LEGISLATIVE ASSEMBLY

Standing Committee on Broadband in Rural and Regional Communities

Beyond the Bush Telegraph

Meeting the Growing Communications Needs of Rural and Regional People

Report No. 2/54 – March 2009

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Terms of reference

The Legislative Assembly Standing Committee on Broadband in Rural and Regional Communities was established on 21 June 2007 to inquire into the needs of rural and regional communities in relation to telecommunications (including broadband) and other technology services and, in particular, to report on the following terms of reference:

(a) The availability of telecommunications (including broadband) and other technology services in rural and regional communities;

(b) The benefits and opportunities for rural and regional communities of having access to telecommunications (including broadband) and other technology services;

(c) Disincentives and barriers to the provision of telecommunications (including broadband) and other technology services to rural and regional communities;

(d) The consequences for rural and regional communities of not having, or not having adequate, access to telecommunications (including broadband) and other technology services, having regard to likely future industry and technological developments; and

(e) Options for encouraging providers of telecommunications (including broadband) and other technology services to extend services to rural and regional communities.

Chair's Foreword

I am pleased to table this report of the Standing Committee on Broadband in Rural and Regional Communities.

This Committee has taken on a big challenge in looking at how to get better communications services to the bush. We've tried to work out where the problems are, how the types of services compare to what is available in the city and how this could be improved.

Many of the communities outside of major cities are already facing challenging circumstances because of declining rural industries, falling populations and the withdrawal of government and business services. Lack of access to affordable telecommunications services compounds these disadvantages. In other areas populations are growing because of "sea changers" and "tree changers". It can be hard for new services to keep up with growing demands.

The communications sector is changing rapidly too and new technologies are appearing that can provide great benefits. For instance, since this Committee was appointed the CDMA mobile phone network, the major one operating in rural Australia, has been closed down and replaced with a third generation network that offers high speed data services.

During this inquiry we have been astonished at the possibilities communications technology can offer to improve the quality of people's lives. These include applications such as remote diagnosis of patients, improved educational opportunities for remote students and the ability for rural and regional businesses to operate wherever they choose.

As many people told the Committee, broadband really should be considered essential infrastructure to modern society. But there is a big gap between the level of services available in the cities and in the country. It can take many years for new technologies to reach rural areas even when they are commonplace in the city. In 2006 the Census showed that people in remote areas are at least 40 per cent less likely to have broadband services than people in urban areas.

People in the bush deserve more. With improved broadband services, their kids can get a quality education in their local community rather than either missing out or having to go to boarding school. People can receive high quality medical diagnosis from a specialist in their local hospital rather than travelling to the city. Businesses can communicate with markets and customers all over the world.

The roll-out of the National Broadband Network is meant to bring high-speed broadband services to 98 per cent of the population but gaps will still remain in rural and regional areas. The Committee is pleased to note that the NSW Government has recognised the needs of rural communities with its recent announcement that $11.6 million will be spent over five years in the Community Broadband Development Fund. This should go some way to addressing the gap in availability of services.

But work still needs to be done to maintain services, to upgrade them in line with developing technologies and to encourage upgrading of the mobile phone network in areas lacking coverage.

As a Committee we do not pretend to have any special expertise in the field of IT and communications. Our recommendations are based on what we learned from talking to the members of rural and regional communities, the government agencies and the telecommunications companies.

In this report, we've made a number of recommendations to improve the way the State and local governments can improve broadband services. We also have some suggestions that we ask the State Government to raise with the Federal Government about changes to policy and regulation that would improve mobile phone networks and encourage regional competition.

I would like to thank all the groups and individuals who contributed to this inquiry by making submissions and meeting the Committee. I would also acknowledge that much of this work was undertaken by my predecessor as Chair, the Hon Philip Costa MP.

Paul Gibson MP
Chair

List of Findings and Recommendations

The Committee finds that the telecommunications sector is changing rapidly as new technology develops but the services available in rural and regional communities are not keeping up with those in metropolitan areas.

While telecommunications and broadband are available in some form throughout New South Wales, services are of poorer quality and more expensive in large parts of rural and regional New South Wales. In particular, there are large gaps in the availability of "normal" mobile phone services and broadband through ADSL connections. Alternative delivery solutions are more expensive and of lesser quality.

Existing infrastructure in rural and regional communities does not support universal mobile phone and broadband services. There are significant social and economic benefits to improving the level of telecommunications in rural and regional areas. On the grounds of equity, the Government should help these communities receive services as close to parity with services available in cities as possible.

The Committee notes that the Federal Government plans to make significant investment in infrastructure through the National Broadband Network. This is planned to provide high-speed broadband services to 98 per cent of the population. The Committee finds that is not going to be complete until 2013. This means that significant gaps in service provision will remain for a long time yet.

The Committee finds that the Government's planned investment in infrastructure through the Community Broadband Development Fund will go a significant way toward filling the infrastructure gap in rural and regional communities where the National Broadband Network is not expected to reach.

The Committee finds that there are significant barriers to infrastructure provision for carriers including difficulty obtaining access to Crown land and regional spectrum. The Government has a role in reducing these barriers where possible.

Consumers often have limited knowledge about the services available from communications providers and there are opportunities for the Federal Government to redress this information gap. In some places there is a community need for training in the use of broadband and to provide public access to broadband services.

Glossary[1]

2G	Second generation digital phone system
3G	Third generation digital phone system. Optus, Telstra and Vodafone all operate 3G networks in Australia.
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ADSL	Asymmetrical Digital Subscriber Line
Broadband	Internet connection at a minimum of 256 kbps
BPL	Broadband over Powerlines
CTC	Community Technology Centres
CDMA	Code Division Multiple Access – digital mobile phone system operated by Telstra in rural and regional areas. Replaced by its Next G network in 2008
DBCDE	Department of Broadband, Communications and the Digital Economy – Commonwealth department responsible for advising Minister on broadband and communications. Renamed in 2007
DCITA	Department of Communications, Information Technology and the Arts (changed to DBCDE in 2007)
DSL	Digital Subscriber Line
FCS	Fibre Connection to Schools. Federal Government program to increase the availability of broadband services in schools.
FTTH	Fibre to the Home
FTTN	Fibre to the Node
FTTP	Fibre to the Premises
GSM	Global System for Mobiles – second generation “digital” mobile phones
HCF	Hibrid Coaxial Fibre – or “cable” used to transmit high speed data and video services consisting of a hybrid of optical fibre and coaxial cable.
HiBIS	Higher Bandwidth Incentive Scheme Commonwealth funding program
ISDN	Integrated Services Digital Network Technology that enables digital transmission of voice and data at up to 128 kbps over the public switched telecommunication network.
ISP	Internet Service Provider
Kbps	Kilobits per second
Mbs	Megabits per second. One megabit consists of 1000 kilobits. Downloading reasonable sized files quickly requires at least 1 Mbps. Videoconferencing requires 4 Mbps.

[1] Most terms are sourced from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*

NBN	National Broadband Network – proposed national network to offer 98 per cent of the population 12 Mbps broadband to be funded up to $4.7 billion by the Federal Government
RTIRC	Regional Telecommunications Independent Review Committee
Scalable	The extent to which the bandwidth of the technology is able to be enlarged
USO	Universal Service Obligation – Federal Government policy attempting to ensure standard telephone services are reasonably accessible to all people on an equitable basis wherever they live or carry on business.

Glossary

Chapter One - Introduction

Role of the Committee

1.1 The Standing Committee on Broadband in Rural and Regional Communities was appointed from members of the Legislative Assembly of New South Wales to investigate the telecommunications needs of rural and regional communities with a particular emphasis on the quality of broadband services.

1.2 Its terms of reference include assessing the availability of services, identifying the benefits to rural and regional communities of these services, establishing whether there are barriers and disincentives to improved service delivery and reporting on options for encouraging service providers to extend services to new areas.

