



## CASE STUDY

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# TOWARD UNIVERSAL BROADBAND ACCESS IN AUSTRALIA

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## ACKNOWLEDGEMENTS

This case study has been prepared by Mr. Colin Oliver, ITU Expert within the framework of an ITU-NTC workshop on Universal Access and Rural Broadband held in October, 2009. It has been developed with the support of National Telecommunications Commission, Thailand and in consultation with the Department of Broadband, Communications and the Digital Economy, Government of Australia.

The views expressed in the report are those of the author and do not necessarily reflect the views of the ITU or its membership.



**National Telecommunications Commission, Thailand**



**Australian Government**

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**Department of Broadband,  
Communications and the Digital Economy**

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## 1.0 Introduction

In April 2009, the Australian Government announced that it would establish a company that will invest up to \$43 billion Australian dollars<sup>1</sup> over the next eight years to build and operate a wholesale-only, open access National Broadband Network. While that project is under development, the Government assists users across the country to obtain a service comparable to that available in metropolitan areas under the Australian Broadband Guarantee program. It is also amending the regulatory framework (including the universal service obligation) to ensure that it supports the Government's agenda for the development of the National Broadband Network and Australia's digital economy.

This case study reviews the development of Australian policy and experience in the provision of universal access to telecommunications and particularly broadband services. It is important to stress that broadband policy and industry dynamics in Australia are likely to continue to develop over time and a number of issues currently remain open.

To assist understanding of parallel policy developments with regard to the USO, regional services, and broadband development, this case study considers these topics as linked but separate threads. A timeline at [Appendix 1](#) provides a very simple parallel view of each policy area and related developments.

### Background

A case study of Australia must begin with a brief outline of the demographic, political, regulatory and market structures which give rise to the unique Australian environment for broadband development.

Australia's population of around 22 million is concentrated along the coast region from Adelaide and Hobart in the south to Cairns in the north east, with a smaller concentration around Perth in Western Australia.

The sprawling suburban and regional settings in which most of the population are found make the construction of network infrastructure relatively expensive by world standards. The same demographic challenges led to Australia's broadcasting system being engineered for wide and uniform coverage. Consequently, cable infrastructure was limited until Optus and Telstra rolled out their hybrid fibre cable networks for subscription ('pay') television services in the late 1990s to about 2.6 million households.<sup>2</sup>

Australia's generally prosperous and developed economy has benefited from an open and competitive telecommunications market since 1997. Australians tend to adopt technological innovations readily, encouraging suppliers to offer access to new devices and services. These factors have encouraged broadband development.

As a result of the geographical challenges and the high level of interest in communications technology, two key themes emerge as central to the recent Australian story of telecommunications and broadband policy development.

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<sup>1</sup> Australia's currency has been appreciating in recent months. It is currently around US \$0.92.

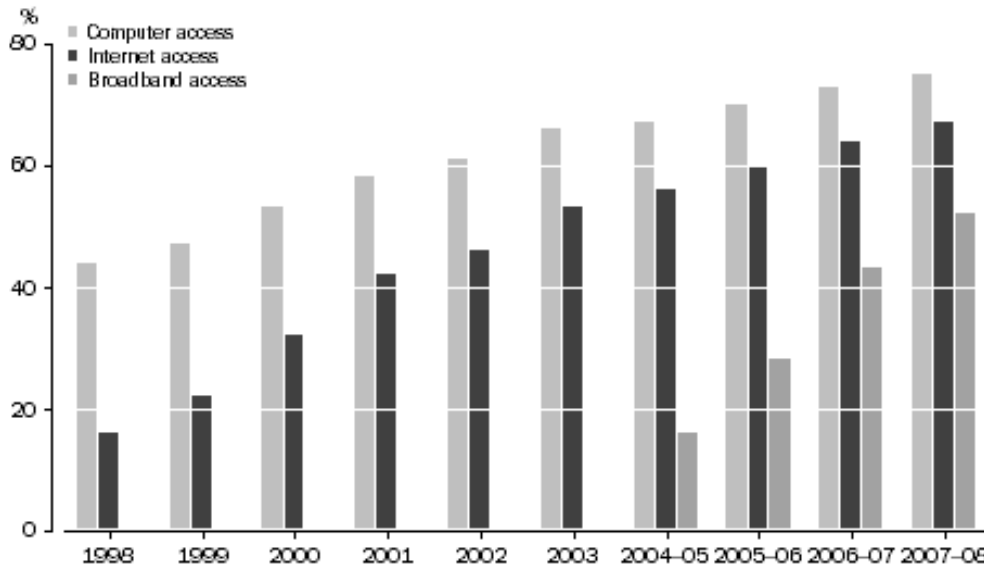
<sup>2</sup> According to ACMA's *Communications Report 2008-2009*, "There are two major HFC networks in Australia, which are operated by Telstra and Optus. HFC cable networks, also known as 'cable', involve the use of optical fibre and coaxial cable to provide broadband access, subscription television (pay TV) and voice services. Telstra's network passes 2.5 million premises in Adelaide, Brisbane, the Gold Coast, Melbourne, Perth and Sydney; Optus's network passes 2.2 million premises and is capable of offering services to 1.4 million serviceable premises in Brisbane, Melbourne and Sydney. There is some overlap between these networks, resulting in an estimated combined coverage of 2.6 million premises."

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- The first concerns the challenge of encouraging investment in infrastructure while maximising competition especially in areas of relatively low population density.
- The second concerns the challenge of supporting consumer access to widely available, high quality services.

These themes recur even as the standards and expectations for services provision have changed. Just as many people, who are now parents or grandparents have become dependent on basic telephone services, many individuals today find themselves dependent on the mobile and broadband services that underpin the digital economy.

**Figure 1: Household Computer or Internet Access, 1998 to 2007-08<sup>3</sup>**



### Federal and state powers

The fathers of federation in Australia had the foresight in the late 1890s to assign powers over 'telegraphic, telephonic and other like services' to the new Australian Government.<sup>4</sup> Over time this has meant that the Australian Government has been able to exercise unchallenged responsibility for the regulation of broadcasting, telecommunications and wireless services.<sup>5</sup> However, the six States, the two Territories and the more than 600 local government bodies play an important role in the lives of ordinary Australian, particularly in the commercial, agricultural, health, emergency services, energy, transport and education sectors. They are among the largest users of modern broadband and communication services. A national strategy therefore requires the cooperation of all layers of government as well as non-government stakeholders.

Cooperation was critical to many of the funding programs developed in the early stages of broadband promotion. As the focus shifts to rolling out infrastructure in greenfields estates, renewing infrastructure in 'brownfields' areas, and applying the benefits of broadband infrastructure, the importance of cooperation and the scope for it will only increase. To support this, the Online and Communications Council adopted an agreed *Framework for collaborative development and use of broadband* in December 2008<sup>6</sup>. It sets out common objectives, principles

<sup>3</sup> Australian Bureau of Statistics, 8146.0 - [Household Use of Information Technology, Australia, 2007-08](#)

<sup>4</sup> Section 51(v) of the Australian Constitution

<sup>5</sup> A brief outline of the history and structure of telecommunications regulation is available in Appendix F, "Telecommunications Regulation" of the *Regional Telecommunications Independent Review Committee Report*, September 2008.

<sup>6</sup> Online and Communications Council, *Framework for collaborative development and use of broadband* December 2008

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and strategies to support broadband accessibility, take-up and usage and it provides a basis for ongoing cooperation.

### Regulatory framework and agencies

Under Australian law, regulatory responsibility for communications is allocated largely to

- the Australian Communications and Media Authority (ACMA) and
- the Australian Competition and Consumer Commission (ACCC).

The industry is also encouraged to develop codes and resolve issues where possible, with regulatory intervention as a last resort.

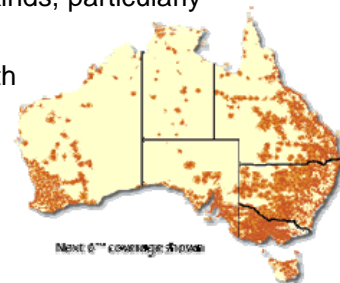
- The ACCC has responsibility for competition and consumer issues across the whole economy. It also has specific powers tailored to the particular challenges of the telecommunications sector. These special powers are concerned with interconnection disputes and access to telecommunications services and facilities, as well as with anti-competitive behaviour in the telecommunications sector.
- The ACMA's responsibilities encompass a wide range of other regulatory and consumer protection provisions including registration of industry codes, monitoring consumer protections and technical standards, and also monitoring requirements placed on Telstra as licence conditions. Other important ACMA functions include numbering, spectrum management, broadcasting regulation and disaster planning.
- The Communications Alliance is an industry body that has prepared most of the registered codes for the industry on matters such as billing, complaint handling, number portability and network standards.
- The Telecommunications Industry Ombudsman is an independent dispute resolution scheme available to consumers and funded by the industry.

Finally, the Department of Broadband, Communications and the Digital Economy advises the Minister on broad policy matters including the development of legislation, and it administers funding programs in support of broad Government objectives including the Australian Broadband Guarantee program.

### Market structure

ACMA reported 172 licensed telecommunications carriers in its *Communications Report 2007-08*. Among these Telstra and Optus provide national fixed and mobile services, Vodafone and 3 operate mobile networks (currently in a merger process). A number of regional providers have established their own hybrid fibre cable infrastructure (such as TransACT in Canberra and Neighbourhood Cable in the Victorian cities of Ballarat, Mildura and Geelong). Regional operators can resell mobile and other services in order to compete with the large players across a range of services. Many smaller carriers offer specialised services of various kinds, particularly business and information services.

Near-complete population coverage has been largely achieved for both fixed and mobile networks. Telstra's map of its Next G coverage broadly reflects Australian settlement and transport patterns.



ACMA summarised service coverage in the following table.

**Figure 2 Telecommunication Service coverage, 30 June 2008** <sup>7</sup>

Services	Coverage	No. of service providers or networks
<b>Fixed</b>	100%	372 voice service providers
<b>Mobile</b>		
GSM	96% of population	3 carrier networks
3G	98.8% of population	3 carrier networks
<b>Broadband</b>		
HFC cable	2.6 million premises	4 carriers with metropolitan and regional centre networks
ADSL	91% of population	19 carriers with active DSLAM installations
Wireless	Selected metropolitan and regional areas	225 service providers
Satellite	100% of population	48 service providers

It can be seen that broadband take-up has relied heavily, but not solely on ADSL technology. ACMA reported that

- 78 per cent of internet subscribers now use a broadband service.
- At May 2008, there were 2,749 exchanges providing ADSL coverage to 91 per cent of Australia’s population.
- ADSL2+ services offering speeds of up to 20 Mbps were available from over 1,400 exchange locations by April 2008—an increase of nearly 1,000 since June 2007 when only 450 exchanges offered ADSL2+ services.
- Wireless broadband services were supplied by 225 companies, with three-quarters of them providing services in regional Australia.<sup>8</sup>

ACMA also noted “an increase in retail (own network) lines from 8.69 million to 9.58 million over the 2007–08 reporting period. This can be partially explained by the trend for carriage service providers (CSPs) to supply services using Unconditional Local Loops (ULL), which allow them to install Digital Subscriber Line Access Multiplexers (DSLAMs) in Telstra exchanges and offer services over copper lines without relying on Telstra wholesale services. This has resulted in a significant decline in Telstra wholesale lines, which decreased by 24 per cent in 2007–08, and a significant increase in ULL lines from 239,000 at June 2007 to 527,000 at June 2008.”<sup>9</sup>

The most recent survey of *Internet Activity* by the Australian Bureau of Statistics, based on a survey of internet service providers with more than 1000 clients found 8.4 million active internet subscribers in Australia.

- “Digital subscriber line (DSL) continued to be the major technology for non dial-up connections, accounting for 57% (4.2 million) of these connections. However, this percentage share has decreased since December 2008 when DSL represented 63% of non dial-up access connections.

<sup>7</sup> [Australian Communications and Media Authority Key Indicators 2007-08](#)

<sup>8</sup> ACMA *Communications Report 2007-2008*, page 22

<sup>9</sup> ACMA *Communications Report 2007-2008*, page 49

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- Mobile wireless subscribers had the next highest share, increasing significantly from 20% of all non dial-up connections (1.3 million) in December 2008 to 27% (2 million) in June 2009. This represents an increase of 51% over the six month period.”<sup>10</sup>

The Bureau noted a general trend towards higher download speeds, with 57% of subscribers now using a download speed of 1.5 Mbps or greater, compared with 51% in December 2008.<sup>11</sup>

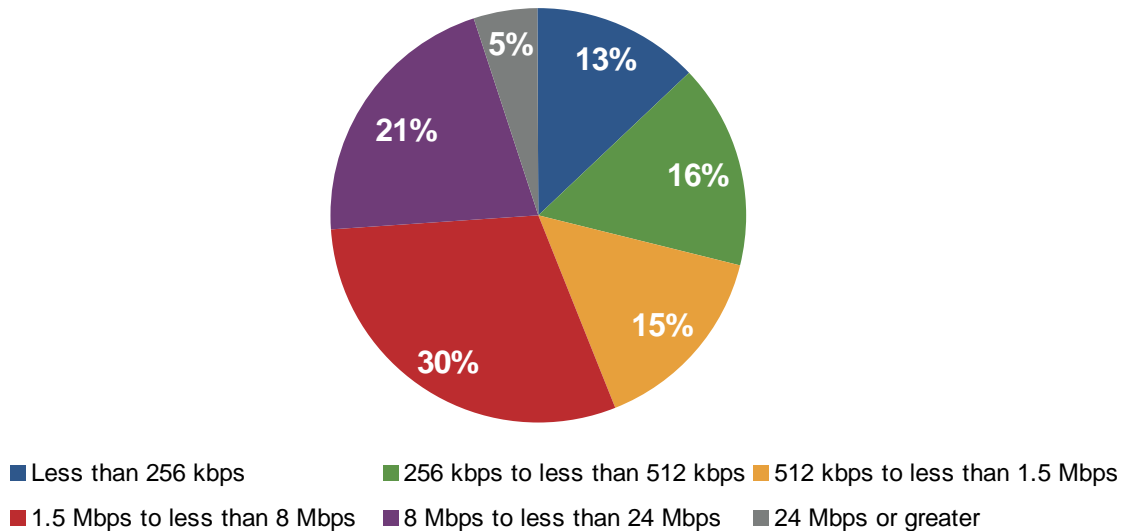
**Figure 3: Download speeds**<sup>12</sup>

Thousand units	Jun 2008*	Dec 2008	Jun 2009	Jun 2009%
Less than 256 kbps	1 581	1 293	1 103	13
256 kbps to less than 512 kbps	1 588	1 442	1 297	16
512 kbps to less than 1.5 Mbps	963	1 165	1 249	15
1.5 Mbps to less than 8 Mbps	1 444	2 002	2 529	30
8 Mbps to less than 24 Mbps	1 390	1 650	1 800	21
24 Mbps or greater	262	373	443	5
<b>Total all download speeds</b>	<b>7 228</b>	<b>7 925</b>	<b>8 420</b>	<b>100</b>

\* data for ISPs with more than 10000 users

The figures for June 2009 can be represented graphically as follows (Figure 4)

**Figure 4. Internet subscribers by downlink speed June 2009**



The Regional Telecommunications Inquiry in 2008 noted that access has increased faster in the cities than the country. It charted the access differential for internet and broadband access on the basis of 2006 census figures as follows (Figure 5).

