

# BACKGROUND TO THE INQUIRY

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## Rural and remote communications status

1. The terms of reference indicate that the Committee should use comparable rural and remote communities on the mainland as points of comparison for the External Territories. It is useful at the outset to define what services are currently available to rural and regional Australia and what might be comparable communities.

2. The *Telecommunications Act 1997* pledged that digital data capability would become available to all Australians by 1 January 2000. In the first instance, by July 1997, 93.4 per cent of the population would be able to access Integrated Service Digital Network (ISDN)<sup>1</sup> quality services within 90 days of an application. This would allow access to voice, data, fax and limited video conferencing over two channels at 64 kbps. In addition a further 2.4 per cent<sup>2</sup> would be provided with a high capacity digital radio system via the Digital Radio Concentrator Service (DRCS). These service objectives were included in ministerial directions stemming from the Act and were therefore part of Telstra's licence.<sup>3</sup>

3. Despite these regulations, at the end of 1998, there remained four per cent of the population without an assurance of access to digital quality telecommunications. This four per cent of the population are typically the remote and rural Australians and people in the External Territories. They live over five kilometres from a telephone exchange and therefore out of range for easy and effective ISDN connection.<sup>4</sup> For these Australians, mobile coverage is not wide or reliable, ordinary telephone connections can be slow and user costs expensive. The existing Optus Mobilesat offers mobile communications to remote areas at a cost for calls of \$1.80c per 30 seconds in peak times on equipment supplied by OPTUS for an initial cost of \$7 000. However this service may not reach the Islands.

4. At the beginning of the inquiry television broadcasts were still awaiting satellite upgrades which, it was hoped, would improve both the extent of the coverage and the quality of the service. In order to provide broadcasting services, special technical provisions have been made for remote communities on the mainland, namely self-help re-transmission services. Until mid 1998, the Optus satellite system provided analogue broadcasts. There is a remote area broadcasting service (RABS) comprised of the ABC, SBS and four Remote Commercial Television Services (RCTS). Initially, one commercial television station was allocated to each of four

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1 This combines voice and data services and is powerful enough to provide internet linkage.

2 Bringing the percentage of Australians with access to ISDN quality to 95.8 per cent.

3 Exhibit No. 19, Austin, Julie, *Deregulation of the telecommunications industry: what it means to rural Australia*, NFF August 1997, p. 12.

4 Australian Communications Authority, *Digital Data Inquiry: Public Inquiry under section 486(1) of the Telecommunications Act 1997*, August 1998, p. 93.

remote zones. However, since mid 1998, with the conversion to digital broadcasting, digital television and radio is now available from the various satellite systems.

5. Further changes have flowed from decisions of the Australian Broadcasting Authority (ABA) in December 1998 to amalgamate licence areas to encompass remote areas of New South Wales, Victoria and Tasmania. As a result, in most areas, two commercial services will be available where previously either none or only one commercial service was available. This should significantly increase the choice in remote areas of Australia of popular programs from the three metropolitan commercial television networks, in addition to ABC and SBS programs.

6. In the short term, the Committee was told that there may be a temporary loss of certain programs in some areas. This was due to the commercial decision of the operators of 7 Central to change from a non-exclusive arrangement with the TEN Network to an exclusive agreement with SEVEN, leaving Imparja to draw programming from the NINE and TEN networks. In particular, AFL coverage previously provided by Imparja will now be exclusively available on 7 Central and the reverse situation will apply for NRL coverage.

7. While households with direct to home satellite reception and digital decoders<sup>5</sup> will be able to receive all services immediately, in other communities both commercial services will not be available unless additional re-transmission facilities are established by the broadcasters or by the communities under self help arrangements. Until this occurs, certain programs, including AFL and NRL coverage, may not be available where they have previously been shown.

8. The Department of Communications, Information Technology and the Arts informed the Committee that broadcasters have undertaken to roll-out re-transmission facilities as quickly as possible. They expect to complete the process between March and September 1999. In the interim, the Government has sought the cooperation of the broadcasters in maintaining programming. The one-day international cricket finals between England and Australia were retained by 7 Central recently in this cooperative spirit.<sup>6</sup>

9. While many of these proposals appear to be positive, many of these changes are yet to take effect. Uncertainty about broadcasting remains. Much of the infrastructure to connect even urban Australia to cable TV through digital satellite or through the cable roll-out has yet to be achieved; regional Australians, especially the four per cent in remote communities, are well back in the stakes.