1.3 This Committee's role is constrained by the fact that the New South Wales Government has limited control over the delivery of telecommunications services. Under the Australian Constitution, the Commonwealth has regulatory power over communications. Most decisions about service delivery are made by private sector carriers on a commercial basis.

1.4 The Committee is able to identify issues and recommend remedial actions for the State Government. Where appropriate, it can choose to draw matters to the attention of the Federal Government.

Inquiry Process

1.5 In September 2007, the Committee sought information by advertising its terms of reference in the press and writing directly to key stakeholders. It received 41 submissions from telecommunications companies, medical organisations, state and local government agencies and the community.

1.6 In March 2008, the Committee tabled a discussion paper summarising the views expressed in submissions and consultations called *Key Issues for Further Investigation*. This discussion paper asked for further case studies of how broadband can help rural and regional communities and businesses and suggestions on ways to avoid the consequences of inadequate broadband services in the future. It also sought further information in relation to the following specific matters:

- Strategies for addressing the lack of availability of services in certain areas including the choice of technology;
- The appropriate role for the State government in promoting and increasing the use of broadband;
- How state and local government planning can delivery of broadband services in particular areas;
- The importance of broadband services for education, health and business activities and to retain regional and rural population levels; and
- The actual level of service required in the future to maximise the benefits to these communities.

1.7 It received a further 26 submissions in response. These submissions are listed in Appendix One.

1.8 The Committee held public hearings in Sydney on 23 June 2008 and in Lismore on 1 August 2008 where it heard from telecommunications companies, key rural stakeholder groups, public sector agencies, representatives of local government and interested individuals. A list of witnesses can be found at Appendix Two.

1.9 The Committee consulted widely by holding meetings with carriers and government agencies in Sydney. The Committee also travelled to Orange, Griffith and Queanbeyan to discuss telecommunication needs with local business and community members. It visited Canberra to meet officers of the Department of Broadband, Communications and the Digital Economy. Staff of the Australian Communications and Media Authority met the Committee in Sydney. The Regional Telecommunications Independent Review Committee met with the Committee in the course of conducting its own national review of telecommunications. These visits of inspection and meetings are described in Appendices Three and Four.

1.10 This report includes information from all phases of the inquiry.

1.11 Chapter Two describes the regulatory background and outlines the respective roles of Federal, State and local governments and telecommunications companies in delivering telecommunications and broadband services to rural and regional communities. In Chapter Three, the report attempts to establish the level of availability of telecommunications and broadband services in rural and regional New South Wales. It includes a discussion of the cost and quality of these services. Chapter Four examines the detail of why telecommunications are important to rural and regional communities and the social and economic consequences of not upgrading them. Chapters Five and Six examine particular issues raised in evidence about infrastructure and consumer concerns. Chapter Seven canvasses options to improve the current level of service availability and contains the Committee's recommendations.

1.12 On the basis of the evidence presented to it in this inquiry, the Committee has made a number of recommendations on the steps that the State Government could take to improve the availability of services for rural and regional communities. These include improved coordination between all levels of government, improved efforts to attract services to particular communities, removing roadblocks to planning at local government level and increasing the use of State Government facilities where possible.

1.13 It also has made some suggestion for how the Federal Government could improve the regulation of the communications sector although it acknowledges that these are matters for the Federal Minister.

Chapter Two - Regulatory Background: Policies and Programs

2.1 This Chapter describes the respective roles of government and business in providing telecommunications services in rural and regional communities. It includes a brief history of recent communications policies and outlines current and future programs.

Role of Governments

2.2 As noted in the previous Chapter, under the Australian Constitution, the Commonwealth rather than the State Government regulates communications. This means that the New South Wales Government has no direct control over communications policy.

2.3 In recent years, the Federal Government has encouraged private sector delivery of communications services on a commercial basis and only intervened with subsidies or particular programs in cases of clear market failure, such as where services in rural and remote areas are deficient.

Federal policies and programs

2.4 Historically, the Federal Government was a significant provider of communications services as well as the regulator. The government-owned national telecommunications carriers had a monopoly of domestic, overseas and satellite telephony services.

2.5 In the 1980s, policies were introduced to separate the regulatory from service delivery functions and to introduce competition. The national satellite service was sold to a consortium that became Optus. The domestic and overseas telephone services were transformed into the Telstra Corporation and then, starting in 1997, progressively privatised, culminating in the sale of the final part in 2006. A third national mobile phone licence was granted to Vodafone. Over time more companies entered the market. There are currently 172 licensed telecommunications carriers and 372 voice service providers.[2] The Australian Media and Communications Authority (ACMA) and the Australian Competition and Consumer Commission (ACCC) now regulate aspects of telecommunications in accordance with policies developed by the Minister through the Department of Broadband, Communications and the Digital Economy (DBCDE).

2.6 While a more open telecommunications market has led to some efficiencies and broadened consumer choices, there is an increased risk that companies are less likely to offer services to particular groups and in less commercially attractive areas, particularly regional, rural and remote areas. A key part of Federal policy has been to encourage the maintenance and upgrading of services for these communities with targeted programs and policies. Regular reviews of the adequacy of communications services have been undertaken as part of the privatisation process.

[2] RTIRC *Regional Telecommunications Review Framework for the Future* 2008 pp.309-322 and ACMA *Communications Report 2007-2008*, November 2008, p.14

Universal Service Obligation

2.7 The Federal Government's original instrument for improving accessibility of communications services is the Universal Service Obligation (USO) which requires one provider to ensure standard telephone services are reasonably accessible to all people on an equitable basis wherever they live or carry on business.[3] As the universal service provider, Telstra is obliged to have policy statements and a marketing plan approved by ACMA that outline how Telstra intends to fulfil its obligations, including fulfilling its obligations to people with a disability and people with special needs.[4] In 2007-08, Telstra was provided with $145 million from a levy on other telecommunications carriers based on their share of the market. This amount has declined in recent years.[5] Telstra has always been the only USO provider but there is nothing to prevent another carrier from applying to provide the services.[6] The continued need for, and scope of, the USO is currently under review by the Department of Broadband, Communications and the Digital Economy.

Efforts to improve Rural and Regional services

2.8 A 2001 report by the Productivity Commission found there was less competition in communication services in regional than in metropolitan areas. The Government responded with the *Telecommunications Competition Bill 2002* to which introduced a range of measures to increase the level of competition and investment in the telecommunication market by encouraging a more transparent regulatory regime.

2.9 In 2002, the Government established the Regional Telecommunications Inquiry (the Estens inquiry) to investigate the adequacy of telecommunications services in regional, rural and remote Australia. Its recommendations led to funding for extending mobile phone infrastructure in regional Australia and the Higher Bandwidth Incentive Scheme (HiBIS).[7]

2.10 One of the conditions of the full privatisation of Telstra was that the Regional Telecommunications Independent Review Committee (RTIRC) reviews the adequacy of telecommunications in rural, regional and remote areas at least every three and a half years.[8] A further condition of the sale was the creation of the $2 billion Communications Fund. The earnings of this fund were to provide a source of funding for implementing the Government's agreed response to the recommendations of the RTIRC's reviews.[9]

2.11 The first RTIRC report was completed in September 2008 and the Federal Government provided a comprehensive response to its recommendations on 5 March 2009. The response included a commitment to funding improved services in regional Australia.[10]

[3] ACMA *Communications Report 2007-2008*, November 2008, p.24

[4] ACMA *Submission to Telecommunications Universal Services Obligation Review,* November 2007, p.12

[5] DCITA *Telecommunications Universal Services Obligation Review Issues Paper Attachment D* p.2

[6] *ibid.* p.3

[7] RTIRC *op. cit*. pp. 319-320

[8] Part 9B *Telecommunications (Consumer Protection and Service Standards) Act 1999*

[9] *ibid.*, Part 9C

[10] DBCDE *Regional Telecommunications Review Government Statement of Response* March 2009

Local Presence

2.12 The fully privatised Telstra is required to maintain a "local presence" in regional, rural and remote parts of the country to the extent that this is broadly compatible with its overall commercial interests. Telstra is obliged to publish a plan of activities to maintain its local presence and report on progress.[11]

Historical Funding Programs

2.13 Technological change has meant that telecommunications has changed from landlines in homes and businesses to a range of mobile communications and multimedia data services. However without government intervention these services are less likely to be available in rural and regional areas than in metropolitan areas.