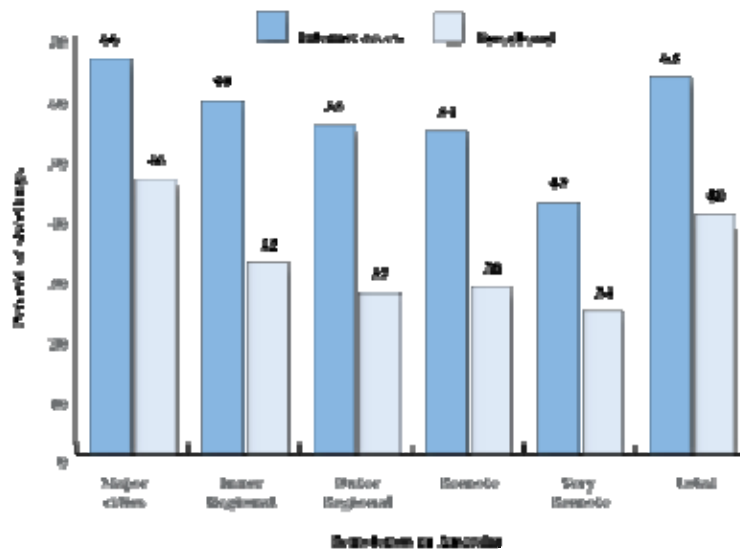
<sup>10</sup> ABS notes that that mobile wireless subscriptions to the internet via a data card or USB modem are included in the scope of this survey, but connections to the internet via mobile telephones are excluded

<sup>11</sup> Australian Bureau of Statistics [8153.0 - Internet Activity, Australia, June 2009](#), 14 September 2009

<sup>12</sup> Table and following chart based on Australian Bureau of Statistics [8153.0 - Internet Activity, Australia, June 2009](#), 14 September 2009.



Figure 5: Dwellings with internet and broadband access, 2006 <sup>13</sup>



### Broadband prices

ACMA reviewed changes in consumption and prices in their Communications Report 2007-08, finding that overall, Internet subscribers spent \$15.96 per GB in 2007–08, compared with \$18.44 in 2006–07, a 13.4 per cent reduction. The movements in the prices per GB in 2007–08 by technology type were as follows:

- 10.6 per cent decline to \$16 per GB for ADSL subscribers;
- 25.6 per cent decline to \$8.70 per GB for cable subscribers;
- 51.7 per cent increase to \$182.20 per GB for narrowband subscribers; and
- 19.4 per cent decline to \$149.50 per GB for satellite subscribers.

ACMA concluded that “the internet is increasing in overall affordability. The major effect of these price changes is highlighted by the movement of subscribers toward the lower cost (per GB) internet technologies of ADSL and cable, and away from narrowband services.” <sup>14</sup>

### Digital Economy agenda

Consideration of Australia’s broadband policy would be incomplete without reference to the Government’s digital economy agenda.

“The Australian Government defines the digital economy to be: the global network of economic and social activities that are enabled by information and communications technologies, such as the internet, mobile and sensor networks.”<sup>15</sup>

The Minister for Broadband, Communications and the Digital Economy launched *Australia’s Digital Economy: Future Directions*, a paper to outline key areas of focus for Government, industry and the community in the digital economy on 14 July 2009.

The paper provides a broad framework and context for development of the digital economy,

<sup>13</sup> *Regional Telecommunications Independent Review Committee Report*, September 2008, page 154

<sup>14</sup> ACMA *Communications Report 2007-2008*, page 168

<sup>15</sup> *Australia’s Digital Economy: Future Directions* © Commonwealth of Australia, 2009.

[www.dbcde.gov.au/digital\\_economy/final\\_report](http://www.dbcde.gov.au/digital_economy/final_report), page 2

dealing with the question ‘what does success look like?’<sup>16</sup> Clearly the development of broadband is a crucial foundation for the nation’s digital infrastructure.

**Figure 6: Digital economy: what does success look like?** <sup>17</sup>

Who	What	How
<b>Government</b>	Digitally aware and enabling	<ul style="list-style-type: none"> <li>• lays the foundation for the nation’s digital infrastructure</li> <li>• facilitates innovation</li> <li>• sets conducive regulatory frameworks</li> </ul>
<b>Industry</b>	Digitally confident, innovative and skilled	<ul style="list-style-type: none"> <li>• demonstrates digital confidence and builds Australia’s digital skills</li> <li>• adopts smart technology</li> <li>• develops sustainable online content models</li> </ul>
<b>Community</b>	Digitally literate and empowered	<ul style="list-style-type: none"> <li>• enjoys digital confidence and media literacy</li> <li>• experiences inclusive digital participation</li> <li>• benefits through online engagement</li> </ul>

Related initiatives

Broadband policy has an important part to play in the overall development of the digital economy. Other key Government initiatives to nurture Australia’s digital economy include:

- *The Digital Education Revolution* – a \$2 billion, five-year commitment to build Australia’s digital media literacy amongst school children
- *Enterprise Connect*: providing business advisory services to small and medium enterprises to help increase their productivity
- *Small Business Online*: promoting the benefits of the digital economy to Australian small and medium sized enterprises, helping them take advantage of e-business opportunities and to expand their online presence
- *Government Innovation*: the Government has recently established an independent Government 2.0 Taskforce to advise on a range of issues that relate to the emerging agenda of online engagement
- *Smart Technology*: to demonstrate the ability of technology to make our existing energy infrastructure smarter, the Government will invest \$100 million in the National Energy Efficiency Initiative.

The *Future Directions* paper provides a number of case studies to highlight the benefits to business and other users in regional and rural Australia as they are able to engage in wider national and international transactions. In that respect, it reinforces the ambitions of regional communications users for improved access to broadband in Australia.

For further information on the digital economy agenda, see the website of the Department of Broadband, Communications and the Digital Economy.<sup>18</sup>

We now turn to the universal access obligation and the debate about whether it should be expanded to cover internet and broadband services.

<sup>16</sup> *Australia’s Digital Economy: Future Directions*, page 3

<sup>17</sup> *Australia’s Digital Economy: Future Directions*, page 3

<sup>18</sup> [http://www.dbcde.gov.au/digital\\_economy](http://www.dbcde.gov.au/digital_economy)

## 2.0 Universal Service Policy

The Universal Service Obligation (USO) in Australia is a regulatory arrangement relating to basic telephone services and pay phones under which the universal service provider receives a subsidy that is recouped in part from other carriers with a levy based on their share of industry revenue. The subsidy for the period 2008-09 has been set at \$145,076,237. (Annual eligible revenue, on which the levy is based is around \$25 billion. The other leading charges on carriers are carrier licence fees (\$38 million) and numbering charges (\$60 million). Given its revenue share, the net annual amount payable to Telstra by other carriers is around \$52 million.

The following table is a summary of the subsidies for 2005-06 to 2008-09

	2005-06	2006-07	2007-08	2008-09
Levy	\$171,403,872	\$157,691,580	\$145,076,237	\$145,076,237
Eligible revenue	\$24.7 billion	\$25.2 billion	n/a	n/a

The intent of the USO is to ensure 'standard telephone services' are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on a business. It applies only to voice communication services, including pay phones. The *Telecommunications (Consumer Protection and Service Standards) Act* requires Telstra, the sole universal service provider, to 'take all reasonable steps to fulfil the USO' and to comply with its own [policy statement and marketing plan](#) on the USO.

The universal service provider is required to have a policy statement and marketing plan approved by the ACMA. The policy statement and marketing plan outline how the provider intends to fulfil its obligations as universal service provider, including its obligations to people with a disability, people with special needs and eligible priority customers.

### Brief history

The USO was introduced in 1991 as part of a series of measures associated with the introduction of telecommunications competition. Since then, successive Governments have maintained a close interest in the development of new services, particularly mobile, internet and broadband services and the extent to which equitable access to these services required support.

As will be seen, the Australian approach to universal access issues is now much broader than the USO. In 1999 there was a move to expand the USO to cover narrowband data services by means of a Digital Data Service Obligation. This was withdrawn in 2007 in light of the success of the Australian Broadband Guarantee incentive program, and the USO approach has not been expanded to mobile and broadband internet services.<sup>19</sup>

The policy framework for providing

The existing legislative and regulatory arrangements for universal service are increasingly strained by the importance of mobile telephony and broadband services, the privatisation of Telstra, and the ongoing development of a competitive telecommunications market. ... Ten years ago the Internet was barely on the horizon. Now the Internet is essential for business and social use.

*Regional Telecommunications Independent Review Committee Report, September 2008, page v.*

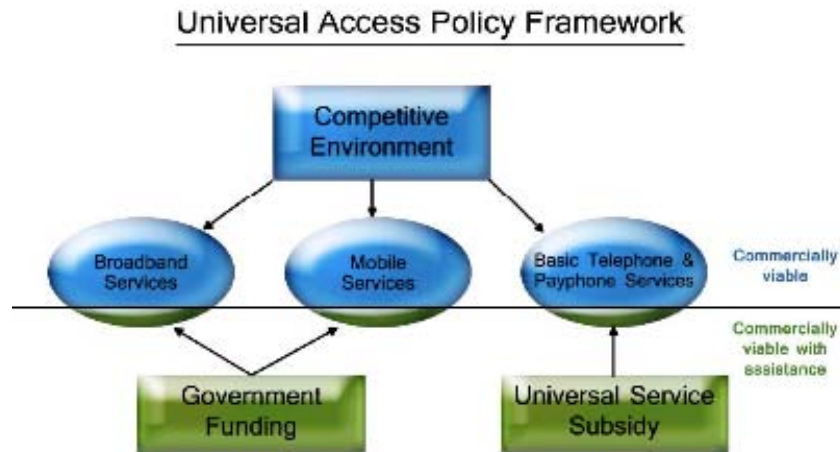
<sup>19</sup> The General Digital Data Service Obligation (GDDSO) required that 96 per cent of Australians have reasonable and equitable access to ISDN-based digital data services. The Special Digital Data Service Obligation (SDDSO) required that the remaining four per cent of Australians have reasonable and equitable access to digital data services with a one-way minimum data speed of 64 kilobits per second. The SDDSO, like the USO, was funded by an industry levy to subsidise the costs to providers of these services.

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reasonable and equitable access to telecommunications services has placed great importance on a competitive market, appropriate consumer safeguards and targeted funding to support service advancements in rural and regional areas which could otherwise be unserved.

The timeline at [Appendix 1](#) outlines many of these programs and their links with broader communications policy developments.

**Figure 7: Different approaches to broadband, mobile and basic services**<sup>20</sup>



In 2007, the *Telecommunications Universal Service Obligation Issues Paper* offered this diagram to illustrate the different strategies applied within the overall universal access policy framework. This case study considers the different ways in which these elements have worked, as well as the recent National Broadband Network initiatives.

### Reviews and outcomes

The universal service obligation has been the subject of a number of reviews. It also featured as part of the consideration of wider reviews of regional services and broadband developments.

A major review of the USO and associated funding arrangements in 2004 found that “*at the highest level, Telstra is fulfilling its obligation to provide the [standard telephone service] to all Australians who request such a service.*”<sup>21</sup> In its Standard Marketing Plan, “*Telstra commits to making all reasonable efforts to meet each request for the [standard telephone service] from a person in Australia, on an equitable basis [and] ... the evidence indicates that Telstra is meeting the full intent of the legislative obligation.*” ... “*In addition, regulatory measures now contained in Telstra’s [Standard Marketing Plan], such as priority assistance and interim services, provide a further measure of equity in reducing service gaps and targeting special areas of need.*” Overall, the universal service obligation appeared to be achieving the purpose set for it, although there was a lively debate around the funding of it.

The most recent review of the USO was announced in June 2007. That review was overtaken by other developments, but submissions made to the USO review have been taken into account by:

<sup>20</sup> Department of Communications, Information Technology and the Arts *Telecommunications Universal Service Obligation Issues Paper* 2007, page 7

<sup>21</sup> Department of Communications, Information Technology and the Arts, *Review of the Operation of the Universal Service Obligation and Customer Service Guarantee*, 7 April 2004 page 42

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- the Regional Telecommunications Review that concluded in September 2008, and
- the ongoing work to develop a National Broadband Network in Australia.

This short account of the issues draws particularly on the *Telecommunications Universal Service Obligation (USO) Review Issues Paper* released in April 2007 and the *Regional Telecommunications Independent Review Committee Report*, September 2008.

At various times it has been suggested that the scope of the USO should be expanded to include mobile, internet and broadband technologies.