10. Finally, broadcasting is in a much sounder position than telecommunications services such as the Internet. The Information Policy Advisory Council (IPAC) summed up the state of rural telecommunications in 1997 in the following terms:

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5 For which a Commonwealth subsidy of \$750 is available.

6 Department of Communications, Information Technology and the Arts, *Submissions*, p. S301.

For the shrinking number of Australians who live there rural Australia is today a landscape of diminishing opportunity, high costs, poor services and often real hardship.<sup>7</sup>

### **Regional Telecommunications Infrastructure Fund (RTIF)**

11. To address the problems, the Federal Government has established the Regional Telecommunications Infrastructure Fund (RTIF). It awards monies to a wide range of community projects and programs to study or facilitate local communications in remote areas. To date the program has funded 140 projects, including the Outback Digital Network (ODN) project and the Outback Electronic Network (OEN) project. The fund consists of \$250 million over five years allocated on the basis of the ratio of people in the state who live outside the capital city. The State allocations are listed below.

**Table 0.1 RTIF funding 1997-2002**

New South Wales	\$37.4 million
Victoria	\$28.5 million
Queensland	\$53.1 million
Western Australia	\$26.5 million
South Australia	\$26.5 million
Tasmania	\$58.0 million
Northern Territory	\$16.0 million
Australian Capital Territory	\$4.0 million

12. The RTIF as initially announced made no allocation to the External Territories; however, in July 1998, the Minister for Communications and the Arts announced a special allocation for the External Territories dependent on the further sale of Telstra.

#### *Comparable communities on the mainland – case studies*

13. The terms of reference of the inquiry require the Committee to make a comparison between the communication services available to the External Territories and comparable communities on the Australian mainland. In respect of this matter the Committee received information about communities in the Northern Territory and the North Eastern Goldfields Region of Western Australia.

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7 Exhibit No. 20, Ferguson, Sue, *Rural and regional.au/for all*, Communications Update, July 1997, p.12.

### Northern Territory Government remote area communications review

14. The government of the Northern Territory has conducted a review of the standard of telecommunications in remote areas of the Northern Territory, focussing on 66 Aboriginal communities (service towns) with populations exceeding 100. These towns were identified as having an urgent requirement for higher speed data services particularly for government agencies operating in these communities. The review comments on a successful submission by the Northern Territory Government for communications funding under the *Networking the Nation* program.

15. The two main issues that were discussed in this report were:

- Standard telephone services are delivered to government and private organisations, and to residents in all 66 communities. These standard services have a carrying capacity of less than 64 kbps, and as a result, do not adequately support higher speed data transmissions, such as fax and Internet transmissions.
- Telstra operates under a policy that requires a capital contribution from the first applicant for higher speed data services. This capital contribution can run into millions of dollars.<sup>8</sup>

16. The report considered that the current Universal Service Obligation (USO) is unsatisfactory, as it allows Telstra to provide a standard telephone service, which does not allow higher speed data communication services, and it also allows Telstra to require an up-front contribution before providing higher speed data services to a community.

17. The report recommended that the Northern Territory Government endeavour to have the USO altered, so that the telecommunications industry, rather than the service user, would be required to fund the delivery of higher speed data services to remote communities in the Northern Territory.<sup>9</sup>

18. The Northern Territory Government agreed with the report, and consequently made a submission to the Regional Telecommunications Infrastructure Fund (RTIF) for funding for its *Outback Electronic Network* project. The project received RTIF approval in April 1998, and is now in the preliminary phase of the pilot study.

19. The OEN project is designed to enhance regional communications and to provide remote Northern Territory communities with increased access to communications technology, focussing on infrastructure, education, training, support staff, and local content in remote communities. The project will be completed in two stages, an Initial Roll-Out (first stage), and the Completion of Roll-Out (second

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8 Exhibit No. 13, Alan Aked, Morespen Pty Ltd, *Comments on Key Issues: Northern Territory Government Remote Area Communications Review*, May 1997, p.2.