2.14 The USO has never included mobile phone services but in 1999 a Digital Data Service Obligation (DDSO) was introduced. This required data services through ISDN of 64 kbps be available on request. The small minority of people who could not obtain this service for technical reasons had a special DDSO (SDDSO) with data available by one-way satellite. This speed of the DDSO connection was not updated as technology developed and, in 2007, the former Minister for Communications, Information Technology and the Arts announced that the obligation would be abolished because it was largely superseded by other programs.[12]

2.15 The major funding initiatives that improved services in rural and regional areas in the last 12 years were:

- **Networking the Nation.** From 1997 the program provided more than $300 million from the sale of the first part of Telstra to projects in rural, regional and remote parts of the country to improve telecommunications services and reduce disparities in the level of access. The program contributed to the rapid expansion in mobile telephone services, the large increase in internet literacy, and the delivery of government, business and consumer services online. For instance, in New South Wales this program provided almost $4 million to the Rural Link Program that provided broadband access to selected organisations in 70 communities. The program funded Community Technology Centres (CTCs), new mobile phone towers and provided training to people in rural areas.[13]
- **Social Bonus from T2.** From 1999, a further $174 million was available from the sale of the second part of Telstra including $70 million for Building Additional Rural Networks, $45 million for Local Government Fund and $36 million for the Internet Access Fund.[14]
- **Mobile Phones on Highways.** From 2001, Vodafone was contracted to provide mobile phone services on designated highways in the eastern states.[15]
- **The Telecommunications Services Inquiry** of 2000 led to $163 million for the **National Communications Fund** including:

[11] ACMA *Communications Report 2007-2008*, November 2008, p.116

[12] RTIRC *op cit.* p.317

[13] DCITA [http://www.archive.dcita.gov.au/2006/06/networking_the_nation], Networking the Nation Project Funding List – New South Wales

[14] DCITA [http://www.archive.dcita.gov.au/2006/06/networking_the_nation]

[15] RTIRC *op cit.* pp.323-324

  - **Towns over 500 Program** provided $38 million to Telstra to improve mobile phone services in 131 towns; and
  - **Regional Mobile Phone Program** From 2001, $50 million was allocated to improve mobile phone services including in towns with less than 500 people, on regional highways and to subsidise satellite services.
- **HiBIS** From 2004, $158 million was provided to internet service providers to provide higher bandwidth services at prices similar to those available in metropolitan areas. In 2006, this was replaced by the similar **Broadband Connect** program.[16]

2.16 In 2005, the Government announced $1.1 billion in funding for the **Connect Australia** package consisting of:

- **Broadband Connect** which aimed to deliver equitable broadband services to regional, rural and remote Australia ($878 million until 30 June 2009);
- **Clever Networks** which aimed to roll out new broadband networks for innovative applications to improve delivery of health, education and other essential services ($113 million until 30 June 2010);
- **Mobile Connect** which aimed to extend terrestrial mobile coverage and continue satellite handset subsidies ($2.5 million until 30 June 2009); and
- **Backing Indigenous Ability** which aimed to deliver vital communications services for remote Indigenous communities ($89.9 million until 30 June 2010).[17]

2.17 In 2007, before the Connect Australia initiatives were completed, the Government announced the **Australia Connected** program. This aimed to deliver fast affordable broadband access for all Australians with the roll-out of a new national high speed wholesale network to 99 per cent of the population providing speeds of 12 megabits per second by mid 2009. In parallel with the deployment of this new network, the Government announced a new commercial fibre optic roll-out in metropolitan and major regional centres. The **Australian Broadband Guarantee** offered a subsidy of $2,750 per household to those people who would not be covered by the national network.[18]

2.18 A consortium of Optus and Elders (called OPEL) were the successful bidders to build the national broadband network.[19] However, five months after the change in government in November 2007, the new Minister announced that they would not be proceeding with OPEL network.[20]

Current Programs

2.19 The new Government continued some of the existing funding programs. The most important current program is the **Australian Broadband Guarantee** which has total

[16] RTIRC *op cit.* pp. 324-327

[17] DCITA, *Broadband Connect and Clever Networks, Supporting Investment in Sustainable Broadband Infrastructure, Discussion Paper*, November 2005, pp 4 and 6.

[18] DCITA, Australia Connected [http://www.dcita.gov.au/communications_for_consumers/funding_programs__and__support/australia_connected]

[19] DCITA [http://www.dcita.gov.au/communications_for_consumers/funding_programs__and__support/broadband _connect]

[20] Media release from Senator the Hon Stephen Conroy Minister for Broadband, Communications and the Digital Economy 2 April 2008 “OPEL Networks Funding Agreement not to proceed.”

funding over the four years to 2008-09 of $270 million for funding internet service providers to provide services to residents and businesses at prices comparable to those offered in metropolitan areas where these services would otherwise not be available. The Guidelines for the program were revised in mid-2008. The minimum standard of service under the scheme is 256 kbps download and 64 kbps upload.[21]

2.20 Under the **Mobile Connect Program**, the Government has maintained the existing Satellite Phone Subsidy Scheme that offers $1,000 towards the costs of a phone for those people or work in areas without terrestrial mobile coverage. The Government recently announced $11.4 million to extend the satellite subsidy scheme to assist health and emergency services and to enable users to replace older handsets.[22]

2.21 The Government also offered $8 million in 2008 for extending terrestrial mobile phone coverage to priority locations that do not currently have coverage and for which there are no current plans to provide coverage but no carriers applied for funding under the program.[23]

New Programs

National Broadband Network

2.22 The major future program for improving services is the National Broadband Network. The Federal Government has committed up to $4.7 billion to the construction of an open-access fibre-based network which must deliver at least 12 Mbps to 98 per cent of homes and businesses. Tenders were requested in 2008 and are currently being assessed.[24] It is unclear how long it will take for the network to be constructed or the level of priority rural and regional communities in New South Wales will receive.

Fibre Connections to Schools Initiative

2.23 The Federal Government has promised to provide $100 million to the Fibre Connections to Schools Initiative with the aim of deliver scalable broadband services at speeds of up to 100 Mbps to schools.[25] The guiding principles of the program include increasing the number of schools with fibre to the premises (FTTP) and a special emphasis on improving the standards of broadband services in remote schools to a standard consistent with that of the National Broadband Network of 12 Mbps using whatever technology is most suitable.[26]

2.24 This program is not intended to provide ongoing funding for operating the new services and this may be a future problem for remote schools where costs are higher.[27] Funding priorities are to be determined in the early part of 2009.