- In 1996, the report of the Review of the Standard Telephone Service recommended that a digital data capability should be provided through the USO mechanism where it is not provided through the operation of the market. The review did not recommend the inclusion of mobile telephony because it concluded that the mobile telephone services were not sufficiently socially important at the time.
- In 1998, the Australian Communications Authority was instructed by the then Minister to conduct a public inquiry into whether the benefits of prescribing a minimum data rate access to the internet would exceed the costs.
- In the 1999 legislative package supporting the second stage of the privatisation of Telstra the 'universal service' legislative provisions were amended to provide for a 'Digital Data Service Obligation' to ensure that all people in Australia have access upon request to a digital data service of 64 kbps.
- The 'Estens' Regional Telecommunications Inquiry in 2002 recommended the USO arrangements be reviewed and that future equity objectives not be achieved through the traditional USO arrangements. They proposed a new approach to supporting broadband development which is discussed later in this case study.
- The Review of the Universal Service Obligation and Customer Service Guarantee in 2004 consequently passed over the issue of expanding the scope of the USO to include a broader range of services.<sup>22</sup>

The Regional Telecommunications Independent Review Committee Report on 2008 noted that, responding to community concerns, successive governments have devoted considerable public funds to support access to voice services, the internet, mobile services and pay phones, significantly improving access to telecommunications for people in regional, rural and remote parts of Australia

These programs have included, for example:

- providing local call dial-up access to the internet through the Networking the Nation programs which funded the development of local internet service providers;
- supporting untimed local calls for customers in rural and remote areas through the 'extended zones' agreement with Telstra;
- expanding the geographic reach of terrestrial mobile phone networks through Australian Government programs such as Networking the Nation, the Towns over 500 Agreement, and subsequently the [Towns Under 500 program](#);
- guaranteeing access to metro-comparable internet services through programs such as the Australian Broadband Guarantee and its precursors; and
- improving access to pay phones for remote Indigenous communities through programs such as Backing Indigenous Australia.

Although the larger programs operated over several years, the following chart <sup>23</sup>provides some perspective on their relative scale against the annual universal service obligation levy of around \$145 million (net \$52 million).

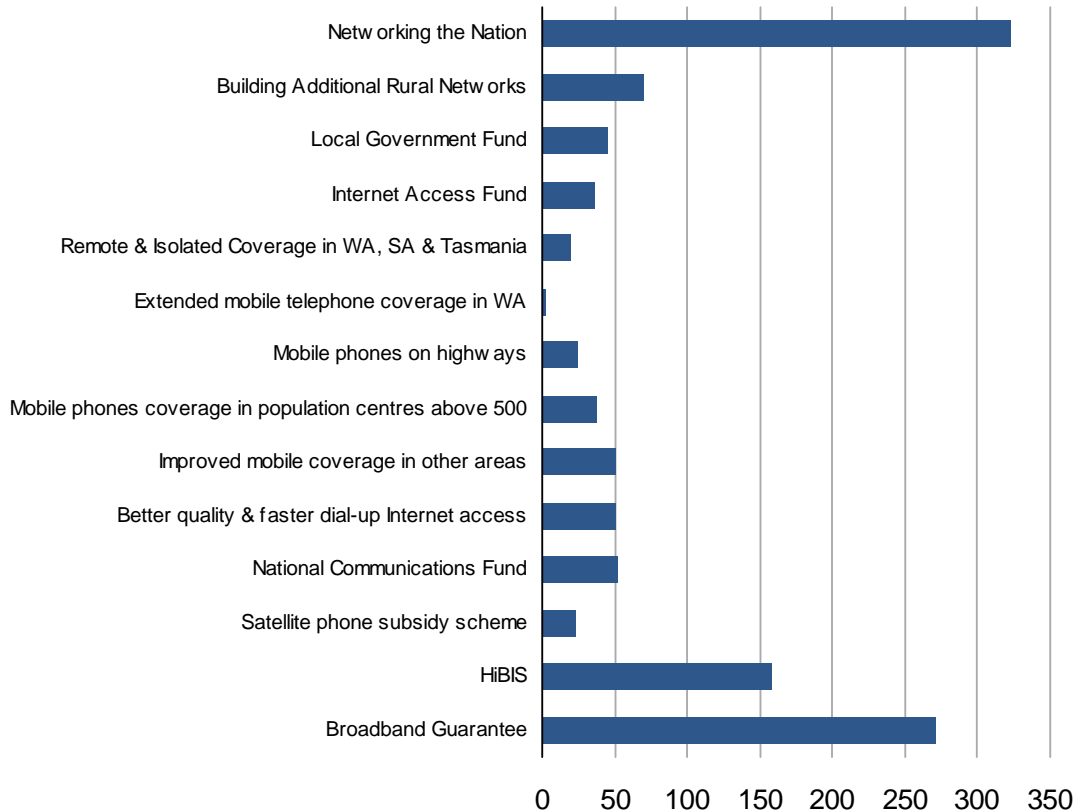
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<sup>22</sup> Department of Communications, Information Technology and the Arts, *Review of the Operation of the Universal Service Obligation and Customer Service Guarantee*, 7 April 2004. The review focussed heavily on the effectiveness and costing of the USO regime for basic services.

**Figure 8: Other Government programs to extend services 1996-2009 (\$ million)**

The operation of the universal service levy has been contentious. Telstra object that the subsidy is insufficient to cover their costs. Other carriers object to subsidising their largest competitor.

The ACMA has responsibility for administration of the USO. Their submission to the 2007 review<sup>24</sup> noted that “Past attempts to estimate the cost of the USO have been the subject of extensive analysis and subsequent protracted debate in Australia. ... The 2004 review found that any



attempts to cost the USO would be difficult, controversial and costly, and would risk being contested by one or more affected carriers. ACMA considers that this conclusion continues to be valid.” ACMA also made the following points.

- Previous copper-based costing assumptions and the associated modelling may need substantial reconsideration in a more complicated and technologically dynamic market.
- Requiring the universal service provider to absorb the whole cost may be appropriate only where the net cost is very low.
- A competitive process would provide another way to cost the the USO, but this also entailed significant administrative and compliance costs.
- Differences between ‘greenfields’ and ‘brownfields’ areas needed to be considered.
- Where there were competing providers in an area, bids were likely to reflect the net incremental cost of being the universal service provider and so may be low. However, where there is only one provider, its bid would more likely reflect the incremental cost to another party of commencing service in that area and so be higher. (The legislation has provided for contestability of the USO in some less remote regions, but no bids have been forthcoming).

<sup>23</sup> Derived from *Regional Telecommunications Independent Review Committee Report*, September 2008, pages 322-328

<sup>24</sup> Australian Communications and Media Authority *Submission to Telecommunications Universal Service Obligation Review*, November 2007, page 1-2.

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The Regional Telecommunications Review Committee concluded in September 2008 that 'a fresh approach is needed'.

Some of the key points in their findings were:

- The USO only covers voice communications services delivered over standard telephones. There are frequent requests to extend the USO to cover mobile, data and internet communications but it is impractical to extend the USO to other services.
- Technical developments now mean that a voice service can be provided more cost effectively and efficiently through a broadband or mobile connection.
- Government programs outside the USO indicate it is not achieving policy outcomes. For example, the USO is intended to provide universal access to pay phones, but the Australian Government has a separate program to provide community phones to remote Indigenous communities.
- Funding through an industry specific tax imposes an administrative burden on the carriers and ACMA.
- ACMA in turn finds enforcement problematic, due to a lack of clarity in the regulatory framework and members of the public are unsure what the USO provides to them.<sup>25</sup>

Other 'safety net' elements

Overall, the USO represents only part of the framework that supports access to services. Consequently, it is common for inquiries and policy statements to cover other related items at the same time. Figure 9 is a brief summary of the consumer safeguards framework in Australia.

**Figure 9: Consumer Safeguards<sup>26</sup>**

Universal Service Obligation (USO)	Requires Telstra to take 'reasonable steps' to fulfil the USO and to comply with Telstra's USO marketing plan and policy statement.
Customer Service Guarantee (CSG)	Provides for compensation to customers where service providers fail to meet regulated connection or repair times or fail to keep appointments.
Priority assistance	Telstra is required to offer priority connection and repairs for those who register with their provider that they have a life-threatening condition.
Network Reliability Framework (NRF)	Reduces the incidence of faults experienced by consumers whose services are provided over Telstra's network. The framework requires Telstra to report to ACMA on the performance of its network and to undertake remedial activity in specified circumstances.

<sup>25</sup> *Regional Telecommunications Independent Review Committee Report*, September 2008, pages 182-3

<sup>26</sup> Based upon *Regional Telecommunications Independent Review Committee Report*, September 2008, page 179-180

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Access to untimed local calls	Legislation requires ongoing access to untimed local calls in Australia.
Access to untimed local calls in extended zones	Enhanced protection is provided by a contractual agreement between Telstra and the Australian Government that provides untimed local calls to Telstra's customers in the 'extended zones' in exchange for receiving \$150 million of public funds. This arrangement expires in May 2011.
Telstra price controls	Telstra is required to pass on productivity gains to consumers through lower prices for services where price reductions are unlikely to be achieved by competitive pressure. Telstra is also required to offer basic line rental and untimed local call services in non-urban areas at the same rate as it offers them in urban areas.
Telstra Local Presence Plan	Telstra is obliged to maintain a local presence plan that sets out its range of activities and strategies in regional, rural and remote Australia.
Telecommunications Industry Ombudsman (TIO) Scheme	All providers are required to join the TIO scheme which provides an industry funded and managed dispute resolution service between providers and individual and small business consumers.
Access to emergency calls	Requires the provision of an emergency call service as an operator-assisted service that connects a caller, free of charge, to police, fire or ambulance in a life threatening or time critical situation.
Carrier pre-selection	Providers offering voice services must allow the customer to 'pre-select' another provider for long distance calls.
National Relay Service	This Australia-wide telephone access service provides a communication bridge to enable telephone contact between people who are deaf, hearing impaired and speech impaired and the broader community. The cost (\$14,636,363.60 in 2007–08) is covered by a special levy on eligible telecommunications carriers.

### Recent changes to the USO and consumer safeguards

The Government's policy announcements on 15 September 2009 included preliminary changes to the universal service obligation and consumer safeguards regime.

- Legislation will strengthen the *Universal Service Obligation* by enabling Minister to specify the standards, terms and conditions of services, connection and repair periods, and reliability requirements of the standard telephone service. Telstra will be required to meet new minimum performance benchmarks. Failure by Telstra to meet the requirements will expose Telstra to a civil penalty of up to \$10 million.
- The legislation also includes more stringent rules on the removal of *pay phones* and new provisions to allow people concerned about a pay phone removal to apply to the ACMA to direct Telstra not to remove a pay phone. Failure to comply with the new rules will expose Telstra to civil penalties or on-the-spot fines.
- Once the detailed operating arrangements for the National Broadband Network have been settled, the Government will consider the broader range of issues associated with the delivery of universal access.
- The *Customer Service Guarantee* currently provides that telephone companies must financially compensate customers where certain minimum performance requirements are not met. The legislation provides new minimum performance benchmarks to require telephone companies to meet or exceed the Customer Service Guarantee time periods for a certain proportion of cases. Failure to comply may result in civil penalties or on-the-spot fines.
- *Priority Assistance* arrangements require the highest level of telephone service to residential consumers who have a diagnosed life-threatening medical condition. The legislation will require



## ***Toward Universal Broadband Access in Australia***

telephone companies either to offer Priority Assistance services or to inform the customer where they can purchase these services.

- *Enforcement of Consumer Safeguards* will be strengthened, with the ACMA having increased powers to issue infringement notices ('on-the-spot fines') instead of commencing procedures in court.

As in many other countries, the telecommunications sector is one of the most highly regulated sectors in the Australian economy. Internet services have not been regulated to the same extent and there has been great reluctance to burden a new and vibrant sector of the economy with legacy regulation.

Given the limitations of the universal service obligation to voice services and the growing demand for improved internet and broadband services in regional Australia, the question of how to respond became a key concern in the consideration of regional telecommunications policy.

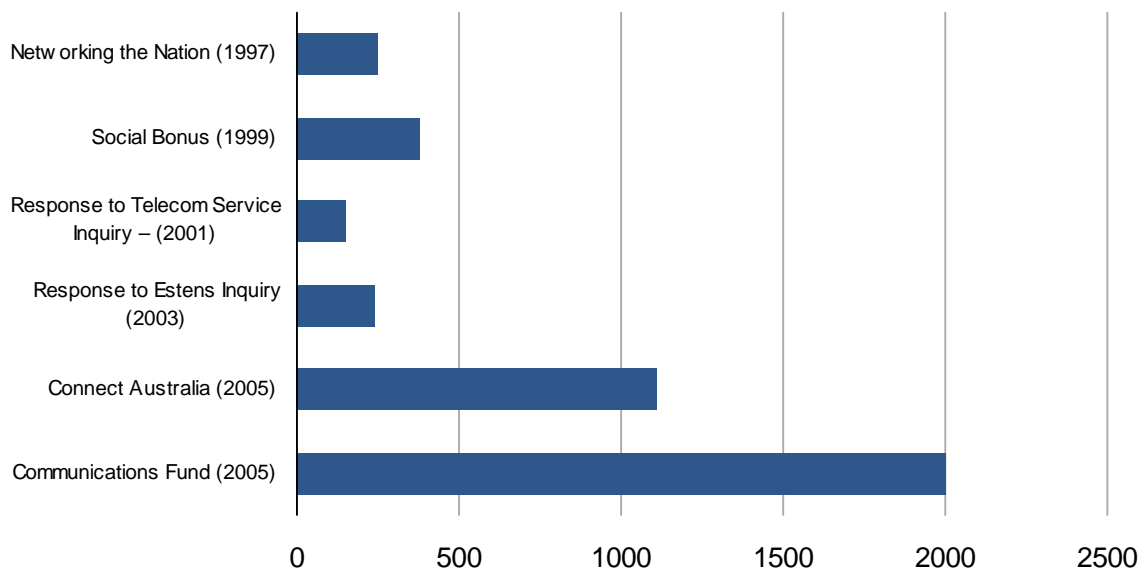
### 3.0 Regional and rural services

#### Central place in telecommunications policy

Both before and after the liberalisation of Australia’s telecommunications market a principal policy objective has been the provision of telephone services throughout Australia on a non-discriminatory, uniform basis at affordable prices. The needs of rural Australia have been given special status in this context.<sup>27</sup>

We have noted that concerns for regional Australia at the time of telecommunications liberalisation in Australia led to the introduction of the universal service obligation in 1991. Similarly, the staged process for the privatisation of Telstra led to further measures to ensure that services to ‘the bush’ were ‘up to scratch’ (meaning broadly that they met the required standard). While government revenue generated by the sale was used primarily to retire debt, substantial funds were allocated to the support of regional communications. In particular, a \$2 billion Communications Fund was created in September 2005 as part of the package for the full privatisation of Telstra.<sup>28</sup> In August 2005, the Government released a statement to announce that Government funding to support telecommunications in regional Australia since 1997 had passed the \$4 billion dollar mark.<sup>29</sup> Figure 10 provides a simplified view of the major funding packages over the period covered by that statement, totalling \$4.027 billion.