9 Exhibit No. 13, Alan Aked, Morespen Pty Ltd, *Comments on Key Issues: Northern Territory Government Remote Area Communications Review*, May 1997, p. 11.

stage).<sup>10</sup> The OEN has a provisional allocation of \$3.6 million, but it must show that it can satisfy the RTIF guidelines.

20. The OEN project is seeking to install telecommunications links with a minimum of 128kbps transmission capacity to 66 selected remote communities in the Northern Territory.<sup>11</sup> An *Advanced Communication Strategy* is currently being prepared by stakeholders in the project that will determine the technologies to be utilised and the requirements and objectives of the project.<sup>12</sup>

21. This project is expected to provide substantial benefits for remote communities in the Northern Territory, including the offsetting of community costs, the provision of assistance for small business and tourism, and the enhancement of office technologies, staff recruitment, legal proceedings, education, tele-medicine and Internet access. It is also expected to facilitate greater interaction and awareness between Aboriginal communities in the Northern Territory.

22. A second project is the Outback Digital Network (ODN) which addresses indigenous interests in 120 remote population centres throughout northern Australia. It operates on the following principles:

- it will operate on regional groupings defined by the indigenous people themselves and as a managed network in which all parts are connectable;
- it will operate on commercial principles to ensure sustainability and create indigenous employment in remote areas;
- it will provide a brokerage for overall indigenous interests in telecommunications, both in the economic sense and in the cultural sense;
- it will act in a sweeper role to ensure that infrastructure and participation in the development are available to all remote living indigenous people by filling in around other initiatives;
- it will consider a full range of digital telecommunications including satellite based telephones, EFTPOS, Internet access, videoconferencing and other interactive computer links.

23. The ODN is being pursued through an indigenous task force and is strongly mandated by the participating communities and their representative organisations. An allocation of approximately \$2.6 million has been announced so far towards the project.

24. These projects and plans for remote communities in the Northern Territory seek to redress communications deficiencies currently experienced by these communities, deficiencies similar to those experienced by the External Territories.

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10 Exhibit No. 22, Northern Territory Government, *The Electronic Outback*, 1998, p.2.

11 Exhibit No. 22, Northern Territory Government, *The Electronic Outback*, 1998, p. 4.

12 Exhibit No. 22, Northern Territory Government, *The Electronic Outback*, p. 3.

By way of example, the Committee received information about Yapakurlangu Region.<sup>13</sup> The indigenous communities of this region often experience the effects of remoteness and poverty. They also suffer from a lack of infrastructure and resources, including extremely poor telecommunications infrastructure, a lack of service provision, inadequate equipment performance and unsatisfactory maintenance and repair programs. There is a lack of reliable telephone services, very few public and private telephones, and limited access to personal computers.

25. Communities in the Yapakurlangu Region identified their telecommunications needs as follows:<sup>14</sup>

- Reliable telephone services
- Access to the Internet
- Access to E-mail
- Availability of video conferencing
- Availability of EFTPOS
- Web site development and hosting
- Access to data network services

26. Communities in the region seek improved telecommunications in order to enhance community and regional interaction and to overcome the effects of remoteness. This includes establishing functional links with service agencies, improving communication between family members, and allowing greater discussion and interaction concerning regional issues.<sup>15</sup>

27. At present, the only telecommunications carrier to offer a cost-effective combination of voice, data and video services is the Australian Associated Press Telecommunications (AAPT).<sup>16</sup> Consequently, the Yapakurlangu Region communities are considering the utilisation of a self-contained satellite service delivery network as a viable alternative to landlines or microwave links. The communities consider flexible bandwidth to be an important aspect of the satellite service, in order to accommodate special services that demand higher bandwidths. To

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13 The Yapakurlangu Region of the Northern Territory, comprises five nominated communities of Barrow Creek, Ali Curung (Alekareng), Canteen Creek (Owairtilla), Lake Nash (Alpurrurulam) and Elliott (Gurungu).

14 Exhibit No. 18, FOCUS Pty Ltd and Consultel, *Tennant Creek Regional Telecommunications Infrastructure Project*, 1998, p.4.

15 The Focus report stresses that the provision of telecommunications infrastructure must be carefully balanced against community needs. Services must be affordable to the community as a whole, should be cost-effective for users, and should be based on practical needs. Telecommunications services must also be capable of being managed by the communities in the Yapakurlangu Region, with regards to control over long-term pricing and service arrangements.