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[21] RTIRC *op. cit*.p.328

[22] DBCDE *Regional Telecommunications Review Government Statement of Response* March 2009, p.4

[23] DBCDE [http://www.dbcde.gov.au/communications_for_business/funding_programs__and__support/mobile_connect] 19 January 2009

[24] DBCDE [http://www.dbcde.gov.au/communications_for_business/funding_programs__and__support/national_broadband_network], 16 January 2009

[25] Department of Education Employment and Workplace Relations [http://www.deewr.gov.au/Schooling/DigitalEducationRevolution/FibreConnection/Pages/FibreConnectionstoSchools.aspx], 16 January 2009

[26] Department of Education, Employment and Workplace Relations *Fibre Connections to Schools Investment Principles*, p.2

[27] *ibid.* p.6

Backing Indigenous Ability

2.25 The Backing Indigenous Ability Telecommunications Program (BIA) is a $36.6 million initiative to help improve communications services in remote Indigenous communities. It is designed to address the need for telephones, internet and videoconferencing, provide training and skills development and promote and develop Indigenous online content. The program is delivering fixed community phones or mobile satellite handsets to remote Indigenous communities with populations under 50 and without access to a public payphone. Another part of the program is providing equipment and funding to improve internet access in communities.[28]

Indigenous Communications Program

2.26 The Federal Government has recently announced an additional $3.7 million for the Indigenous Communications Program that builds on the BIA. This program will provide phones to an additional 300 remote indigenous communities, monitor and maintain existing phones and provide support for state and territory governments in delivering public internet access and basic training in 120 communities.[29]

Digital Regions Initiative

2.27 As part of the response to the RTIRC report, the Government has committed $46 million to a joint funding initiative with state, territory and local governments to use broadband to improve the delivery of key health, education and emergency services in non-metropolitan areas.[30]

State Government

2.28 The New South Wales Government has contributed to improvements in the delivery of telecommunications services in rural and regional areas by working with the Commonwealth on specific projects. The Government also participates in the Online and Communications Council, a Ministerial Council which consults and coordinates information and communication issues of national strategic importance.[31]

2.29 The State Government has significant communications needs and has used its purchasing power to aggregate procurement of broadband services for its agencies. In 2005, the Government commissioned Soul to deliver high-speed data services to 24 regional towns for five years under the Government Broadband Service. Eventually the service was to provide connection to 3,000 sites including schools, hospitals, TAFE colleges, courts houses and police stations. The service is currently used by 25 agencies. [32]

2.30 The State Government has also managed the delivery of projects by adding contributions to Federal funding programs. For instance, it funded half of the $7 million cost of the Fibre Towns Infrastructure Project which delivered “last mile” infrastructure to more than 60 schools and hospitals in 16 rural towns.[33]

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[28] DBCDE fact sheet[http://www.dbcde.gov.au/]

[29] DBCDE *Regional Telecommunications Review Government Statement of Response* March 2009, p.4

[30] *ibid.*, p.4

[31] Submission No 1.30, p.2

[32] The Hon Morris Iemma MP “Premier Switches on broadband for rural NSW” Media release 5 November 2005

[33] Submission No 2.18, p.6

Community Technology Centres

2.31 The State Government has provided some support to the Community Technology Centres established under previous Federal programs. These centres are now expected to be self-sustaining and have formed themselves into an Association. The State Government provides the CTC Assocation with ongoing support through the membership of its board of an officer of the Office of Rural Affairs.

Community Broadband Development Fund

2.32 The New South Wales Government has recently announced that it has made $11.6 million available for five years from 2008-09 for grants to deliver broadband services in the 2 per cent of towns not covered by the proposed National Broadband Network. Communities of less than 5,000 people that do not currently have high-speed wireless broadband are being encouraged to express interest in applying for funding under the program to develop local solutions to deliver the services.[34]

Local governments

2.33 Local governments are users of broadband services and often provide community access to services such as in libraries or other community access centres.

2.34 Local government is the consent authority for many aspects of land use planning such as business and residential development. The siting of mobile phone towers of less than five metres in height is not subject to local planning permission but other types of communications infrastructure generally is.

2.35 Local councils have also been facilitating community telecommunication activities through regional organisations of councils and regional development boards. For instance the Murray Regional Development Board pioneered a community engagement model for trialling wireless broadband services which is forming the basis of the new Community Broadband Development Fund.

Role of Telecommunication Companies

2.36 Private telecommunication companies provide communications services in Australia in accordance with regulatory requirements and their commercial interests. As noted by Engineers Australia, the telecommunications sector is unusual in that the majority of its infrastructure is in private hands. The consequence of this is that investment decisions are based on direct financial return rather than social or economic considerations.[35] Recent Government policy has been to intervene in commercial decisions with additional regulations or targeted funding where there are clear cases of market failure.

2.37 This approach has led to tensions between telecommunications companies and the Government. For instance, in 2008, Telstra planned to close down the CDMA mobile phone network that operated through much of rural and remote Australia to be replaced by a new mobile Next G network. Existing mobile phones would not work in the new network. The Federal Government negotiated an extension of time for the transition in order to ensure that the new network would provide equivalent services

[34] Department of State and Regional Development [http://www.business.nsw.gov.au/community/Funding+Programs/country_infrastructure_fund.htm]

[35] Engineers Australia *Infrastructure Report Card 2007* p.5

to customers and there was a greater level of confidence in the new network than had originally been the case.

2.38 The entry of new companies into the telecommunications sector has caused competitive pressures that are resolved by a regulated competitive access regime. While there are several mobile phone networks, Telstra is the owner of the only fixed line network including copper wire to premises, the exchanges where switching occurs, and backhaul links between major centres. Many other companies rely on access to this network to deliver their own services. Because of the high fixed costs of establishing this network and economies of scale, the ACCC recognised that there were high barriers to competition in these fixed line services and it has mandated access to Telstra's network for other carriers who can combine with their own facilities to deliver broadband and voice services.[36]

2.39 In practice, however, there have been difficulties about the extent of the access regime that could mean that competitors shared the benefits of Telstra's investments. For example, in early 2008 the Committee heard that a number of Telstra exchanges had ADSL2+ technology which had not been activated because Telstra was concerned about competitors having access to upgraded exchanges where Telstra was the only service provider and competing in the same markets without investing in equipment. This was resolved by a decision of the Minister and Telstra agreed to activate ADSL2+ in 900 additional exchanges, many of them in rural and regional New South Wales.[37] In several areas of the state access to broadband was delayed while these regulatory issues were being considered.

Conclusion

2.40 The New South Wales Government is only one of many actors involved trying to improve the delivery of telecommunications services to regional and rural communities. Most of the policy and funding comes from the Federal sphere and decisions about service delivery are made by telecommunication companies on the basis of commercial concerns. In the next Chapter, the Committee will discuss the level of availability and quality of services in rural and regional communities.

[36] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* p.19, p.79

[37] Joint media release of the Hon Kevin Rudd MP, Prime Minister, and Senator the Hon Stephen Conroy MP, Minister for Broadband, Communications and the Digital Economy, 6 February 2008

Chapter Three - Service Availability and Quality

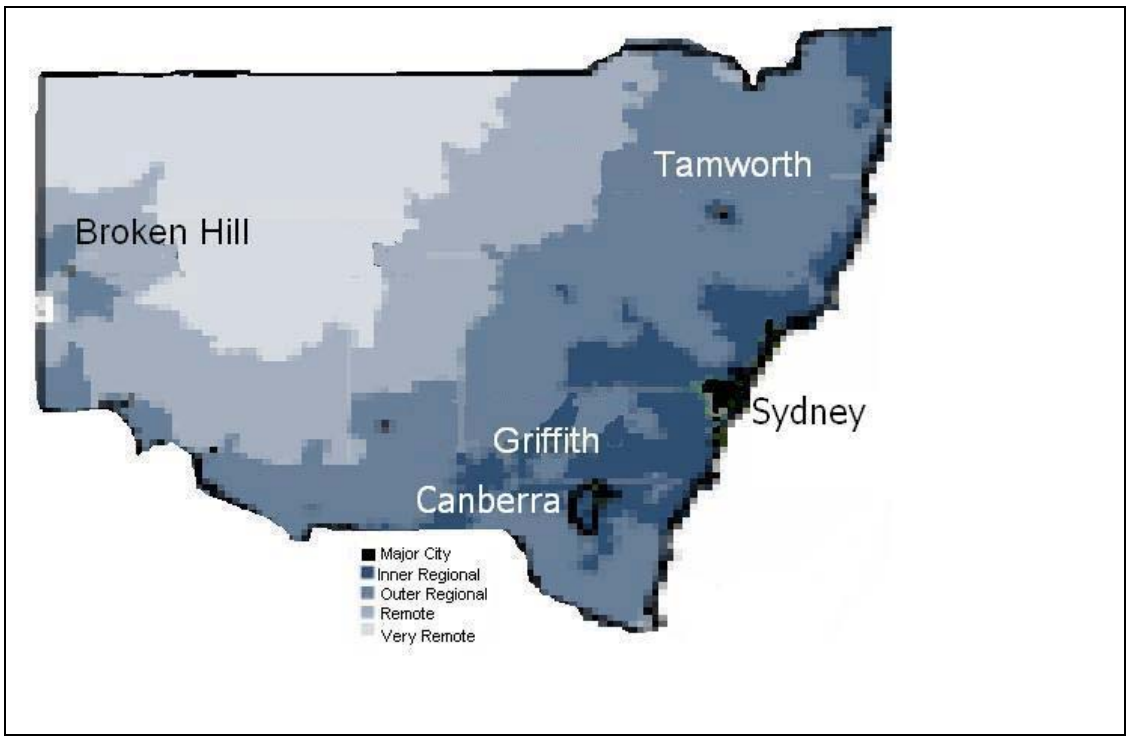
3.1 Telecommunications and particularly broadband internet services are increasingly important to the way we live and work. A large proportion of businesses and individuals use these technologies regularly but there is a significant shortfall in the services available in rural and regional areas compared to metropolitan areas. The major problems are lack of coverage, higher costs and lower speeds.