**Figure 10: Regional telecommunications funding 1997-2005 (\$ million)**



In addition, regular inquiries into the state of rural and regional telecommunications were mandated by legislation in 2005.

<sup>27</sup> Statement by the Hon Senator Gareth Evans, Minister for Communications, 25 May 1988 quoted in *Regional Telecommunications Independent Review Committee Report*, September 2008.

<sup>28</sup> Senator the Hon Helen Coonan, Minister for Communications, Information Technology and the Arts, [\\$2 billion Communication Fund Established Media Release 23 September 2005](#).

<sup>29</sup> [Fact Sheet: Regional Telecommunications Funding Government funding support for telecommunications in regional Australia - now more than \\$4 billion, 17 August 2005](#)

2008 Regional Telecommunications Review

The *Regional Telecommunications Independent Review Committee* is consequently a statutory committee mandated to review the adequacy of telecommunications services in regional Australia. The most recent review (often called the 'Glasson' Review, after its chairman), commenced in August 2007 and reported in September 2008. The next report is due by late 2012. The Glasson Review had to take account of a Universal Service Review that had already commenced, and also the plans for a National Broadband Network. (This was the \$4.7 billion program for which there was a request for proposals in April 2008.)

Range of issues considered

The committee reviewed the significance of communications including broadband to regional Australian under a number of headings including:

- Social inclusion
- Education
- Health care
- Emergency services
- Aboriginal and Torres Strait Islander people
- Local government
- Primary industry and commerce
- Transport, and
- Resources industry.

The report provides a wealth of information on the growing significance of internet-based telecommunications services for everyday life, reducing social isolation, and contributing to economic development in regional Australia. It noted the positive impact of programs like the Australian Broadband Guarantee. This program and its predecessors had enabled around 300,000 people in regional Australia to purchase a broadband service broadly comparable to those available in metropolitan areas.

The committee looked closely at each of the areas listed above. With regard to education, the committee found that broadband can support innovative service delivery and improve education outcomes. It noted the core elements of the new Government's Digital Education Revolution policy including

- the National Secondary School Computer Fund that provide grants of up to \$1 million for schools to help to help them provide or upgrade ICT services for secondary students in years 9 and 10, and
- The Fibre Connections to Schools initiative, committing \$100 million to contribute to the provision of fibre-to-the-premises broadband connections to Australian schools, aiming to deliver broadband download speeds of up to 100 Mbps.

The committee considered the question 'what is broadband?' It noted that the Australian Bureau of Statistics, like the OECD defines it as an 'always on' connection with an access speed of 256 kbps or more. In Australia it noted that consumers tend to equate broadband with ADSL, although a mix of technologies is available across Australia including cable modem HFC networks in some urban areas, wireless and satellite networks.

## ***Toward Universal Broadband Access in Australia***

It heard reports of problems with delivery speeds from satellite services in remote locations and noted that the most remote schools may still require special consideration in the future.

The committee considered the successive Australian Government programs including:

- the Higher Bandwidth Incentive Scheme ('HiBIS') introduced in April 2004,
- the Broadband Connect Incentive Program introduced in January 2005, and
- the current Australian Broadband Guarantee (which attracted generally positive comments, and which is to continue to 2012).

At a broad level, the Review Committee remained concerned about

- ongoing assurance of access to services on an equitable basis,
- the challenge of keeping pace with service improvements in urban areas, and
- the availability of backhaul.

Not surprisingly, they found that competition in regional markets is not as intense as in urban areas. On the other hand they did find that pricing of telephone, mobile and broadband services has moved away from distance-based charging to single nation-wide long distance prices. Competing providers have sought to differentiate themselves not only by having lower prices for various distances, but also by having larger areas covered within each price band. The result has been the virtual elimination of distance-based charging.

The committee recommended that the Australian Government develop a new framework to provide an assurance of ongoing access to voice, mobile, broadband and pay phone services to replace the existing USO legislation. It recommended that the legislative framework should provide for the Minister to determine the relevant Communication Service Standards — incorporating standards for voice, broadband, mobile phone and pay phone services.

As yet there is no formal Government response to this proposal, but the Government has noted that it will return to a number of the Committee's recommendations when arrangements for the National Broadband Network are further advanced.

### Initial Government response

After the committee completed its work and reported in September 2008, the Government in April 2009 announced plans for more far-reaching measures to establish a company that would invest up to \$43 billion over the next eight years to build and operate an open access wholesale National Broadband Network to provide fibre optic to the home and workplace, supplemented with next generation wireless and satellite technologies to deliver super fast broadband services.

Following the National Broadband Network announcements, the initial Government response to the committee report has focussed on matters that can be considered separately from the development of the National Broadband Network. Having indicated that the overall investment in response to the review could go to \$400 million, the Government announced an initial investment of \$60 million in regional communications:

- \$46 million in new funds for the Digital Regions Initiative to support digital education, health and emergency services projects in partnership with state, territory and local governments,
- \$11.4 million in new funds to increase and extend the subsidies available under the Satellite Phone Subsidy Scheme, and
- An additional \$3.7 million contribution (to a total \$30 million Indigenous Communications Program) to improve essential telecommunications services, basic public internet access and computer training for remote indigenous communities in partnership with states and territories.

## ***Toward Universal Broadband Access in Australia***

Overall, it was clear that the shape of the Government's broader response to the review would depend upon developments in the National Broadband Network. Meanwhile, the Australian Broadband Guarantee would continue until 2012.

"Businesses noted that access to broadband is vital to their business to ensure they keep up with advances in their fields. However, the higher prices they pay for their broadband services in regional Australia had to be passed on to their customers and this placed them at a competitive disadvantage to larger urban-based businesses. The Committee also heard that the higher relative price of broadband in regional Australia can be a disincentive for new businesses to remain or locate in these regions." ... Examples of the importance of broadband included:

- "The provision of health services in regional Australia through remote diagnosis, consultations and access to specialist advice, online availability of health records, and improved attraction and retention of health care professionals in regional areas.
- Enhanced education and e-learning capacity through distance education, remote access to online resources such as libraries and information websites, and improved future education and employment prospects, both within the region and more broadly.
- Increased flexibility and competitiveness of regionally-located businesses to expand their markets and reach, and improved access to relevant information and capacity, including greater access to skills and training.
- The rise of social networking (sometimes called Web 2.0) is facilitating participation and interaction. Online support groups and forums provide a new way of socialising and people in regional Australia can participate and receive advice and support no matter where they are located.

... These services deliver substantial economic and social benefits, and allow regional areas to readily connect with the national and global economy on an equal basis."

*Regional Telecommunications Independent Review Committee Report, September 2008, page 157-158*

## 4.0 Development of broadband policy and programs

### Early inquiries and programs

As mobile services became increasingly important to rural areas, the Australian Government introduced a series of funding programs to extend mobile coverage to areas that were not keeping up with the competitive markets in urban areas. Government funding programs supported mobile phone development in towns and highways across Australia and a satellite handset subsidy scheme was developed to assist people unable to access terrestrial mobile phone services.

In contrast to the story of mobile services development, broadband promotion activities tended to focus not only on the supply side of the industry, but also on the demand side and related capacity building measures. Since 1994, when a Broadband Services Expert Group recommended a national strategy to improve access for schools, libraries, medical and community centres, a feature of internet and broadband development has been the extent to which users have been actively engaged. From 1997 to 2004 the National Office for the Information Economy took a number of initiatives to stimulate electronic commerce and develop online government activities before these functions returned to mainstream government departments.

In the past 12 years, broadly-based programs to support regional services have included internet and broadband elements to support capacity building in rural areas.

- The *Networking the Nation* program (commenced 1997) placed the right and the responsibility for initiating action to remedy local telecommunications deficiencies in the hands of regional communities and representative groups within those communities, along with state and local governments. This resulted in a very wide range of projects being submitted for consideration and among those winning funding were projects concerned with establishing websites and portals, videoconferencing, internet service providers, IT training, online services and e-business trials, public Internet access facilities, and over 150 points of presence.
- The 2002 'Estens' *Regional Telecommunications Inquiry* found that all Australians could access an internet service provider for the cost of an untimed local call. Its report, *Connecting Regional Australia*<sup>30</sup> recommended, among other things, that the Government establish an incentive scheme for the provision of higher bandwidth services to regional, rural and remote areas.
- The *Broadband Advisory Group* report of 2003 focused primarily on sectors such as education, health, government services and more generally, services to rural and regional Australia. It suggested a number of strategies such as demand aggregation to support development.
- The *Higher Bandwidth Incentive Scheme* ('HiBIS') started on 8 April 2004. This was a \$157.8 million initiative of the Australian Government that took up the recommendations of the Regional Telecommunications Inquiry to provide registered internet service providers with incentive payments to supply higher bandwidth services in regional, rural and remote areas at prices comparable to those available in metropolitan areas.
- A *National Broadband Strategy Implementation Group* was established in 2004 to oversee the development of a *National Broadband Strategy* and demand aggregation strategies. The *Demand Aggregation Brokers* program was active from 2004 to 2006 providing national broadband advisers for education and health along with six state brokers and 24 community brokers. A *Coordinated Communication Infrastructure Fund* promoted collaborative investment in health and education. Grants were awarded in two competitive funding rounds in 2004 and 2005.
- The \$878 million *Broadband Connect program* commenced on 1 January 2006 and built on HiBIS which ended on 31 December 2005. The program was announced on 17 August 2005 by the Minister for Communications, Information Technology and the Arts as part of the package called *Connect Australia*. It consisted of two components: a new incentive program to replace

<sup>30</sup> [Connecting Regional Australia: the Report of the Regional Telecommunications Inquiry](#), 2002

## ***Toward Universal Broadband Access in Australia***

HiBIS, and a *Broadband Connect Infrastructure Program* that we will pick up again in discussion of the National Broadband Network.

The *Australian Broadband Guarantee* replaced the Broadband Connect Incentive Program in 2007 to support metro-comparable broadband access for Australians living in the most remote or difficult to reach areas. The overall package, called *Australia Connected*, was a funding and legislative initiative announced on 18 June 2007 to deliver fast affordable broadband access for all Australians.

Policy groundwork: the 2002 Regional Telecommunications Inquiry

The Regional Telecommunications Inquiry of 2002 (called the 'Estens' inquiry after its chairman) laid down much of the rationale and groundwork for HiBIS and subsequent programs including the Australian Broadband Guarantee. It also considered several of the practical issues associated with running a major subsidy program in regional Australia.

At that time the Inquiry found limited expansion of broadband services into areas unserved by the metropolitan cable networks established by Telstra and Optus. Regional Australia had reached the 'bandwidth ceiling' imposed by dial-up technology. Reviewing recent service improvements, they found

- increasing access to ADSL service as exchanges were enabled,
- an active ADSL market with some competitors installing their own equipment in local exchanges and a number of very competitive resellers of Telstra's wholesale product,
- a developing market for satellite services led by Telstra and Optus, and
- potential growth of wireless services.

The Estens committee concluded that "price rather than availability is the major impediment to the take-up of higher bandwidth services in regional, rural and remote areas." They weighed up the question of whether or not wireless services would provide a simple, effective and inexpensive solution to the pricing issue and concluded that the reality was complex. Savings in some areas were potentially offset by other challenges including distance limitations, signal attenuation, variable access to suitable locations for transmission facilities, security and interference issues.

They therefore concluded that "the best way to get efficient, cost-effective services in place is to provide a technology neutral, transparently competitive 'level playing field' to allow commercial decisions to be made on the best technologies and services to meet consumer needs." In support of this ambition, they laid down some directing principles for development of this approach:

- Equitable access to broadband services would provide an impetus for future economic development. Consequently, reasonable Government action should be taken to remove impediments to take-up.
- Government action should minimise any distortion of the market.
- Technology and competitively neutral intervention should aim to stimulate efficient and sustainable commercial services.
- It should avoid burdening the telecommunications industry with excessive financial obligations and carefully consider the impact on taxpayers.
- Government support needed to be justified by social and economic equity considerations.

Finally, they noted "Government regulation and funding support in this area has already been considerable. It would be beneficial for consumers and the industry as a whole for new policy initiatives to simplify the current structure rather than further complicating it."

This rationale supported the fundamental recommendation for an incentive scheme to support access to services in regional, rural and remote areas.<sup>31</sup>

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<sup>31</sup> [Connecting Regional Australia: the Report of the Regional Telecommunications Inquiry](#), 2002, page 228

“The most effective and appropriate Government response would be to provide a financial incentive to providers of higher bandwidth services to offer services at equitable prices in regional, rural and remote areas. Specifically, a one-off ‘per customer’ payment should be paid to providers of higher bandwidth data services in areas where a defined minimum level of service, in terms of price and functionality, is not likely to be provided commercially in the immediate future. Importantly, for providers to receive the incentive payment, higher bandwidth services would have to be made available at prices within parameters broadly comparable to the prices charged in metropolitan areas.”

The report went on to suggest that

- the scheme would need to identify price levels at which different service levels would be offered and that
- subsidies may need to be differentiated to recognise different levels of service, different costs associated with the technologies used, and whether a provider was a reseller or was providing new infrastructure.

It also found that such a strategy would usefully complement other Government initiatives such as measures to support education health services and demand aggregation at the community level.

#### Australian Broadband Guarantee

The Australian Broadband Guarantee reflects the policy approach recommended by the Estens report. It provides residential and small business premises with access to metro-comparable broadband services that they would otherwise lack.

Following the general election of November 2007 and a change of Government, the Minister for Broadband, Communications and the Digital Economy announced on 13 May 2008 an extension of the Australian Broadband Guarantee program. This would safeguard the broadband opportunities for all Australians while the Australian Government continued to implement its broader broadband policy agenda. The Australian Broadband Guarantee program received additional funding in the 2008–09 Budget to extend the program over four years.

#### Outline of the program

The Australian Broadband Guarantee provides incentive payments to registered internet service providers to supply subsidised broadband services to eligible residential and small business consumers, as well as Aboriginal or Torres Strait Islander Community Councils, where commercial broadband services of a ‘metro-comparable’ standard are not available.

The program objectives are to build capacity in under-served areas and regions where commercial infrastructure has not been extensively deployed. The program allows viable internet service providers to extend the range of their service coverage.

