telephone services with the deployment of the Digital Radio Concentrator System developed at Telecom's own research facilities in the mid-1970s.³ One view is that Telecom Australia only made this investment in an attempt to forestall the Australian domestic satellite, AUSSAT.⁴

The next major development was a contribution by the Government of \$150 million to Telstra to upgrade the capacity of the service to enable untimed local calls in the extended zones. The agreement came into effect in on 1 January 2001.⁵

Outside of these developments the state of regional telecommunications came into focus through the process of privatisation of Telstra. Parliamentarians representing regional constituents were concerned that a private sector operator would reduce the service quality in regional areas. Two reviews chaired by Mr Besley and Mr Estens occurred before full privatisation and both reported inadequacies of existing services, not just concerns for future services.

To obtain support for privatisation the Government acted on the recommendations of those reviews.

As a means of securing future action the Bill that created the Regional telecommunications Review process was introduced, together with the provision of a \$2 billion fund, the proceeds of which were to be spent on future upgrades. That fund was subsequently used as part of the funding of NBN Co, including the fixed wireless and satellite components.

The NBN funding is the single largest commitment ever made by the Commonwealth Government to services in regional Australia. While the project received acknowledgement by the most recent RTIRC (Chaired by Ms Sinclair) it has not been a recommendation of any previous review.⁶

The fixed wireless component of the network, untouched by the recommendations for a “Multi-Technology Mix”, has recently been recognised as a world leading wireless broadband network. Ovum research director David Kennedy noted “Our research demonstrates the combined technical performance with high levels of affordability of the nbn™ fixed wireless network make it a world leading broadband service when compared to other overseas wireless operators.”⁷

This extensive introduction is intended to identify that the issues of regional telecommunications have been well explored in the past and that the most significant developments have occurred outside of the review process.

Notwithstanding that history there are two communications requirements that are not currently well served; these are communications in remote communities (mostly indigenous communities) and the communications requirements of broad acre agriculture. Addressing these needs is the first section of the paper.

The other outstanding issue remains confusion about the purpose and operation of the existing universal service arrangements and what the future arrangements should be. That is the second section of the paper.

The final section outlines suggestions for the committee on recommendations it might make about future inquiries.

¹ See http://www.pim.org.au/cent_pedal.htm

² NAA: A5868, 360. Cabinet Submission, 11 November, 1968. Provision of Lines for Country Telephone Subscribers. P.3. Cited in AAPT submission to the Senate Committee Inquiry into the provisions of the Telecommunications Legislation Amendment (Regular Reviews and Other Measures) Bill 2005
http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed%20inquiries/2004-07/regularreviews/index

³ See <http://www.coxhill.com/trlhistory/history/intro.htm> and
<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=59381>

⁴ See Ian Reinecke and Julianne Shultz's *The phone book : the future of Australia's communications on the line* Trove reference <http://trove.nla.gov.au/version/45017309>

⁵ See the Australian Communications Authority review of the program from October 2002
http://acma.gov.au/webwr/telcomm/universal_service_regime/universal_service_obligation/rural_remote/ezprogramupgrade.pdf

⁶ The reports and government responses to the Besley, Estens, Glasson and Sinclair inquiries can be found at <http://www.digecon.info/history006.htm>

⁷ NBN Co Media Release *Broadband opens up business opportunities in the bush* 16 July 2015
<http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbns-world-leading-fixed-wireless-service.html>

Outstanding Telecommunications Needs

Fixed line telephony (or its functional radio equivalent) is generally available to all Australians. Following the completion of the National Broadband Network IP data connectivity of at least 25 Mbps downstream and 5 Mbps upstream will be available for all Australians.

Telstra CEO Andy Penn has announced plans to spend \$5 billion over the next three years to extend 4G mobile coverage to “99% of the Australian population.”⁸

The method of referring to coverage as a percentage of the population served dates back to the original coverage obligations placed on Australia’s three GSM licences in 1991.⁹ As it also includes the use of in car kits it gives a misleading impression of the geographic handheld coverage, a situation that the Glasson chaired RTIRC recommended be clarified.