3.2 In this Chapter the report addresses the Committee's task of assessing the level of availability of telecommunications services, including broadband, in rural and regional communities in New South Wales. It discusses the issues of coverage, quality and the various types of methods by which people can receive broadband services.

Where are Rural and Regional Communities?

3.3 Throughout this report, "rural and regional" is used to refer to any area outside major cities. The Australian Bureau of Statistics applies categories of "remoteness" based on an area's distance by road from urban areas. The following map shows the five regions in New South Wales of "Major Cities", "Inner Regional", "Outer Regional", "Remote" and "Very Remote".[38]

Map 3.1 Remoteness Areas in New South Wales



Source: Derived from Department of Infrastructure, Transport, Regional Development and Local Government 2008 *About Australia's Regions* p.3

3.4 More than 70 per cent of the six and half million people in New South Wales live within the "Major Cities" area. Beyond the boundaries of the "Inner Regional" area, where around 400,000 or 20 per cent of people live, population densities drop rapidly. Only 6.5 per cent of the population is in the "Outer Regional" area, less than half a

[38] Australian Bureau of Statistics *Australian Standard Geographical Classification (ASGC)* 1216.0 July 2008 p.39

per cent is in the "Remote" area and slightly more than 4,000 people, or 0.067 per cent of the State's population, live in the "Outer Remote" area.[39]

3.5 The more remote areas of the State have small centres of population with vast distances between them. This combination of factors makes it more difficult and costly to provide the same level of services to these communities as in metropolitan areas. It is also difficult to attract service providers to areas because of the small pool of potential customers. However, while less remote regional areas may be comparatively well-populated, they still offer less commercial opportunities to telecommunications companies than metropolitan areas.

Communications quality throughout New South Wales

3.6 Unsurprisingly, research has found that there is a high level of correlation between low population densities and lower quality telecommunications. In December 2007, Engineers Australia released a report on the adequacy of fixed and mobile telecommunications infrastructure around Australia with a ranking from "A" meaning the needs of the most demanding customer could be met now and in the future to "F" representing inadequate services. The rankings provide a relative indication of the quality of telecommunications infrastructure based on an assessment of how much is deployed in an area, the level of competition between carriers, the availability of multiple access technologies and how infrastructure competitiveness and density compare to the geographical size and population density of an area.[40]

3.7 While the criteria for this assessment were very stringent and not even metropolitan areas received the highest level, it is instructive that all divisions in New South Wales outside of the metropolitan area fared poorly. The "Far West Region" which scored the lowest ranking also had the highest percentage of land classified as "remote" and the lowest number of infrastructure owners. The following table shows the details of the analysis.

Table 3.1 Engineers Australia Fixed Telecommunications Infrastructure Rankings 2007

Statistical Division Name	Rating	Demographic Information (At October 2006)							
	Fixed/ Mobile	Land Area (km^2)	Population (000s)	Urban (%)	Inner Region (%)	Outer Region (%)	Remote (%)	Very Remote (%)	No. of Infrastructure Owners
Sydney	B/B	12,145	4,199	96.3	3.7	0.0	0.0	0.0	35
Hunter	E/D	30,906	600	66.9	30.6	2.5	0.0	0.0	16
Illawarra	D/D	8,339	408	60.3	39.4	0.3	0.0	0.0	17
Richmond-Tweed	D/E	9,840	221	22.6	75.9	1.5	0.0	0.0	17
Mid-North Coast	D/E	25,931	288	0.0	70.5	29.4	0.0	0.1	16
Northern	D/D	99,782	180	0.0	40.0	57.3	2.7	0.0	17
North western	E/E	198,360	119	0.4	36.2	38.3	20.3	4.8	18
Central west	D/E	63,871	179	0.0	68.5	29.1	2.4	0.0	13
South eastern	D/D	52,228	198	17.3	50.1	32.3	0.3	0.0	16
Murrumbidgee	D/E	63,707	153	0.0	55.0	43.0	2.0	0.0	12
Murray	E/E	87,869	114	0.0	71.5	27.5	1.0	0.0	15
Far west	F/F	119,390	24	0.0	0.0	87.2	4.2	8.6	4

Source: Engineers Australia *Telecommunications Infrastructure Report Card 2007* p.9, Appendix pp.12-13

3.8 Mobile phone communication is generally rated worse than the fixed network in most regions. This is consistent with what might be expected from the fact that fixed services have had a longer period in which to be installed and policies that have not required the universal delivery of mobile services throughout the country.

[39] Australian Bureau of Statistics *2006 Census of Population and Housing Table B01 for Regions of NSW*

[40] Engineers Australia *Telecommunications Infrastructure Report Card* December 2007, p.2

Availability of Telecommunications

3.9 The Committee was asked to investigate the availability of telecommunications. According to the Australian Communications and Media Authority (ACMA), at 30 June 2008:

- 100 per cent of the population has access to the fixed phone network;
- Second generation (2G) GSM mobile phone services are available to 96 per cent of the population from three networks; and
- Third generation (3G) mobile phone services are available to 98.8 per cent of the population on three carrier networks.[41]

3.10 In very remote areas, satellite phones can provide mobile phone services.

3.11 The Committee is not aware of any ongoing issues with the availability of voice services on the fixed phone network. The following discussion of telecommunications focuses on mobile telephony.

3.12 The Committee notes that the type of mobile phone service is evolving rapidly. Over the 12 months until June 2008, there was an 88 per cent increase in the number of subscriptions to 3G services to 8.55 million. This is largely caused by expansions in these networks and the need for customers using Telstra's old CDMA network to change to another service once that network closed in April 2008.[42]