- It is not intended to be the main source of financial support for a provider's business. Applicants for registration as service providers need to demonstrate that they have a viable business plan without the support of the Australian Broadband Guarantee.
- Intervention is limited to where the market is not delivering metro-comparable services.
- It is demand-driven and incentive-based.
- It encourages multiple providers with a view to encouraging competition.
- It provides basic consumer protection for clients of service providers operating within the program.



The consumer's approach to the Australian Broadband Guarantee

Consumers can determine their eligibility for assistance in several ways.

- They can seek service directly through a registered internet service provider,
- they can call the consumer help line (1800 883 488), or
- they can themselves check the *Broadband Service Locator* established by the Department of Broadband, Communications and the Digital Economy. This is a free and easy-to-use online tool that enables consumers to find out about the broadband services offered at their location.

If a metro-comparable service is already available, consumers may choose from the providers on offer without entering the Australian Broadband Guarantee scheme.

If there are no metro-comparable commercial broadband services available to their premises, the consumer can register for an Australian Broadband Guarantee subsidised service.

The current standard for metro-comparable service requires a service provider to offer

- speeds of at least 512 kbps download and 128 kbps upload;
- at least 3 Gigabyte monthly usage allowance, and
- a price of no more than \$2500 over a three year period, including all connection and equipment cost.

The supplier's approach to the Australian Broadband Guarantee

Under the *Program Guidelines*<sup>32</sup> for the scheme, applications from internet service providers are assessed by a Department Assessment Panel, drawing on expert advice from consultants, where necessary.

Applicants for registration need to provide details of

- themselves and the services they will offer,
- the technical service solutions to be deployed
- the service plans to be offered to consumers, and
- the service area in which the applicant proposes to offer a service.

Service levels

There are three categories of service that suppliers can offer under the Australian Broadband Guarantee program: a threshold service, an entry level service, and an added value service.

- The threshold service must offer access to the internet at a peak download/upload data speed of at least 512/128 kbps and at least 3 GB per month usage allowance, at a price to the customer over three years of no more than \$2500, and shaping of data to no less than 64 kbps at no cost, or excess data charges of no more than 5 cents per megabyte with no shaping for any data used above the specified monthly data usage allowance.
- Providers may also choose to offer entry level services that provide access to the internet at a peak download/upload data speed of at least 256/64 kbps and at least 500 MB per month usage allowance.

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<sup>32</sup> Australian Government [Australian Broadband Guarantee Program Guidelines 2009-10](#), July 2009

## ***Toward Universal Broadband Access in Australia***

- A condition of registration is that providers must have registered at least one added value service with a speed of at least 1024/256 kbps, and at least 5 GB per month usage allowance.

### Consumer protections

Registered suppliers must comply with the metro-comparability standard and must also provide a number of other protections for consumers. For example, consumers can expect a three year offer of service without any increase in the monthly price of the service; excess data charges capped at no more than five cents per megabyte, and independent testing of service speeds and network availability.<sup>33</sup>

### Administration of the Australian Broadband Guarantee

Approximately 50 staff within the Department of Broadband, Communications and the Digital Economy administer the program within the current budget of \$250.8 million over four years to 2011-12. The program is averaging over 3,000 claims from registered providers per month, sending out almost 6,000 consumer information packs per month in response to customer requests, and handling about 3,000 consumer enquiries per month through the consumer support team.

Where there are alternative suppliers available to provide a service, the order of preference is as follows:

- Category A - a *commercially available metro-comparable service* without the support of the Australian Broadband Guarantee.
- Where that cannot be obtained, a Category B service - a terrestrial broadband services to be supplied through *investment in new infrastructure*.
- Where neither of the above services can be obtained, - a Category C service - a terrestrial broadband service to be supplied through an *upgrade to existing infrastructure*.
- Where none of the above can be obtained, - a Category D service - a *satellite* broadband service to be supplied through investment in new or upgraded infrastructure.

The amount of the subsidy varies according to the nature of the service.<sup>34</sup> Technical support for the broadband locator draws upon a variety of resources including MapInfo, the Australian Bureau of Statistics, Geoscience Australia and coverage maps supplied by internet service providers checked against known blackspots, technical faults and line-of-site issues.

Providers registered under the program have the primary responsibility for marketing their services, with the Department vetting promotional materials to ensure compliance with program guidelines. In addition, the Department utilises its website as well as other promotional activities to ensure people in regional Australia are aware of the program and the benefits to be gained. The program as a whole has reached a level of maturity with published manuals, training resources and management controls to minimise risks and maximise effectiveness.

### Taking stock

The Regional Telecommunications Review Committee in 2008 noted that the Australian Broadband Guarantee is the last of a series of programs that have revolutionised access to broadband services throughout regional Australia and helped facilitate the rollout of additional

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<sup>33</sup> For further detail, see *Frequently Asked Questions* and the website at [www.dbcde.gov.au/abg](http://www.dbcde.gov.au/abg).

<sup>34</sup> Currently up to \$2500 for an upgrade service; \$1000 for an ADSL or cable service; \$2000 for a wireless service in a metro area; \$2500 for a wireless service in a non metro area; up to \$6000 for a difficult and costly service.

## ***Toward Universal Broadband Access in Australia***

infrastructure to enable access for regional Australians. The Committee concluded that these programs have promoted competition in the regions and have assisted in closing the digital divide although transitions from one program to the next had created problems for providers. They strongly supported the Australian Broadband Guarantee model and its extension until 2012.

Experience has shown that most people prefer to commence a broadband service at the lowest cost level but the trend is to move up to higher levels over time. The meaning of metro-comparability may also change over time, but the aim of the program is not to compete with the most attractive urban service offerings: it is to provide an equivalent basic service with a price cap on that basic service. The scheme has been very successful in building a network of competing service suppliers (currently about 17),<sup>35</sup> and in building the capacity of suppliers to widen their range of support services and service offerings. In the early stages, ADSL and wireless providers contributed largely to the take-up of of the Australian Broadband Guarantee. After the easier areas were covered the balance of support from the scheme has shifted to satellite offerings. There is now strong competition among satellite providers, and users benefit from service and quality improvements.

A comparison with the universal service obligation demonstrates some of the strong points of the program.

**Figure 11: Australian Broadband Guarantee and Universal Service Obligation**

	Universal Service Obligation	Australian Broadband Guarantee
<b>Policy focus and objectives</b>	Broad/legacy concept to support basic telephone service to rural and disadvantaged users	Clear expectations of a targeted program that is technology neutral
<b>Competition</b>	One provider, no competing bids	Multiple providers
<b>Consumer choice</b>	One basic service and one provider	Different services and competing providers
<b>Funding</b>	Industry levy	Central government funds

A mark of the success of the Australian Broadband Guarantee is that the Australian Telecommunications Users Group, in their [submission](#) to the Universal Service Obligation Inquiry suggested that the Australian Broadband Guarantee be the model for a new 'Australian Voice\* Guarantee' (meaning an inclusive approach to voice and voice equivalent services). The voice and broadband guarantees together would make up an Australian Communications Guarantee scheme.

The Australian Government has committed funding for the Australian Broadband Guarantee until 2012. The program may need to evolve further as the National Broadband Network develops. As part of that initiative, the Government has committed to providing high quality wireless and satellite services for the 10 percent of premises which are likely to remain outside the reach of fibre-to-the-premises infrastructure.

<sup>35</sup> The Department of Broadband, Communications and the Digital Economy maintains a [list of registered providers](#) on its web site.

## 5.0 National Broadband Network

Proposals for a national broadband network developed through several stages and setbacks before the Government announced a commitment in April 2009 to establish a company that would invest up to \$43 billion over eight years to build and operate the National Broadband Network. Following is a brief account of the earlier proposals and their outcomes and the current National Broadband Network initiative.

### 2007 Broadband request for proposals and outcome

In September 2006, the then Minister, Senator Helen Coonan invited applications for funding large scale infrastructure projects under the Australian Government's \$878 million Broadband Connect Program. In that announcement she said "Several respondents [to an earlier expressions of interest process] are interested in developing proposals for major national or regional infrastructure projects that would result in well developed, end-to-end solutions of significant scale. Some also proposed a consortium approach to bring together major transmission capacity projects (such as interstate links and local access solutions) that could be integrated into comprehensive national or regional projects."

An expert task force was appointed to manage the assessment process and advise on related issues including regulatory matters. In September 2007 the Minister announced that a funding agreement for a new national high speed broadband network had been signed with OPEL Networks, a joint venture between Optus and the Australian rural group Elders.<sup>36</sup> Overall, this promised a new \$1.9 billion competitive broadband network that would deliver high speed broadband to 99 per cent of households and small businesses at retail prices comparable to metropolitan prices. The Elders-Optus joint venture would contribute over \$900 million toward the establishment of OPEL Networks. OPEL Networks would be a structurally separated 'wholesale only' company that would sell services on a transparent and equivalent basis to parent entities Elders and Optus, and to any other broadband provider in the market. The announcement also said:

- technologies used would include a new wireless broadband network with 1,363 new wireless broadband WiMAX sites across the country, and
- a further 312 exchanges would be enabled with very fast ADSL2+ broadband for the first time, with an additional 114 exchanges being enabled by Optus on a commercial basis.
- 15,000 kilometres of fibre optic backhaul cable would link rural areas back to major city centre.

She also said the Government would independently test the network to ensure that coverage was achieved to a very high standard and that service standards were comparable to those in metropolitan areas.

After a general election and change of Government in November 2007, the new Rudd Labor Government publicly committed to honouring the contract between the Commonwealth and OPEL. However, on 2 April 2008, the Minister for Broadband, Communications and the Digital Economy, Senator Stephen Conroy announced that the OPEL Networks broadband network would not proceed.<sup>37</sup> The announcement said that a "condition precedent of the contract stated that OPEL would provide coverage reasonably equivalent to 90% of under-served premises identified by the then Department of Communications, Information Technology and the Arts as being within its coverage area."

<sup>36</sup> Senator the Hon Helen Coonan, Minister for Communications, Information Technology and the Arts, Media Release 9 September 2007 *New OPEL Project Underway*

<sup>37</sup> Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy Media Release 2 April 2008 *OPEL Networks Funding Agreement not to proceed*.

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The Department of Broadband, Communications and the Digital Economy “performed an analysis of the detailed testing and mapping undertaken by OPEL, and determined that the OPEL network would cover only 72% of identified under-served premises,” Senator Conroy said.

“On the basis of [the Department’s] assessment, the Government determined that OPEL’s Implementation Plan did not satisfy the condition precedent of the funding agreement, and as a result the contract has been terminated.”

2008 National Broadband Network request for proposals and outcome

As part of its 2007 election commitments, the new Government had announced that it intended to make available \$4.7 billion to facilitate the construction of a National Broadband Network.

On 11 April 2008, the Government announced the release of a request for proposals.<sup>38</sup> The request for proposals detailed the scope of the National Broadband Network, which was to:

- deliver minimum download speeds of 12 megabytes per second to 98 per cent of Australian homes and businesses,
- have the network rolled out and made operational progressively over five years using fibre-to-the-node or fibre-to-the-premises technology,
- support high quality voice, data and video services including symmetric applications such as high-definition video-conferencing,
- earn the Commonwealth a return on its investment,
- facilitate competition in the telecommunications sector through open access arrangements that allow all service providers access to the network on equivalent terms, and
- enable uniform and affordable retail prices to consumers, no matter where they live.

Proposals closed in November 2008 and an expert panel was appointed to assess the proposals.

The Government terminated the process on 7 April 2009 on the advice of the Panel that “none of the national proposals offered value for money.” The Panel also noted the rapid deterioration of the global economy and its impact on the process. An extract from the evaluation report was published,<sup>39</sup> providing further detail on the process and findings including:

- that Telstra had failed to submit a Small and Medium Enterprise Plan as required under the request for proposals leading to its exclusion from further consideration in the process;
- that all proposals were to some extent underdeveloped;
- that, with the right technology and incentives the goal of providing high-speed broadband services to 98 percent of home and businesses can be reached;
- that rolling out a single fibre to the node network is unlikely to provide an efficient upgrade path to fibre to the premises;
- that analysis of the proposals had highlighted the importance of competition and the need to improve competition in backhaul supply, particularly in regional areas.

On the same day, the Government announced its new proposals for a National Broadband Network,<sup>40</sup> and invited submissions on related regulatory matters.

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<sup>38</sup> Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy Media Release 11 April 2008 *Government invites National Broadband Proposals*

<sup>39</sup> [Extract from the Evaluation Report of the Request for Proposals to Roll-out and Operate a National Broadband Network for Australia](#), 20 January, 2009

<sup>40</sup> Prime Minister, Treasurer, Minister for Finance, Minister for Broadband Joint Media Release [New National Broadband Network](#), 7 April 2009

## 2009 National Broadband Network announcement

The Government announced that it would establish a company that will invest up to \$43 billion over the next eight years to build and operate an open access wholesale National Broadband Network. The new network will provide fibre optic to the home and workplace, supplemented with next generation wireless and satellite technologies to deliver super fast broadband services.

To turn its vision into action the Government immediately took steps to:

- establish a company to build and operate the network and make an initial investment of \$4.7 billion in the network;
- commence an implementation study to determine the company's operating arrangements, detailed network design and ways to attract private sector investment;
- fast-track negotiations with the Tasmanian Government, as suggested by the Panel of Experts, to build upon its National Broadband Network proposal to begin the rollout of a FTTP network and next generation wireless services in Tasmania;
- implement measures to address [regional backbone 'blackspots'](#) through the timely rollout of fibre optic transmission links connecting cities, major regional centres and rural towns - delivering improvements to telecommunication services in the short term
- progress legislative changes that will govern the national broadband network company and facilitate the [rollout of fibre-to-the-premises networks](#), including the use of [fibre optic technology in future greenfield developments](#), and
- commence a [consultative process](#) on [necessary changes to the existing telecommunications regulatory regime](#).

The new super fast National Broadband Network, to be built in partnership with the private sector, would become the single largest nation building infrastructure project in Australian history.

## Objectives

The new National Broadband Network is to:

- connect 90 percent of all Australian homes, schools and workplaces with broadband services with speeds up to 100 megabits per second, 100 times faster than those currently used by many households and businesses,
- connect all other premises in Australia (the remaining 10 percent) with next generation wireless and satellite technologies that will deliver broadband speeds of 12 megabits per second, and
- support up to 25,000 local jobs every year, on average, over the 8 years of the project.