16 Exhibit No. 18, op cit., p. 8.

achieve these ends the Yapakurlangu Region has made an application for funding under the RTIF program.

28. The Northern Territory Government received approval in April 1998 for RTIF funding for its *Electronic Outback* project. Communities in the Yapakurlangu Region will be included in the project, as part of a telecommunications upgrade for 66 remote Aboriginal communities in the Northern Territory.<sup>17</sup> Final applications from the Yapakurlangu Region were made in October 1998, with funding decisions to be finalised by the RTIF in November.

### *Bathurst Island*

29. The Committee visited Bathurst Island at the end of its visit to the Indian Ocean Territories. Bathurst Island is a community of 1,400 people situated approximately 60 kilometres north of Darwin. Bathurst Island possessed more advanced communications facilities than those described at Yapakurlangu and as such was ahead of the base standard that the RTIF was seeking to put into remote communities.

30. The Tiwi Islands (Bathurst and Melville) have 128 phone lines although only 28 operate at any one time. There are two public phones. They have a number of Internet access lines: three for the Council, a couple of lines for the health centre, a couple of lines for the school and a line for the training centre. While these facilities sound impressive, by comparison with those in more remote communities, the Island is not without its communication difficulties. There is currently no EFTPOS facility due to a lack of lines on the Island. There is no mobile phone access, due, according to Telstra, to a lack of demand. On the outstations on Melville Island, where the communities are very small, there is no telephone at all, although requests for a service dated back five or six years. The population on Melville moves back to Bathurst often because of the lack of communications on the Island. The lack of communications on the western sides of both Bathurst and Melville Islands was seen as a problem inhibiting the capacity of the islanders to notify authorities of illegal boats.

31. The Committee was told that Telstra has advised the Tiwi Council that it intends to spend \$1.2 million on a two stage upgrade of the telecommunications services on the Islands. The first stage, to be completed by the end of 1998, would put in another 200 lines. The second stage, for completion by March 1999, would lay fibre optic cable and increase the size of the exchange to enable greater Internet access and allow for telemedicine, tele-education etc.<sup>18</sup>

### **Western Australia**

32. The North Eastern Goldfields Region of Western Australia, comprises the shires of Meekatharra, Sandstone, Menzies, Leonora, Wiluna, Laverton, and the town of Leinster. The region is comprised of six shires covering approximately 652,000

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17 Exhibit No. 22, Northern Territory Government, *The Electronic Outback*, 1998, p.4.

18 The information on the communications on Bathurst Island was taken at a meeting of the Committee with the Tiwi Council on Monday 24 August 1998.

square kilometres, with a population exceeding 10,400.<sup>19</sup> However, for the purpose of the inquiry, it is the individual towns and communities that might be seen as the basis of comparison. The populations of each shire as of 30 June 1996 are as follows:

**Table 0.2 Population of remote communities in Western Australia**

<b>SHIRE</b>	<b>POPULATION</b>
Laverton	1569
Leonora	3511
Meekatharra	2666
Menzies	521
Sandstone	295
Wiluna	1879
<b>TOTAL</b>	<b>10 441</b>

### **Telecommunication**

33. The primary telecommunications infrastructure in the North Eastern Goldfields Region is provided by Telstra, and is mainly based on optical fibre cable and digital microwave radio technology.

34. The USO standard for the region, which has remained unchanged for many years, is limited to a voice grade service with no specific requirement for data transmission capability. Because of this, Telstra provides a Digital Radio Concentrator System (DRCS) to much of the area. This provides a basic telephone service, consistent with the USO as currently defined, with a data transmission capability of only 2.4 kilobits per second, too slow for effective fax and data communications and Internet use.<sup>20</sup>

35. Westlink<sup>21</sup> satellite receivers are available throughout most of the North Eastern Goldfields Region. However, satellite-based telecommunication is expected to be limited in the North Eastern Goldfields Region in the near future, because of

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19 Exhibit No. 16, Peter Farr Consultants Australasia Pty Ltd, *Communications Strategy for North Eastern Goldfields Region WA*, February 1998, p.13.