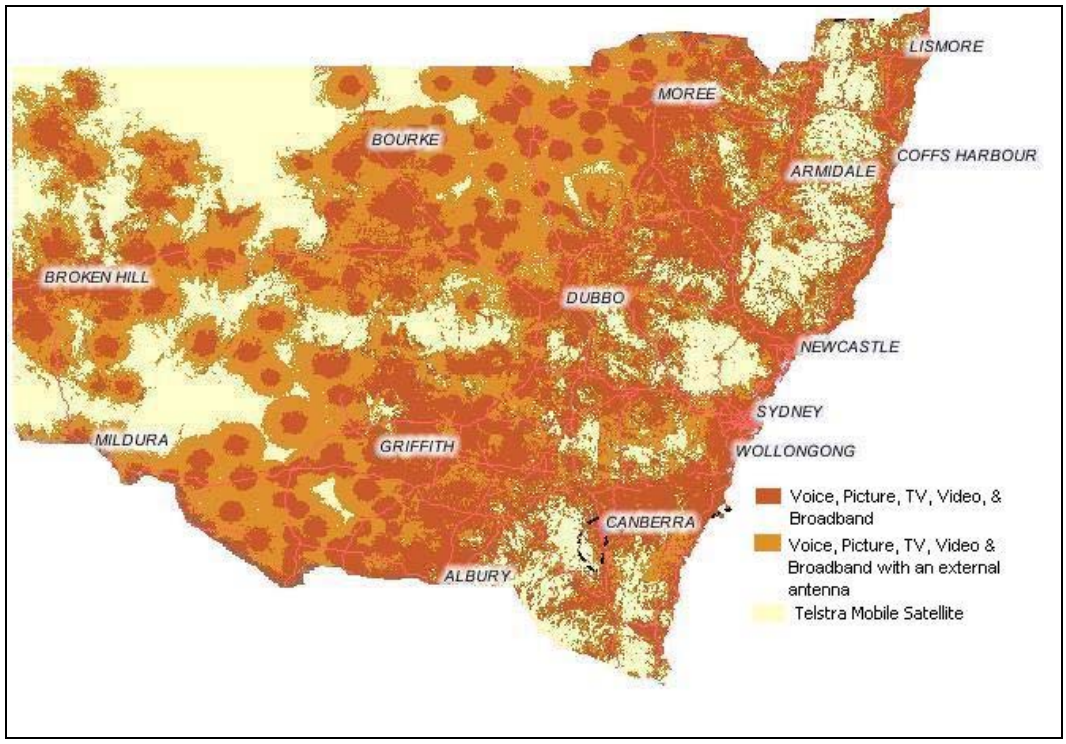
Availability versus Coverage

3.13 The Committee heard that there is an important distinction between availability of services where people live and availability where people actually spend their time. Mobile telephone coverage is particularly problematic in rural and regional areas as the availability of services declines outside population centres. For instance, Mrs Elisabeth Webster from Reids Flat in south eastern New South Wales wrote that there were no mobile phone services available in her area. The Central NSW Regional Organisation of Councils noted that mobile phone coverage is "non-existent" more than five to ten kilometres from town centres including along highways.[43]

3.14 The following two maps show coverage of the 3G mobile phone network in New South Wales at June 2008. The first shows the Telstra Next G network. The darker areas are where the network is fully available. The lighter areas are where the service is available with the use of an external antenna. The second map shows the coverage of the 3G networks operated by Hutchison, Optus and Vodafone.

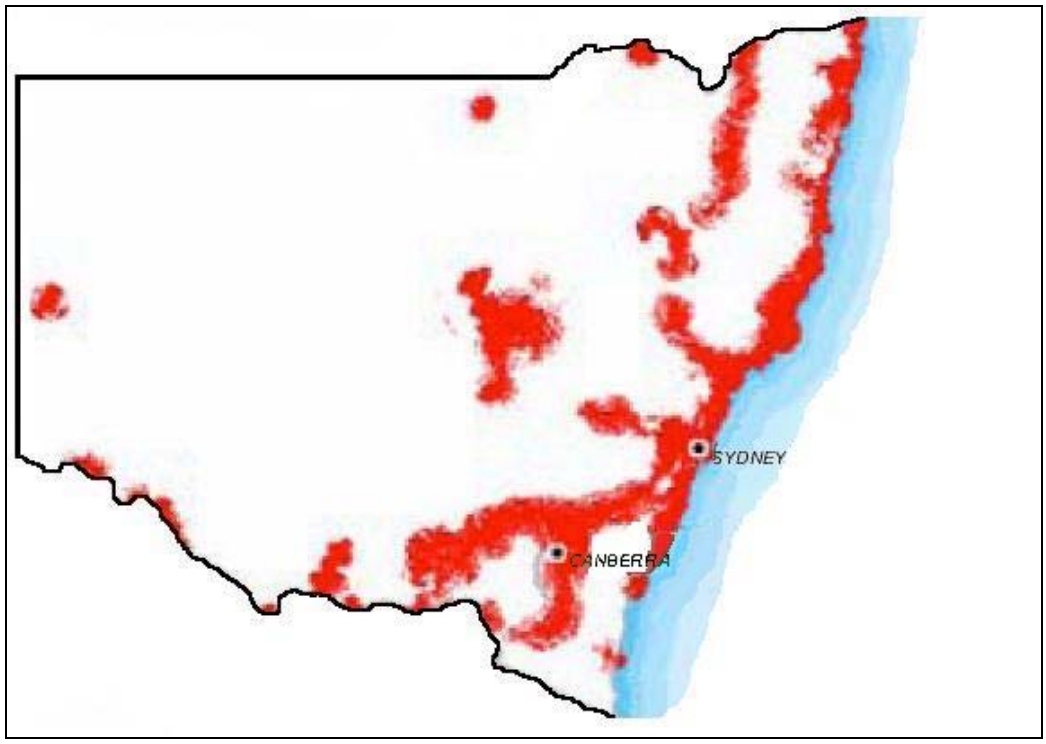
[41] ACMA *Communications Report 2007-2008*, November 2008, p.14
[42] *ibid.*, p.10
[43] Submission 2.10, p.6, Submission 1.22, p.1

Map 3.2 Coverage of Telstra's Next G Network



Source: Telstra Telstra.com

Map 3.3 Coverage of 3G Networks operated by Hutchison, Optus and Vodafone

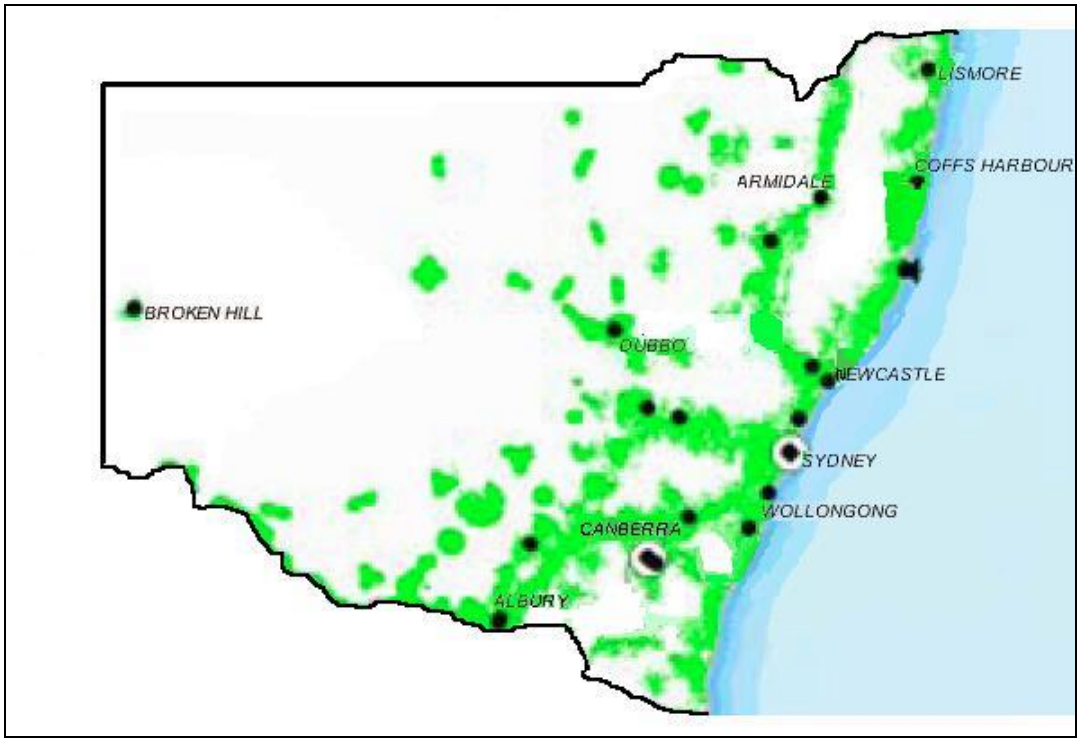


Source: derived from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.26

3.15 These maps show that there are gaps in coverage in remote areas as well as areas with difficult topography such as the northern tablelands. The next two maps show