Despite this extensive coverage, lack of mobile coverage remains the most significant communications issue. Two particular instances are of importance, small communities and agriculture.

Mobility and agriculture

Most Australians can use their mobile phone at home and at work and traveling between the two. That isn’t the case for most people involved in agriculture.

Many Australians benefitted from previous satellite phone subsidy schemes, but still don’t enjoy the utility of a modern mobile. The investment in mobile black spot programs is unlikely to fully meet the needs. In any case only about a quarter of Telstra’s announced coverage increase involves funding from the Government black spot subsidy scheme.

Adding a few more base stations on highways or close to towns won’t address areas shaded by hills or trees.

The needs of this sector are niche and best addressed by a new solution. The development of photovoltaic cells, batteries and light radio antennas suggest that wider coverage on a specific area could be cost effectively achieved by the deployment of a number of smaller cells configured to give maximum coverage.

This is the kind of innovative approach that occurred when Telecom developed the DRCS at TRL. However, thirty years of neoliberal orthodoxy has rendered the Australian R&D capability to a hollow shell. Even our much vaunted development of WiFi is more an accident than design.¹⁰

Instead of using old solutions for the task (more black spot programs) the Government could and should use an RFI process to invite carriers and/or equipment providers to propose a jointly funded project to develop and deliver a different model for mobile network extension.

Remote Indigenous Communities

A different challenge confronts remote communities.

Submissions from these communities tend to focus on the need for their own fibre connection and the need for a mobile solution.

These communities are unlikely to be connected with a high capacity fibre link and rely instead on satellite links. The deployment of fibre is expensive and is particularly expensive if deployed as a project on its own.

Fibre extension should be considered in conjunction with any other civil works. For example if new road infrastructure is built or there is a connection to an energy grid.

A more radical but viable proposition is to consider the building of fibre routes to replace the existing wireless routes through central Australia as a multi-year project (possibly as long as fifteen years) with staged connection.¹¹ Such an approach should include the training and utilisation of local labour in all the construction tasks.¹² The end point of the project could well be a new trans-continental link from Brisbane to Perth.

While not connected to fibre a community mobile solution is an undesirable proposition, as the latency inherent in the backhaul is not conducive to mobile standards.

Once again, innovative solutions may be available.

A localised communications solution that utilised WiFi capable mobile phones running voice over IP would provide a solution that provides local communications within the community without use of the satellite link and at the same time provide addressable devices for calls from outside the community, and use in towns and cities.

A bespoke solution developed through an RFP process is more likely to deliver an outcome than a process of tendering for elements of a pre-designed outcome.

Conclusion

These are areas of work that should have been priorities for any Government. However, there is an interpretation that because they will be the subject of reviews, or because they have been (through “black spot programs”) the cornerstone of policy commitments, the Department has not dealt with them fully as policy development priorities.

There may be other developments that we are not aware of over recent years. The committee needs to make a substantive recommendation that requires the Government to respond with policy developments.

⁸ Andy Penn speech to CEDA 9 July 2015 <http://exchange.telstra.com.au/2015/07/09/connecting-with-the-future/>

⁹ The condition was to service no less than 80% of the population by 31 December 1997 see <http://www.digecon.info/history001.htm>

¹⁰ The 2011 book *The Innovation Journey of Wi-Fi* makes no mention of Australia or the CSIRO that I can see <http://trove.nla.gov.au/work/37974711>

¹¹ As the Productivity Commission noted in its Public Infrastructure Inquiry we have an obsession with “big” projects. So the current approach would be to think of constructing one long route in one hit – like the Broadband Black spots Program. It need not be done that way since the cable does need to terminate at repeaters and switches along the route.

¹² The author recalls meeting a group that was keen to engage in NBN construction in Darwin that was a construction firm that was formed for the purpose of engaging indigenous Australians in the telecommunications construction industry. Unfortunately he cannot remember their name.

Universal Service Obligation

More words have been devoted to the discussion of the Universal Service Obligation and the related construct of the availability of the standard telephone service than such a relatively simple process should require.

The first legislative prescription of a USO occurred in the 1991 telecommunications reforms. This followed a costing exercise conducted by the BTCE.