## Ownership and financing

The preliminary estimate is that the enhanced NBN network will cost up to \$43 billion.

The National Broadband Network will be built and operated by a new company specifically established by the Australian Government to carry out this project.

The Government will be the majority shareholder of this company, but significant private sector investment in the company is anticipated.

The Government's investment in the company will be funded through the Building Australia Fund and the issue of Aussie Infrastructure Bonds, which will provide an opportunity for households and institutions to invest in the National Broadband Network.

## ***Toward Universal Broadband Access in Australia***

The Government will seek private investment in the company to draw on private sector capacity and expertise. However, ownership restrictions will be established to protect the Government's objective of a wholesale open-access network.

The Government intends to sell down its interest in the company within 5 years after the network is built and fully operational, consistent with market conditions, and national and identity security considerations.

### Specifications

The new super-fast network will:

- connect homes, schools and workplaces with optical fibre to the premises, providing broadband services with speeds of 100 megabits per second to Australians in urban and regional towns with around 1,000 or more people,
- use next generation wireless and satellite technologies that will be able to deliver 12 megabits per second or more to people living in more remote parts of rural Australia,
- provide fibre optic transmission links connecting cities, major regional centres and rural towns,
- be Australia's first national wholesale-only, open access broadband network,
- be built and operated on a commercial basis by a company established at arm's length from Government and involve private sector investment, and
- be expected to be rolled-out, simultaneously, in metropolitan, regional, and rural areas.

The Government's objective is to achieve 90 per cent coverage of the fibre-to-the-premises network, with remaining coverage to be delivered through wireless and satellite technologies within this funding envelope. Initial advice to the Government is that this objective is achievable, but this estimate will be subject to an implementation study.

### Recent actions

Since these initial announcements, the Government has taken a number of further steps.

- It has conducted a review of related regulatory issues, as described in the next section, which in turn has led to the announcements about separation arrangements for Telstra and wider regulatory reforms, discussed later in this case study.
- It has appointed board members to the new company and moved to fast track the National Broadband Network rollout in Tasmania.
- It has extended the Australian Broadband Guarantee to support broadband take-up in under-served areas in the period while the National Broadband Network is being established.
- It has fast-tracked a number of backhaul projects requesting proposals for a regional backbone blackspots program and construction of backbone links to Emerald and Longreach, Queensland, Geraldton, Western Australia, Darwin, Northern Territory, Broken Hill, New South Wales, Victor Harbor, South Australia and South West Gippsland, Victoria.<sup>41</sup>
- It has appointed a stakeholder reference group to advise on fibre-to-the-premises broadband rollouts in greenfield property estates.

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<sup>41</sup> Senator Stephen Conroy Media Release [\*Priority National Broadband Network investment for regional Australia\*](#) 1 July 2009,

### **National Broadband Network**

I'm sure by now, all of you here are aware of the scale and scope of the National Broadband Network. It will be the single largest nation-building infrastructure project in Australia's history.

It is an important economic stimulus that will support 25,000 jobs in Australia for each year of the eight year build — peaking at 37,000. Additionally, it will lay the foundations for future growth, productivity and innovation across all sectors of the economy as we emerge from the global recession.

Ubiquitous, affordable high speed broadband will provide new opportunities for businesses, schools, hospitals and consumers in their every day lives.

One of the critical features of the National Broadband Network is that it will be Australia's first truly national wholesale-only communications network. It represents an historic piece of micro-economic reform in the telecommunications sector. ...

The National Broadband Network ... delivers separation between the infrastructure provider and retail service providers. It will mean better and fairer infrastructure access for service providers, greater retail competition, and better services for families and businesses. It will drive genuine competitive pressure in the telecommunications sector, to the benefit of consumers and businesses that use these services.

It will form the basis for a generation of innovators and for businesses to drive efficiency and productivity growth. It will also change the way we deliver critical public services and manage our investments in infrastructure and utilities.

Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, *Speech to Australian Financial Review National Broadband Conference, 7 June 2009*

### Regulatory issues

In parallel with the 2008 request for proposals process, the Government invited submissions on the regulatory arrangements that should apply as Australia moved to a National Broadband Network. Eighty two submissions were received from a wide range of stakeholders. In April 2009, the Minister released a discussion paper to explore options for reform.<sup>42</sup> In his introduction to the discussion paper, the Minister said that the Government would consider key options including:

- Allowing the ACCC to set up-front access terms and conditions for companies wanting access to Telstra and other networks
- Strengthening the powers of the ACCC to tackle anti-competitive conduct
- Measures to address Telstra's vertical integration, such as functional separation and also the horizontal integration of fixed-line and cable networks, and telecommunications and media assets
- Improvements in universal access arrangements for telephony and pay phones, and the rules around time frames for connections and repairs.

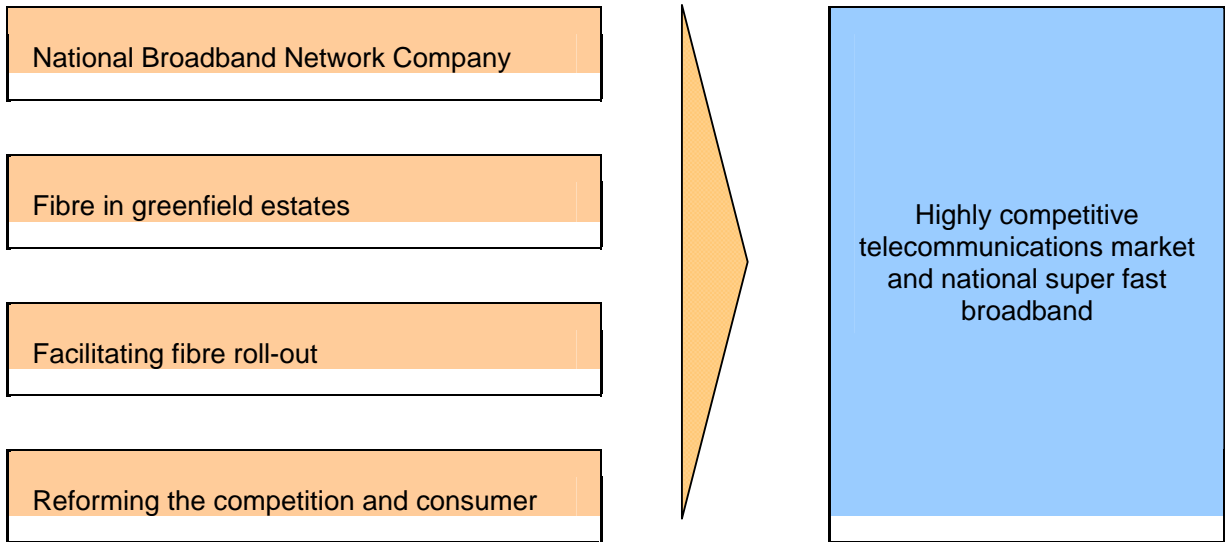
In September 2009, the Minister announced details of the actions the Government would take in each of these areas.

<sup>42</sup> [National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband](#), April 2009.



The April 2009 discussion paper laid out the Government's plan to achieve a highly competitive telecommunications market and national super fast broadband with the key elements described diagrammatically as follows:

**Figure 12: Key policy elements**<sup>43</sup>



Finally, as it set the scene for consideration of the detailed regulatory issues, the Government reasserted its ongoing commitment to several key policies –

- improving productivity
- competition
- consumer protection
- rural, regional and remote Australia, and
- reducing unnecessary regulation

The regulatory issues were then outlined under two broad headings:

- Proposed regulatory reforms for the NBN rollout and
- Consultation on broader regulatory reform options.

The consultation thus covered two sets of issues, which are separate, but can be seen to be related to some extent.

<sup>43</sup> Diagram from *National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband*, page 3

Submissions were invited with a closing date of 3 June 2009. They were made [public](#) on 4 September 2009.

**Figure 13: Regulatory reforms for broadband rollout and broader options**

	Regulatory reforms to support the National Broadband Network rollout	Consultation on broader regulatory reform options
<b>Purpose</b>	For <i>information</i> and to inform consideration of broader reform options	For <i>consultation</i> to assist decision-making
<b>Key topic areas</b>	Operating regime for the National Broadband Network company	Separation arrangements for Telstra
	National Broadband Network access regime	Access provisions under the <i>Trade Practices Act</i>
	ACCC oversight	Anti-competitive conduct provisions under the <i>Trade Practices Act</i>
	Access to land poles, ducts and infrastructure	Facilities access under the <i>Telecommunications Act</i>
	Fibre optic networks in greenfield estates	Spectrum allocation Consumer safeguards framework (including USO)

Proposed regulatory reforms for the National Broadband Network rollout

**Operating regime for the National Broadband Network company**

Recognising the need for regulatory certainty well before shareholders begin to invest or services are offered, the Government committed to establish the regulatory framework for the National Broadband Network as soon as possible and indicated that ownership and control rules would be established to ensure that the National Broadband Network’s open access and equivalent access arrangements were not compromised.

**National Broadband Network access regime**

The National Broadband Network company will be required to offer services on a wholesale-only basis. Legislation will prevent it offering retail services. Consequently the National Broadband Network company will have no incentive to engage in anti-competitive behaviour such as unfairly discriminating between providers. The Government therefore proposed to develop a new access regime for the National Broadband Network that would take account of issues such as

- the nature of the services to be provided
- the mechanisms for determining price and non-price terms of access to the network and ongoing oversight arrangements
- the principles upon which access prices for using National Broadband Network services will be determined.

### **Australian Competition and Consumer Commission oversight**

The discussion paper indicated that the overwhelming majority of regulatory submissions urged that the ACCC should have an integral role in determining access terms and conditions. It was proposed that the ACCC will oversight access to the National Broadband Network and the operations of the company. Further consultation with stakeholders would be undertaken in developing the detail of these arrangements.

### **Access to land, poles, ducts and infrastructure**

To facilitate fibre rollout, it is necessary to consider how best to deal with access to facilities in those areas where infrastructure already exists, and also how to encourage the development of facilities in new 'greenfield' areas where facilities are less developed.

Currently, telecommunications carriers have regulated access to private land in order to install and maintain facilities. This enables carriers to repair and install new lines, provided land owners and occupiers are notified in advance. The paper indicated that the Government will introduce streamlined arrangements which will apply to *all* fibre optic roll-outs to the home and workplace. This should avoid unnecessary delays and also overcome the risk of different towns and suburbs applying different requirements with consequential cost increases. To reduce the costs of deploying fibre networks, the Government will also

- allow optical fibre to be rolled out overhead on existing poles,
- allow telecommunications carriers access to poles, ducts and pipes of other utilities, where technically feasible, for installing fibre optic infrastructure, and
- improve access to information about the location and availability of poles, ducts and pipes.

### **Fibre optic networks in greenfield estates**

Expert advice to the Government supported the view that fibre optic networks to the home and workplace would best position Australian consumers and businesses to thrive in the growing digital economy. Forward-looking local governments around Australia are already using their planning powers to encourage developers and telecommunications carriers to build fibre optic networks in new estates.<sup>44</sup> The discussion paper concluded that it would be counter-productive to have homes developed in new estates with the latest technology, but connected by outmoded copper wires. The Government announced therefore that it would mandate the use of fibre optic infrastructure to the home and workplace in greenfield estates across Australia, where they are approved after 1 July 2010.

On all these measures to support the National Broadband Network the Government was not seeking feedback, but they were set out to inform the consideration of broader options for change during the transition to the National Broadband Network environment.

The Government proposed to consult separately with interested parties before introducing legislation in the Parliament. The Government specifically undertook to consult with state, territory and local governments and other key stakeholders such as builders and developers with regard to the rollout of fibre optic networks in greenfield estates and facilitating deployment of fibre optic infrastructure more broadly. It publicly invited participation in the consultation process.<sup>45</sup>

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<sup>44</sup> For example, the [City of Whittlesea](#) in Victoria

<sup>45</sup> [Creation of this stakeholder consultation](#) group was announced on 14 August 2009.

Consultation on broader regulatory reform options

### **Facilities access regime**

Under the *Telecommunications Act 1997* carriers are required to provide other carriers with access to facilities such as exchanges, pillars, ducts and towers. Where this does not occur by mutual agreement, terms of access may be established by an arbitrator and, if that fails, by the ACCC. The ACCC has adopted a facilities access code which governs access to mobile towers and underground facilities. The regime has been criticised because the ACCC is only the arbitrator of last resort, and because it gives rise to delays, creates uncertainty for access seekers and provides too many opportunities for disputes.

Roll out of the National Broadband Network could well require an efficient facilities access regime, and it is therefore being reviewed with a view to improvement and possible amalgamation with an improved services access regime under the *Trade Practices Act*.

### **Competition framework**

When the Government consulted on regulatory issues involved with the move to the National Broadband Network in 2008, the vast majority of submissions that were received focussed on the competition framework. Australia has a broad competition and consumer protection law which applies across all sectors of the economy. This is the [Trade Practices Act 1974](#). Within that act, there are provisions specific to telecommunications.<sup>46</sup>

- Part XI C sets out the telecommunications access regime, so that service providers can have access to certain wholesale services from another provider.
- Part XI B sets out a specific anti-competitive conduct regime for the telecommunications sector.

This is not the whole of the competition regime. Other measures that support competition in the Australian market include

- the accounting separation and operational separation rules applying to Telstra,
- the telecommunications facilities access regime under the [Telecommunications Act 1997](#) which allows access to facilities such as exchanges, pillars, ducts and towers, and
- Provisions in the [Radiocommunications Act 1992](#) that permit restrictions on the allocation of spectrum to support competition in the market.

The discussion paper on regulatory issues took up each of these issues.

### **Access provisions (Part XIC of the Trade Practices Act)**

Under the Act, the ACCC has power to declare specific telecommunications services to be subject to the access regime. Once a service is declared a telecommunications service provider of a declared service (an 'access provider') is obliged to supply it to another telecommunications service providers (an 'access seeker') on request, subject to certain exceptions. The terms on which a declared service is supplied can be determined by

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<sup>46</sup> The special provisions were adopted because it was thought likely that the standard provisions dealing with anti-competitive conduct and bottleneck facilities may not be up to the challenges of the telecommunications sector, where a 'damages' award for refusal to supply access was less important than the supply of access itself. More broadly, telecommunications was seen as an extremely complex, horizontally and vertically integrated industry in which there is considerable scope for incumbents to engage in anti-competitive activity, because competitors in downstream markets depend on access to networks controlled by the incumbent. Anti-competitive behavior could cause particularly rapid damage to competition in the early stages of competition in the telecommunications market.