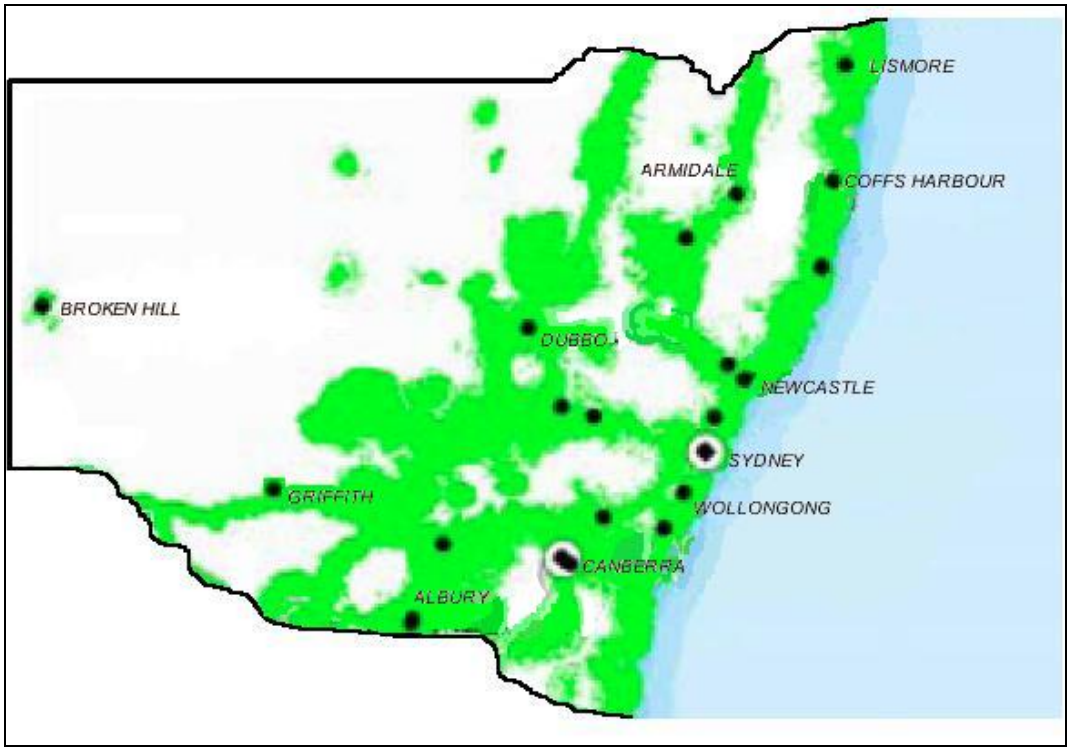
the availability of the second generation (2G) GSM network across New South Wales from Telstra and the non-Telstra networks:

Map 3.4 Coverage of Telstra's GSM Network



Source: derived from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.25

Map 3.5 Coverage of Combined GSM Networks for all carriers except Telstra's



Source: derived from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.24

3.16 The Committee notes that until April 2008, Telstra operated a comprehensive CDMA network in rural and regional Australia so its 2G GSM network provides only limited coverage in many regional areas. There are several carriers providing 2G coverage in regional areas but significant gaps remain in the service. 3G services are not nearly as well developed from these carriers. In many parts of rural and regional New South Wales, only a single carrier provides mobile phone services. This means that subscribers have no choice about which company to use.

3.17 The Committee does not have the resources to verify the accuracy of these maps but it notes that the Regional Telecommunications Independent Review Committee contended that the coverage maps made available to them were misleading and found that in fact terrestrial mobile services without an external antenna were available in less than 15 per cent of the country.[44]

3.18 The Committee also notes that the transition from the CDMA to the Next G network was highly problematic. During this inquiry it heard from many witnesses that the new Next G network did not provide the same level of coverage that the CDMA network did although concerns were resolved over time. In Chapter Seven options for improving coverage for mobile phones are considered.

Availability of Broadband Services

What is Broadband?

3.19 "Broadband" refers to high bandwidth internet services at speeds greater than are possible from ordinary phone lines through "dial up" connections and available at any time without the need to dial a server. While definitions of minimum speeds vary, the OECD defines broadband service as one capable of downloading at greater than 256 kbps.[45] There are number of delivery methods for broadband services.

ADSL

3.20 Broadband services can be delivered through the copper phone network using Digital Subscriber Line (DSL) technology. More than half the exchanges in the country have DSL technology enabled but broadband may not be available for some premises within an enabled exchange area for technical reasons. For instance the speed of DSL services declines the further away from an exchange the subscriber is and usually does not work at all at more than around 3.4 km from the exchange. There could also be some technical block such as a Large Pair Gain System on the network or particular premises may not be connected to the copper network.[46]

3.21 There are several types of DSL technology but the most common type is Asymmetrical DSL (ADSL) that provides for faster download than upload speeds. At May 2008, ADSL was reportedly available to 91 per cent of the population as a result of the technology being installed in almost 3,000 telephone exchanges. By September 2008, 1,400 exchanges offered ADSL2+, an improved version of this technology that offers download speeds of up to 24 Mbps to subscribers within 1.5 km of an exchange. ACMA estimated that 48 per cent of the population could now receive ADSL2+ and noted that in January 2007 only 400 exchanges had ADSL 2+

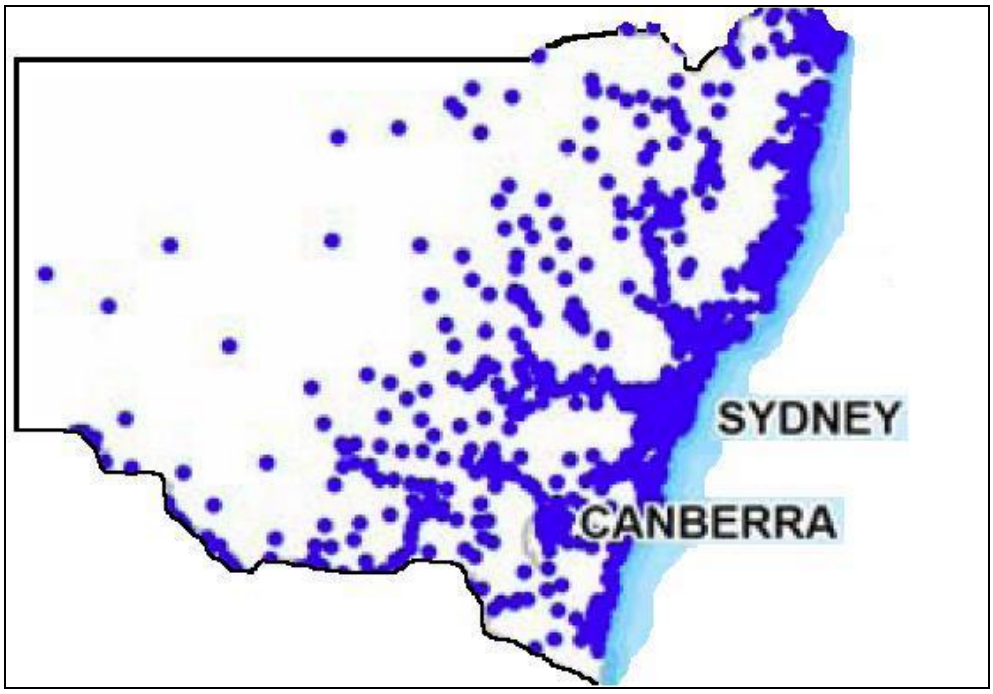
[44] RTIRC pp.126-127

[45] OECD broadband portal FAQ [http://www.oecd.org/document/46/0,3343,en_2649_34225_39575598_1_1_1_1,00.html]. In contrast, Submission 1.35 p.6 includes a definition of 56kbps.