Prior to that the only obligation was a general one on Telecom to strive provide service to anyone who reasonably required it. As Senator Richard Alston noted in 1990:

The relevant legislative provisions were vague and their interpretation has largely been left to Telecom which has jumped at the chance to assume a number of self-defined CSOs.¹³

Telstra outdid even its predecessor in inventing a history for the USO, writing in one submission that the principle of universal service had been first adopted in the Community Telephone Plan of 1960. It is a complete fabrication.¹⁴

The approach to the USO suffered through the obligation being created to provide a service without specifying the price or the quality of service required. As a consequence the USO (and its cross-subsidy) was joined by the CSG and retail price controls. In addition the underlying concept of a standard telephone service has multiple uses within the legislative regime.

It does not help that the USO is widely regarded as something actually used by people acquiring service, rather than being merely a “carrier of last resort” arrangement. Nor does it help that the USO is described as a means to address a “market failure.” It is not, it is a means to address an equity issue that might arise from a fully effective market structure.

The creation of the NBN has created an opportunity to break out of this mindset. However, need to deal with the USO through the migration occurred at the same time as the Government was trying to close an initially \$4 billion valuation gap in the valuation of the Telstra-NBN agreement. As a consequence a very generous USO arrangement was entered into as part of closing what ultimately was a \$2 billion gap.

The “universal service” isn’t actually universal in the wider construct of the USO plus CSG plus retail price controls. The CSG standards vary by geography and the retail price controls did not in general mandate uniform pricing, but they did mandate uniform caps.

The retail price controls have been repealed.¹⁵ A major contribution to the ability to repeal the controls is that all the input services to the controls are now based on cost based access prices. (Original version of the Wholesale

Line Rental (**WLR**) and Local Call Service (**LCS**) were based on a Retail Minus methodology).

Intriguingly the ACCC is persisting in determining geographically averaged prices for the WLR and LCS services as well as the Line Sharing Service (**LSS**), yet persisting with de-averaged prices for the Unconditioned Local Loop (**ULL**) and wholesale ADSL.¹⁶

Despite the access price de-averaging for broadband, currently no provider appears to offer geographically differentiated prices.

The Labor Government NBN policy established a universal price structure for access, however this was only established through the Statement of Expectations. The Bureau of Communications is currently undertaking a study on means for implementing an explicit external cross-subsidy for NBN services in “non-commercial areas”. DigEcon Research has submitted to that inquiry a paper indicating reasons why any such approach will be a poor public policy outcome. That paper is provided to the RTIRC together with this submission.

The Glasson committee proposed a completely different construct for the objective of a Government undertaking to ensure the adequacy of telecommunications services. The proposal included in Part 3 of that committee’s report identified that the Government should by instrument determine a minimum standard of service that should be available to citizens – that standard to be able to be designated separately by geography.

Once the Communications Service Standard was established the Government had to as a separate task ensure that the services specified in the standard were indeed available.

The proposal as described remains the most effective way to replace the existing USO arrangements.

The Glasson committee reported in September 2008 before the close of tenders for the NBN, and the Government responded in March 2009 before the announcement of the revised NBN proposals in April 2009. The Government response to the proposed new arrangements (especially recommendation 3.1.1) was:

The Government agrees with the Committee that this recommendation should not be considered until after the outcome of the National Broadband Network process is fully known. This will enable outcomes of the process to be factored into the Government’s consideration of this recommendation.¹⁷

The Sinclair report made no general USO propositions. It did however recommend (4.1):

The principle of a uniform national wholesale price for like services across technology platforms is essential on an equity basis and should be a fundamental tenet of future policy in this area.

The current RTIRC should review the Glasson proposal and the Sinclair committee commitment to uniform national prices and re-affirm both.