## ***Toward Universal Broadband Access in Australia***

- negotiation and agreement between the parties, or
- if negotiation fails, the terms are as set out in an access undertaking previously lodged by the access provider and accepted by the ACCC, or
- in the absence of such an undertaking, a determination by the ACCC following arbitration.

This is sometimes described as the 'negotiate-arbitrate' model.

When the ACCC takes action in this area it must consider the long-term interests of end-users and whether a particular action is likely to promote

- competition
- any-to-any connectivity, and
- telecommunications infrastructure investment and its efficient use.

For providers other than Telstra to offer DSL services, they must either buy a wholesale DSL service from Telstra or acquire access to the copper line from Telstra's exchange to the customer's premises. This can be obtained by acquiring either the Unconditioned Local Loop ('ULL') service or the Line Share Service from Telstra.

The negotiate-arbitrate model was heavily criticised by both access providers and access seekers for being slow, cumbersome and open to gaming and obstruction, undermining investor confidence. Since the commencement of the regime in 1997 there have been more than 150 telecommunications access disputes compared to only three access disputes in other regulated sectors, including the airports and energy sectors. In the eighteen months prior to the release of the discussion paper, judicial review had been sought in the case of almost all 'final' arbitration determinations made by the ACCC. As of March 2009, the ACCC was considering 51 access disputes, all involving Telstra, and 42 of these relating to the supply of broadband inputs.

As the ACCC cannot set binding terms and conditions up-front, there are multiple steps at which parties can challenge procedural matters or seek procedural review, and arbitrations when they are made bind only the parties to that arbitration. To solve problems up-front an access undertaking could be lodged by the access provider and accepted by the ACCC. However, to date the ACCC has rejected most of the undertakings that have been submitted to it on the basis that it was not satisfied that the legislated criteria had been met.

### ***Outcome***

On 15 September 2009 the Government announced reforms to the competition regime with legislation to streamline the arrangements in Part XIC of the *Trade Practices Act 1974* so that:

- the ACCC will determine up-front terms and conditions for a three to five year period, following consultation with industry;
- the ACCC can determine principles to apply for longer periods; and
- the ACCC can make binding rules of conduct to immediately address problems with the supply of regulated wholesale services

### **Anti-competitive conduct provisions**

Part IV of the Trade Practices Act deals with restrictive trade practices and cartel arrangements across the whole economy. Part XIB sets out the additional anti-competitive conduct regime that applies to the telecommunications sector. It prohibits a service provider with a substantial degree of market power from engaging in conduct that has the *effect* or *purpose* of substantially lessening competition. (This is broader than the general anti-competitive conduct provisions in Part IV of the Act in which the test for misuse of market power is the *purpose* of substantially lessening competition).

Under Part XIB, if the ACCC believes a service provider is engaging in anti-competitive conduct it must first issue a *consultation notice*. The notice summarises the anti-competitive conduct and opens the way for the ACCC or third parties to seek substantial penalties and damages in the

Federal Court. The ACCC may then issue a *competition notice* obliging the service provider to cease the conduct in question or face immediate penalties.

This regime has also been criticised as slow and cumbersome. Overall, the paper notes that in four of the five instances where a competition notice has been issued, a change in conduct has followed, leading the ACCC to revoke the notice or to settle prior to litigation. Overall, it was thought necessary to retain and improve the regime, not to abandon it.

### **Outcome**

The reforms announced on 15 September 2009 includes legislation to reform the arrangements in Part XIB of the TPA so that the ACCC can better address breaches of competition law and conduct damaging to the market.

- The ACCC will no longer have to consult with a party before issuing a competition notice; a process previously prone to delay and obstruction.
- In addition, the reforms will make it clear that the competition notice regime applies not only to carriage services, but also to content services – such as subscription television services – delivered by carriers and carriage service providers.

### **Separation arrangements for Telstra**

The discussion paper stated “Telstra remains one of the most integrated telecommunications companies in the world. It is a vertically and horizontally-integrated company which provides wholesale and retail services and operates multiple telecommunications networks. It owns the fixed line copper network in Australia that connects almost every premises in Australia, as well as the largest hybrid fibre coaxial cable network and 50 per cent of Foxtel<sup>47</sup> - Australia’s largest subscription television provider. The paper noted that Telstra retains dominance in many markets and the extent to which it is vertically integrated raises concerns about Telstra’s ability to favour its own wholesale customers over its retail competitors. In response to these concerns, the Australian Government introduced controls on Telstra for:

- Accounting separation in 2002, and
- Operational separation in 2005.

These controls are seen as less demanding than the measures implemented in other countries such as the United Kingdom or New Zealand, and there have been complaints that these measures have not succeeded in promoting equivalence of access for those that seek it.

The present regime was intended to provide equivalence of outcomes. Given the criticisms, comments were invited on different approaches that would require equivalence of inputs; that is, competitors for wholesale services would be provided with the same service, the same prices, and the same information, and they would follow the same processes as the incumbents retail units.

### **Vertical separation options**

Two options for vertical separation were set out as broad alternatives -

- Strengthening the current operational separation regime, with stronger governance and ring-fencing arrangements, more timely information to customers and stronger enforcement powers involving the ACCC, or
- Moving to functional separation along the lines introduced in the UK and New Zealand, and being considered in the European Union.

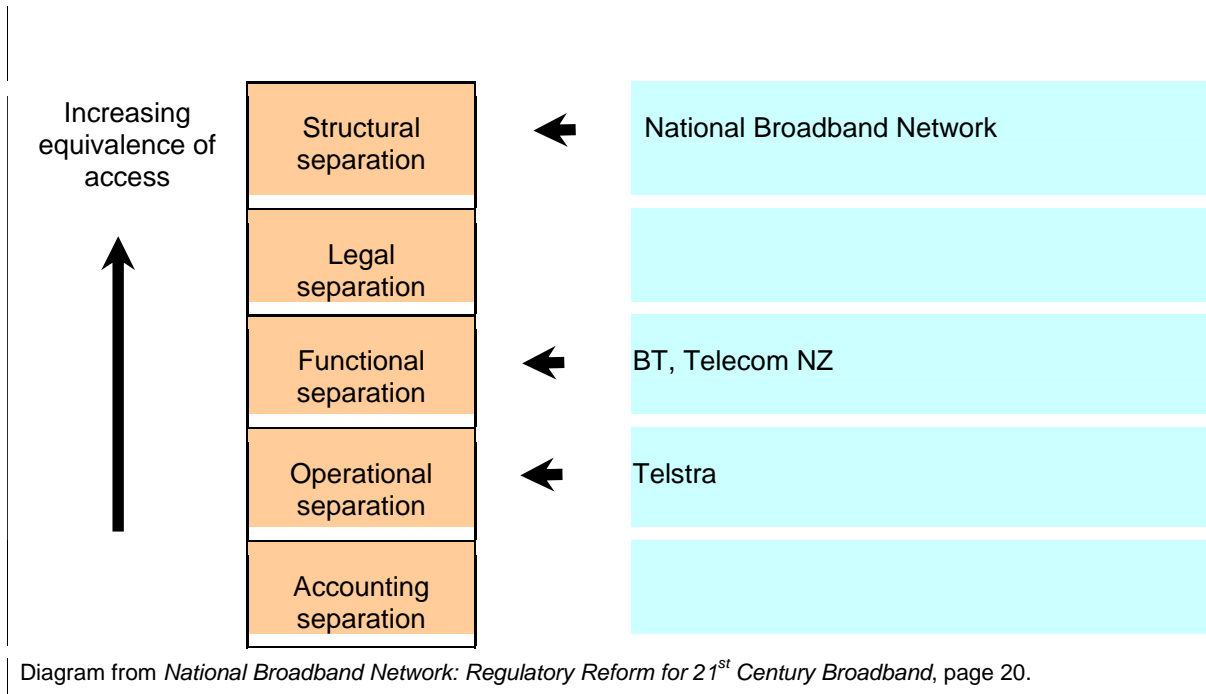
In general, functional separation would require the incumbent to create a separate unit to serve other providers and the incumbent’s own retail units on the same terms and conditions. The unit

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<sup>47</sup> *National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband*, page 17. Smaller network operators include Neighbourhood Cable, TransACT and Austar.

would have separate management, staff, operational systems and premises. Performance incentives would be aligned to the performance of the unit, not the incumbent as a whole.

**Figure 14: Possible models of separation**



### Horizontal separation issues

As well as the issue of vertical separation, the question of 'horizontal separation' was raised.

Telstra owns the largest hybrid fibre coaxial cable network in Australia (passing 2.5 million homes, compared with Optus' 2.2 million).<sup>48</sup> In the European Union and elsewhere, a number of countries have restricted the scope for one company to own both fixed telephone and cable networks in order to encourage cross-platform competition.

Telstra also owns 50 per cent of Foxtel, the major subscription television company and it is argued that as content becomes increasingly important in bundled packages of services, exclusive control of content limits competition opportunities in both the content and carriage sectors, and also limits the consumer's opportunities to choose different packages of connectivity and content services.

### Horizontal separation options

Comments were invited on the following options:

- Measures to prevent Telstra from reinforcing or extending its dominance through the acquisition of new businesses in areas such as commercial broadcasting, newspapers, or exclusive content rights. (This would amount to an extension of cross media ownership rules that currently apply only within the broadcasting sector).
- Divestment of Telstra's cable network. (This could also enable additional infrastructure-based competition).

In the event, the Government chose to deal with vertical and horizontal separation issues in an integrated fashion that also took account of spectrum issues. Before coming to the final outcome it is therefore necessary to say something about spectrum allocation issues.

<sup>48</sup> *National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband*, page 23

## **Spectrum allocation**

Spectrum availability has been a prerequisite of competition in the telecommunications market since the growth of mobile services, and it remains important with the development of 3G and wireless broadband services. Under the *Radiocommunications Act*, available spectrum can be auctioned for licence periods of up to 15 years and secondary trading in spectrum is permitted. The Minister can restrict the participation of particular carriers for competition reasons, and to encourage new entrants. Separate consultations are currently underway to take particular account of

- the transition to digital television and cessation of analogue broadcasts, and
- the forthcoming expiry of existing licences used for mobile telephone services.

Throughout the development of policy on the National Broadband Network there was an expectation of using next generation wireless and satellite technology to ensure that the whole Australian population has access to super-fast broadband services. It was therefore necessary to consider whether competition restrictions on access to valuable spectrum may be needed, and how competition might be encouraged between different technology platforms.

Reforms announced September 2009

On 15 September 2009, the Minister for Broadband, Communications and the Digital Economy, Senator Conroy announced a number of reforms to promote competition, to address Telstra's high level of integration and to strengthen consumer safeguards.<sup>49</sup> The legislative package was released online: [www.dbcde.gov.au](http://www.dbcde.gov.au). The announcement noted that the proposed reforms were supported by the overwhelming majority of submissions received in response to the *National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband* Discussion Paper released by the Government on 7 April 2009.

## **Outcome - separation and spectrum issues**

On the separation issue Senator Conroy said:

"It is the Government's clear desire for Telstra to structurally separate, on a voluntary and cooperative basis."

"The Government believes it is possible to achieve a win-win outcome in the interests of Telstra, its shareholders and, more broadly, all Australians."

The legislation will allow Telstra to voluntarily submit an enforceable undertaking to the Australian Competition and Consumer Commission to structurally separate. The Minister can provide guidance to the ACCC on the matters it would take into account when considering whether to accept the structural separation undertaking.

If Telstra chooses not to structurally separate, the legislation provides for the Government to impose a strong functional separation framework on Telstra. This draft legislation proposes implementing a functional separation regime by altering the *Telecommunications Act 1997* to require that:

- Telstra conduct its network operations and wholesale functions at arm's length from the rest of Telstra;
- Telstra provides equivalent price and non-price terms to its retail business and non-Telstra wholesale customers; and

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<sup>49</sup> Minister for Broadband, Communications and the Digital Economy, the Hon Stephen Conroy Media Release [Historic reforms to telecommunications regulation](#) 15 September 2009



## ***Toward Universal Broadband Access in Australia***

- this equivalence of treatment is made transparent to the regulator and competitors through strong internal governance structures.

The legislation will also seek to promote competition across telecommunications platforms while allowing Telstra the flexibility to choose its future path.

Telstra will be prevented from acquiring additional spectrum for advanced wireless broadband while it:

- remains vertically integrated; and
- owns a hybrid fibre coaxial cable network; and
- maintains its interest in Foxtel.

The legislation provides scope for the Minister to remove either or both of the second and third requirements in the event that Telstra submits to the ACCC an acceptable undertaking to structurally separate.

Introducing the legislation in the Parliament, the Minister representing Senator Conroy in the House of Representatives said

“The government retains an open mind on the best model for structural separation as we transition to the NBN.

It may, but does not need to, involve the creation of a new company by Telstra and the transfer of its fixed-line assets to that new company.

Alternatively, it may involve Telstra progressively migrating its fixed line traffic to the NBN over an agreed period of time and under set regulatory arrangements and for it to sell or cease to use its fixed line assets on an agreed basis. This approach will ultimately lead to a national outcome where there is a wholesale only network not controlled by any retail company — in other words, full structural separation in time. Such a negotiated outcome would be consistent with the wholesale only, open access market structure to be delivered through the National Broadband Network.

The government has commenced constructive discussions with Telstra on how NBN Co. and Telstra could work collaboratively towards the NBN. We believe that we can work towards achieving a solution in the national interest that also meets the interests of Telstra and its shareholders.”<sup>50</sup>

### Removal of Unnecessary Regulatory Burden

Finally the Government announced the removal of several unnecessary regulatory burdens on the industry.