20 By the year 2000 the DCRS system will be able to offer ISDN digital services at 64 kbps. Budde, Paul, *Telecommunications Strategies report, 1997-98*, p. 6.

21 Westlink is a State Government backed satellite based broadcasting service which is used for the distribution of education and training courses, video conferences, tele meetings etc. It provides interactive one way video and two way audio communication to remote areas throughout Western Australia.



initial high costs and low fax and data transmissions capability. ISDN facilities are currently available in telephone exchanges in Leonora, Leinster, Meekatharra and Menzies. Telstra is currently upgrading these facilities.

36. The highest communications priority for the North Eastern Goldfields Region is the need for a digital mobile telephone system to service all towns and major mining sites and camps. This would compensate for a shortage of public telephones in the region, which leads to frustration, particularly in mining camps.<sup>22</sup> In addition:

- The North Eastern Goldfields Region is seeking the establishment of Telecentres in several locations; and
- Telehealth is not available in the North Eastern Goldfields Region, although there is a high level of interest in establishing it in all towns in the area.

### **Television Broadcasting**

37. Television access in the North Eastern Goldfields Region is presently inadequate, with only the ABC and, until recently, one commercial television service available. However, this situation should improve over the next two years. WIN Television was recently granted a commercial licence to operate in Western Australia, although it is not expecting to begin transmission until early 1999,<sup>23</sup> and SBS Television should become operational in 1998 via-satellite. Lack of access to Pay TV is also a concern, although new digital satellite technology may soon address this, and should also improve access to television and radio broadcasting in the whole region.

### **Radio Broadcasting**

38. Communities in the North Eastern Goldfields Region are generally dissatisfied with the current standard of radio broadcasting services. Radio is an important medium for the region's mobile and isolated area workers, as well as for town residents. The morning ABC radio program is broadcast to the region from three different areas, which poses reception and content problems. Lack of technology and budgetary restraints prevent the ABC from tailoring services to individual areas. However, the ABC's present conversion to digital satellite transmission presents opportunities for an increase in the number of radio channels to service the region, and an extension of present coverage.

### **Internet and on-line services**

39. As previously mentioned, Telstra provides the main telecommunications infrastructure in the region. However, OPTUS and AAPT have indicated possible interest in establishing jointly-funded satellite-based Internet projects, if the local community agreed to contribute to some of the costs. On-line demand in the wider Goldfields Esperance Region has outstripped supply, and personal computer

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22 Exhibit No. 16, Peter Farr, *Communications strategies for North Eastern Goldfields Region WA*, February 1998, p. 21.

23 WIN, *Transcripts*, p.262.

ownership is nearly as high as it is in the Perth area. Business use of on-line services is also high.<sup>24</sup>

40. The two main areas of concern for Internet users in the North Eastern Goldfields Region are the lack of Points Of Presence (POP), which are provided by Internet Service Providers (ISPs), and slow Internet access speeds.

41. In summary, the North Eastern Goldfields Region is in need of the following:

- comprehensive mobile phone coverage via the installation of extra digital mobile base stations;
- Digital Radio Concentrator Systems (DRCS) upgrades, or replacement with either optical fibre cable or digital satellite technology to relieve telephone congestion and improve fax and internet communications;
- Integrated Service Digital Network (ISDN) upgrades to improve telephone exchange services;
- the establishment of Telehealth and extra Tele-centre facilities;
- extra public telephones;
- access to a greater variety of television and radio channels, and
- Extra POP and greater access to information technology and user support for Internet users.

## **Conclusion**

42. It would appear that remote communities on the Australian mainland experience many of the communications difficulties enunciated by those in the External Territories. They receive a limited range of television. For the most part, they receive an adequate, if somewhat expensive, telephone service. Therefore the carriers generally meet their obligations under the current USO. However, communications technology is now so much more sophisticated and offers so many more options that voice telephony is rapidly becoming an inadequate service. For remote mainland Australians, as for Australians in the External Territories, access to the more sophisticated services offered by the internet, especially tele-medicine and tele-education, is often so slow and expensive as to be unusable. Where the remote mainland communities have an advantage over the External Territories is in their assured access to the RTIF.

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24 Exhibit No. 16, Peter Farr Consultants Pty Ltd, *Communications Strategy for North Eastern Goldfields Region WA*, February 1998, p.22.