¹³ Richard Alston "Time for some real competition: Is Telecom's Universal Service Obligation Still Relevant?" P. 372 in Mark Armstrong (Ed) *Telecommunications Law: Australian Perspectives* Media Arm. 1990. See also Havyatt Associates <http://www.havyatt.com.au/docs/subs/USO.pdf>

¹⁴ This claim was made by Telstra in its submission to the Senate inquiry into the Australian Telecommunications Network.(see http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed_inquiries/2002-04/telenetwork Note the link to the Telstra submission s107 is returning the wrong document at 15 July, the committee has been advised) "The explicit policy goal of a universal telecommunications service, first detailed in Australia with the adoption of the 1960 Community Telephone Plan 1960 ..." (fn P.21)

The Community Telephone Plan 1960 was only concerned with the issue of automating switching. See <http://www.digecon.info/docs/0029.pdf>

¹⁵ Retail Price Controls were repealed in March 2015. See <https://www.communications.gov.au/departmental-news/telstra-retail-price-controls>

¹⁶ See latest draft access determination at <https://www.accc.gov.au/system/files/FSR%20FAD%20-%20Primary%20price%20terms%20draft%20decision%20-%20Public%20Version%20-%2011%20March%202015.pdf> This report has made no effort to assess why this approach has been chosen.

¹⁷ Government response to Glasson Committee see <http://www.digecon.info/docs/0049.doc>

The Future

The Committee's discussion paper posed thirteen questions. Questions 1 to 5 and 7 to 10 were exclusively framed in terms seeking the views of people in regional Australia. Question 6 sought the views of mobile network operators.

Section one of this paper offered perspectives relevant to questions 6 and 7. Questions 11 to 13 generally went to the questions addressed in section 2 of this submission.

Through the National Broadband Network Australian Government investment in regional telecommunications has exceeded the \$2 billion originally ear-marked. Regional Australians, should, however be alarmed at the description of these "non-commercial services" and the proposed funding approach that ignores the contribution of the proceeds from the sale of Telstra towards it.

Indeed it is worth reminding everyone that the proceeds from the sale of Telstra, an asset that had no carrying value at all to the Commonwealth, far exceed the Government investment in the NBN and all other projects included in the string of successful and unsuccessful projects that were outlined in Appendix F of the Glasson report.

The Committee needs to closely examine whether the process of regular independent reviews is delivering the outcomes originally envisioned when the legislation was introduced.

In particular the Committee should consider whether the tasks performed by the committee are better performed as ongoing activities of the Department of Communications or the Australian Communications and Media Authority. If so, the Committee should have no hesitation in recommending the legislation be amended to give effect to such an outcome.

About DigEcon Research Purpose DigEcon Research is a stand alone research body. Ultimately, its pursuit is policy research, the focus of which is the meaning and significance of the Digital Economy. This policy research encompasses both economic and social research. Researching the significance of the Digital Economy The concept generally referred to as the Digital Economy is frequently discussed but there is little shared meaning in the term. A key definitional issue is whether the Digital Economy is something yet to happen or in which we are now embedded. DigEcon Research focuses on the analysis of social and economic change rather than an analysis of a notionally static “Digital Economy”. Analysis of the change as it occurs should highlight those areas where there is genuine policy choice rather than merely a need to adapt policy to changes that have already occurred. Before Thomas Kuhn popularised the idea of “paradigms” J.K.Galbraith railed against the “conventional wisdom”. There is no denying that what Kuhn called “normal science” or the repeated application of existing theory to new problems results in most practical developments. It is equally true that the application of existing theory to problems they were not designed for results in, at best, vacuous solutions and, at worst, wildly dangerous outcomes. The Digital Economy challenges the fundamental concepts of neo-classical economics. It also challenges most of the precepts of how societies are organised. In this context policy research needs to focus on what is different, not on what is the same. The Digital Economy is not just a matter of means of production but about the fundamental structures of social organisation. Work program This research is designed both to inform policy makers and to assist those who would seek to influence policy makers or to make business decisions. DigEcon Research however does not provide strategy recommendations nor undertake policy advocacy on behalf of any party. A key element of the research will relate to the direct regulation of the converging industries of telecommunications, media, consumer electronics and information technology. However, the agenda encompasses the wider economic and social policy issues. The scope of the research agenda will ultimately depend upon the researchers who wish to participate in what is more an idea than an entity. In the crowded Australian research field there are a number of “bodies” that share some of the objectives of DigEcon Research. DigEcon Research aspires to contribute to the work of these and any other researchers in the field.