- Carriers with a revenue less than \$25 million per annum will be exempted from paying the USO levy and an annual Carrier Licence charge and reporting to the ACMA, as costs of compliance is often considerably higher than their monetary contribution.
- ACMA will reduce reporting requirements under some consumer safeguard measures, so long as performance benchmarks are being met.
- Accounting and operational separation requirements will be repealed once functional separation is in place or Telstra has submitted an enforceable undertaking to structurally separate that is acceptable to the ACCC.
- The Government will also remove the requirement on Telstra to provide technical assistance to enable customers to achieve 19.2 kilobits per second internet services, as the *Australian*

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<sup>50</sup> The Hon Anthony Albanese, Minister for Infrastructure, Transport, Regional Development and Local Government, *Telecommunications Legislation Amendment (Competition and Consumer Safeguard) Bill 2009, Second Reading Speech*, 15 September 2009

## ***Toward Universal Broadband Access in Australia***

*Broadband Guarantee* offers broadband speeds of 512 kilobits per second or higher to Australians who cannot access metro-comparable broadband services.

**6.0 Concluding comments**

At the beginning of this study, two key themes were identified as central to the recent Australian story of telecommunications and broadband policy development.

- The challenge of encouraging investment in infrastructure while maximising competition especially in areas of relatively low population density.
- The challenge of supporting consumer access to widely available, high quality services.

A large number of regulatory measures and funding programs have been applied to meet these challenges. Of the three we have looked at most closely, it may be useful to consider the balance of policy and regulatory tools and outcomes in each case.

It is too early of course to assess the National Broadband Network which promises to change the whole landscape of telecommunications and broadband access in Australia, but in broad terms, we can take note of those aspects that are clear.

**Figure 15: Comparison of policy instruments**

	Universal service obligation	Australian Broadband Guarantee	National Broadband Network & related reforms
<b>Policy focus and objectives</b>	Legacy concept to support basic telephone service to rural and disadvantaged users	Clear expectations of a technology-neutral program to reach rural & remote areas	Clear objective to accelerate access to super fast broadband nation-wide
<b>Competition</b>	One provider, no competing bids	Multiple providers, strong competition	Open access wholesale network to encourage retail competition
<b>Consumer choice</b>	One basic service and one provider	Different services and competing providers	Multiple retail services on open network base
<b>Funding</b>	Industry levy	Subsidy from central government funds available only to viable providers	Public-private sector partnership to be developed
<b>Technology / service focus</b>	Basic telephone	'Metro-comparable' standard for any technology	Super-fast broadband via fibre to the premises
<b>Regulatory &amp; administrative simplicity</b>	Contentious and difficult to administer	Clear administrative process in which providers share work load with government	Structural changes and streamlined regulation to minimise gaming & obstruction.

Overall, Australia's story shows a series of responses to real world challenges in which lessons learned in one stage of development have been applied to the next. At present, the primary focus might appear to be on driving investment in high speed broadband infrastructure. However, the overall package announced in September 2009 also conveys a strong focus not only on maximising competition but also on strengthening the safety net for consumers who need access to reliable high quality services.

Appendix 1. Timeline of key developments

Year	Telecom policy developments	USO and regional policy developments	Broadband/Internet developments	Other developments
<b>1991</b>	Telecommunications Act 1991	Universal Service Obligation introduced		Optus formed with sale of AUSSAT. Vodafone granted mobile licence
<b>1992</b>				Telecom and OTC merge to form Telecom Australia (later Telstra)
<b>1993</b>				
<b>1994</b>		Broadband Services Expert Group reports, rejecting inclusion of household broadband access in the USO	Broadband Services Expert Group recommends a National Strategy to improve access for schools, libraries, medical and community centres	
<b>1995</b>				
<b>1996</b>		Review of the Standards Telephone Service recommends inclusion of a digital data capability through the USO mechanism		Election of Howard Coalition Government
<b>1997</b>	Telecommunications Act 1997 introduces open competition  Inclusion of specific telecoms competition powers in the Trade Practices Act	Networking the Nation' program - the first of a series of initiatives to fund service extension or subsidies consumer access	National Office for the Information Economy established	Sale of one-third ownership of Telstra ('T1').  Australian Communications Authority formed. ACCC assumes responsibility for competition in the telecommunications sector
<b>1998</b>		ACA inquiry recommends against including a digital data carriage service as part of the USO		
<b>1999</b>	USO provisions amended to provide for a Digital Data Service Obligation.	\$314 million 'Social Bonus' from T2 funds further programs for regional Australia		Second tranche sale increases private ownership to Telstra to 49% ('T2')

**Toward Universal Broadband Access in Australia**

<b>2000</b>	Telecommunications Service Inquiry (TSI)  Productivity Commission Review of telecommunications competition regulation	Further funding to improve regional services.  USO regime amended to improve contestability, costing and funding  Minister empowered to determine net universal service cost up to three years in advance	First ADSL broadband connections.  Response to TSI includes \$50 million for improved dial-up Internet services and \$52.2 million National Communications Fund	By November 2000 there were around 696 ISPs and more than 50% of Australian adults were regularly using the Internet
<b>2001</b>		Government response to TSI includes a funding package of \$163.1 million to improve telecommunications services in regional and remote Australia	ACCC survey July 2001 finds 122,800 broadband customers: - 92,500 cable (incl. 86100 residential) - 26,600 ADSL (incl. 17600 residential) - 2,300 satellite - 1,500 other	
<b>2002</b>	Telecommunications Competition Bill introduces accounting separation regime	Regional Telecommunications ('Estens') Inquiry		
<b>2003</b>		Government response to Estens inquiry include plans to invest \$181 million in response to key recommendations	Broadband Advisory Group report - 'Australia's Broadband Connectivity'	
<b>2004</b>			April - \$157.8 million Higher Bandwidth Incentive Scheme (HiBIS) begins, providing ISPs with incentive payments to supply higher bandwidth services at prices comparable to metropolitan areas (ends December 2005)  August - Senate Committee inquiry into 'Competition in broadband services'	The National Office for the Information Economy is disbanded with functions distributed to agencies including the Communications, Finance and Industry departments.

***Toward Universal Broadband Access in Australia***

<p><b>2005</b></p>	<p>Operational separation of Telstra's network, wholesale and retail business units</p>	<p>Rules for Telstra local presence. Regular inquiries to review regional services mandated</p>	<p>January - Broadband Connect Incentive Program begins with an incentive scheme to replace HiBIS and Broadband Connect Infrastructure Program to support network construction.</p> <p>ACCC survey March finds 1,776,800 broadband services in Australia</p>	
<p><b>2006</b></p>	<p>Full privatisation of Telstra.</p>		<p>ACCC survey March finds 3,161,600 broadband services in Australia</p> <p>Government seeks expressions of interest to test feasibility of funding larger scale infrastructure under the Broadband Connect program.</p>	
<p><b>2007</b></p>	<p>Digital Data Service Obligation removed in favour of the Australian Broadband Guarantee</p>	<p>USO review begins</p>	<p>April Australian Broadband Guarantee program begins. Broadband Connect Infrastructure Program contract awarded to OPEL consortium</p>	<p>November Election of Rudd Labor Government</p>
<p><b>2008</b></p>		<p>Regional Telecommunications ("Glasson") Inquiry Report</p>	<p>April announcement that OPEL contract would not proceed and release of request for proposals to build a \$4.7 billion National Broadband Network. Australian Broadband Guarantee program extended, bringing total funding to \$270.7 million over four years.</p>	

*Toward Universal Broadband Access in Australia*

<b>2009</b>	September Government announces major reforms to telecom regulation	Preliminary Government response to Glasson Review includes announcement of an additional \$60 million investment in rural communications.  Preliminary USO reforms announced	April request for proposals process terminated. Government announces that it will establish a company to build and operate a wholesale-only, open access National Broadband Network.
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Appendix 2. Telecommunications reforms 15 September 2009

**Senator the Hon Stephen Conroy**

**Historic reforms to telecommunications regulation**

The Minister for Broadband, Communications and the Digital Economy, Senator Stephen Conroy today announced fundamental reforms to existing telecommunications regulations in the interests of Australian consumers and businesses.

These reforms will drive future growth, productivity and innovation across all sectors of the economy by:

- addressing Telstra's high level of integration to promote greater competition and consumer benefits;
- streamlining and simplifying the competition regime to provide more certain and quicker outcomes for telecommunications companies;
- strengthening consumer safeguards to ensure services standards are maintained at a high level; and
- removing redundant and inefficient regulatory red-tape.

"For years industry has been calling for fundamental and historic micro-economic reform in telecommunications. Today we are delivering this outcome in Australia's long term national interest," Senator Conroy said.

Telstra is one of the most highly integrated telecommunications companies in the world across the fixed-line copper, cable and mobile platforms.

"The reforms address the structure of the telecommunications market and provide Telstra with the flexibility to choose its future path."

"It is the Government's clear desire for Telstra to structurally separate, on a voluntary and cooperative basis."

"The Government believes it is possible to achieve a win-win outcome in the interests of Telstra, its shareholders and, more broadly, all Australians," Senator Conroy said.

The reforms will also promote competition and strengthen consumer safeguards.

"The existing telecommunications anti-competitive conduct and access regimes have been widely criticised as being cumbersome, open to gaming and abuse, and provide insufficient certainty for investment," Senator Conroy said.

Since the commencement of the regime in 1997 there have been more than 150 telecommunications access disputes compared to only three access disputes in other regulated sectors, including airports and energy sectors.

The Government will strengthen consumer safeguards including the Universal Service Obligation, Customer Service Guarantee and the Priority Assistance arrangements to ensure consumers are protected and service standards are maintained at a high level.

In line with the Government's commitments to address impediments to Australia's long-term productivity growth, it will remove unnecessary regulatory burden on the industry.

"These fundamental reforms address the long-standing inadequacies of the existing telecommunications regulatory regime. They will drive lower prices, better quality and more innovative services," Senator Conroy said.

The reforms are supported by the overwhelming majority of the submissions received in response to the National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband Discussion Paper released by the Government on 7 April 2009.



The legislative package is available online: [www.dbcde.gov.au](http://www.dbcde.gov.au)

**Date: 15 September 2009**

**Contact: Tim Marshall 0408 258 457**

## **BACKGROUND**

### **Addressing Telstra's vertical integration**

The legislation will allow Telstra to voluntarily submit an enforceable undertaking to the Australian Competition and Consumer Commission to structurally separate. The Minister can provide guidance to the ACCC on the matters it would take into account when considering whether to accept the structural separation undertaking.

If Telstra chooses not to structurally separate, the legislation provides for the Government to impose a strong functional separation framework on Telstra. This Bill proposes implementing a functional separation regime by altering the Telecommunications Act 1997 to require that:

- Telstra conduct its network operations and wholesale functions at arm's length from the rest of Telstra;
- Telstra provides equivalent price and non-price terms to its retail business and non-Telstra wholesale customers; and
- this equivalence of treatment is made transparent to the regulator and competitors via strong internal governance structures.

### **Addressing Telstra's horizontal integration**

The legislation will seek to promote competition across telecommunications platforms while allowing Telstra the flexibility to choose its future path.

Telstra will be prevented from acquiring additional spectrum for advanced wireless broadband while it:

- remains vertically integrated; and
- owns a hybrid fibre coaxial cable network; and
- maintains its interest in Foxtel.

The legislation provides scope for the Minister to remove either or both of the second and third requirements in the event that Telstra submits to the ACCC an acceptable undertaking to structurally separate.

### **Reforms to the Competition Regime**

The legislation will streamline the arrangements in Part XIC of the Trade Practices Act 1974 (TPA) which allow parties to access regulated services so that:

- the ACCC will determine up-front terms and conditions for a three to five year period, following consultation with industry;
- the ACCC can determine principles to apply for longer periods; and
- the ACCC can make binding rules of conduct to immediately address problems with the supply of regulated wholesale services

The legislation will also reform the arrangements in Part XIB of the TPA so that the ACCC can address breaches of competition law and conduct damaging to the market. The ACCC will no longer have to consult with a party before issuing a competition notice; a process previously prone to delay and obstruction.

In addition, the reforms include clarification that the competition notice regime applies to content services – such as subscription television services – delivered by carriers and carriage service providers.

## **Strengthening consumer safeguards**

### Universal Service Obligation (USO)

The USO requires Telstra, as the universal service provider, to enable all people in Australia to have reasonable access on an equitable basis to standard telephone services, including pay phones. The legislation will strengthen the USO by enabling Minister to specify the standards, terms and conditions of services, connection and repair periods, and reliability requirements of the standard telephone service. Telstra will be required to meet new minimum performance benchmarks. Failure by Telstra to meet the requirements will expose Telstra to a civil penalty of up to \$10 million.

The legislation also includes more stringent rules on the removal of pay phones and new provisions to allow people concerned about a pay phone removal to apply to the Australian Communications and Media Authority (ACMA) to direct Telstra not to remove a pay phone. Failure to comply with the new rules will expose Telstra to civil penalties or on-the-spot fines.

Once the detailed operating arrangements for the National Broadband Network (NBN) have been settled, the Government will consider the broader range of issues associated with the delivery of universal access. Meanwhile the Government will maintain the USO levy at the same rate for this financial year.

### Customer Service Guarantee (CSG)

The CSG currently provides that telephone companies must financially compensate customers where certain minimum performance requirements are not met. The legislation provides new minimum performance benchmarks to require telephone companies to meet or exceed the CSG time periods for a certain proportion of cases. Failure to comply may result in civil penalties or on-the-spot fines.

### Priority Assistance (PA)

PA arrangements require the highest level of telephone service to residential consumers who have a diagnosed life-threatening medical condition. The legislation will require telephone companies to either offer PA services or inform the customer where they can purchase these services.

### Effective Enforcement of Consumer Safeguards

The legislation will provide the ACMA with increased powers to issue infringement notices ('on-the-spot' fines) instead of commencing procedures in court.

### Removal of Unnecessary Red Tape

The Government will exempt carriers with a revenue less than \$25 million per annum from paying an annual Carrier Licence charge, contributing to the universal service levy and reporting to the ACMA, as costs of compliance is often considerably higher than their monetary contribution.

The ACMA will reduce reporting requirements under the CSG, PA and the Network Reliability Framework, so long as performance benchmarks are being met.

The legislation includes measures to repeal unnecessary accounting and operational separation requirements once functional separation is in place or Telstra has submitted an enforceable undertaking to structurally separate that is acceptable to the ACCC.

The Government will remove the requirement on Telstra to provide technical assistance to enable customers to achieve 19.2 kilobits per second internet services, as the Australian Broadband Guarantee offers broadband speeds of 512 kilobits per second or higher to Australians who cannot access metro-comparable broadband services.

Appendix 3 Reports and References

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