[46] ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, pp.5-6

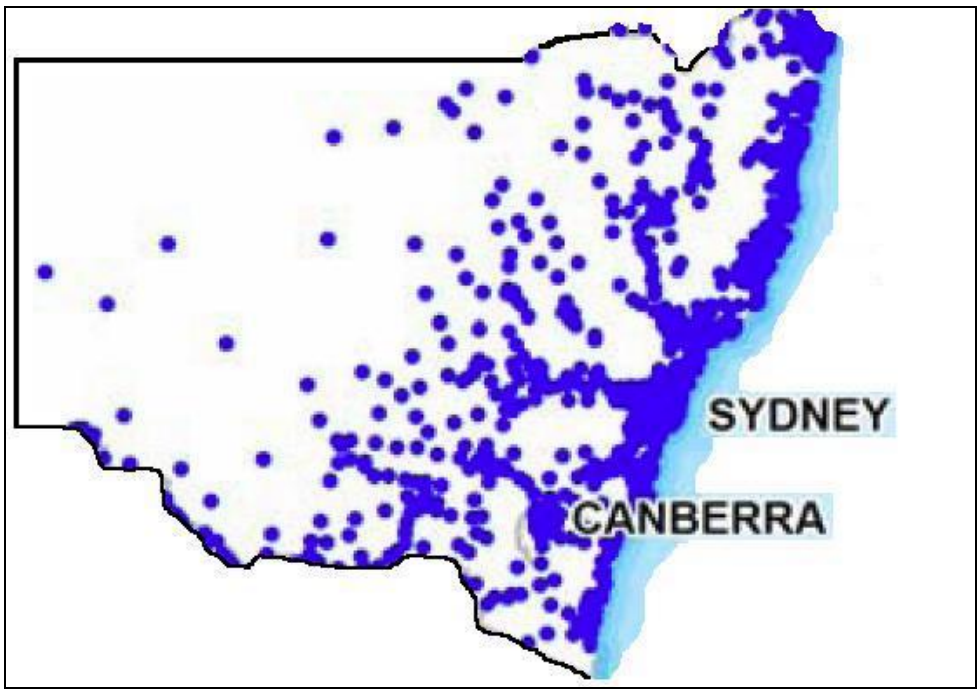
installed.[47] The following maps show the availability of ADSL services in New South Wales at September 2008. The second map only shows exchanges with ADSL 2+.

Map 3.6 Availability of ADSL in New South Wales (including ADSL2+)



Source: derived from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.8

Map 3.7 Availability of ADSL2+ in New South Wales



Source: derived from ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.9

[47] Telstra Media release 17 February 2009, ACMA *Communications Report 2007-2008*, November 2008, pp.20-21

Cable

3.22 In many metropolitan areas, broadband at speeds of up to 20 Mbps is also available through the two networks of "cable" of hybrid coaxial and optical fibre (HCF) operated by Telstra and Optus. These networks cover 2.6 million premises.[48]

Wireless Services

3.23 Increasing numbers of subscribers are receiving broadband through wireless services, which are either fixed or mobile services. Fixed wireless services are used where ADSL or other types of access are not available. More then 225 companies provide fixed wireless broadband services in Australia, with more than three quarters of these operating in regional areas.

3.24 It should be noted that while the GSM and CDMA mobile phone networks offered data as well as voice services, the third generation mobile networks offers much greater speeds and the ability to perform complex applications. For instance, Telstra recently announced that the Next G data speeds had broken a world record by reaching a maximum theoretical available speed of 21 Mbps. Telstra plans to increase the speed of the network to 42 Mbps.[49] Data services from the mobile phone network are not currently included in national surveys of internet use by the Australian Bureau of Statistics except when they are accessed through modems (rather than phones).[50]

Satellite

3.25 In theory, broadband services are available in all locations because they can be provided through satellites. However this is a last resort service for rural and remote areas where alternatives are not available. This option requires expensive customer premise equipment, is more expensive than other technologies, suffers from increased packet latency and is unreliable in wet weather. [51]

Government Broadband Service

3.26 Several New South Wales government agencies have the benefit of superior broadband services to that which might be available to households and businesses through the Government Broadband Service. Soul provides the service in the areas surrounding the following 24 towns and centres:

Table 3.2 Government Broadband Service Centres

Albury	Dubbo	Lithgow	Port Macquarie
Armidale	Gosford	Maitland	Queanbeyan
Bathurst	Goulburn	Muswellbrook	Tamworth
Bega	Grafton	Newcastle	Taree
Broken Hill	Griffith	Nowra	Wagga Wagga
Coffs Harbour	Lismore	Orange	Wollongong[52]

[48] ACMA *Communications Report 2007-08* p. 21

[49] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* p.20

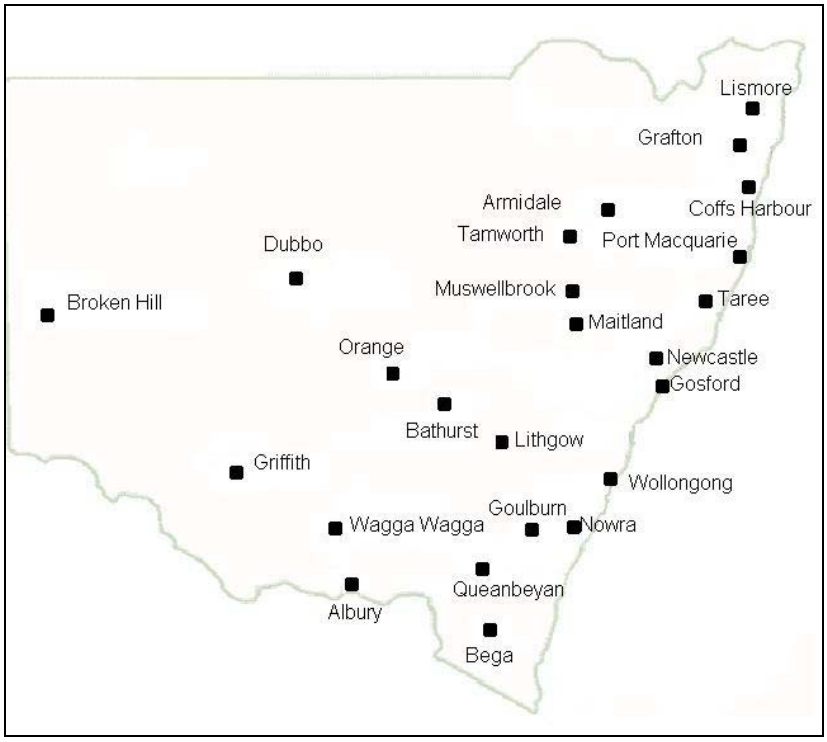
[50] ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, pp.10-11

[51] *ibid.* , p.13

[52] Submission 1.30, p.4

3.27 The following map shows the areas of the State where this service is available.

Map 3.7 Centres connected to Government Broadband Service



Source: derived from Submission 1.30, p.4

3.28 The Government Broadband Service is an extremely valuable link between these communities. For instance it enables schools to conduct videoconferencing and hospitals to communicate with outlying clinics.

Australian Research and Education Network

3.29 Universities in regional centres also have superior internet connections to those available to most households and businesses because of the Australian Research and Education Network (AREN) that provides "gigabyte connectivity" between regional campuses and the internet. This was the result of Federal funding under the Backing Australia's Ability program.[53]

Conclusion

3.30 This discussion has shown that there are gaps in the level of availability of broadband services by terrestrial delivery mechanisms. Alternative delivery methods are available but there are disadvantages to their use in quality and price.

Level of Use of Internet in Rural and Regional Areas

3.31 The Committee was interested in establishing the extent to which broadband services were being used in rural and regional communities.

3.32 The Australian Communications and Media Authority reports that in June 2008, there were 7.2 million business and domestic subscribers to internet services in Australia, an increase of 800,000 on the previous year. The use of broadband has grown to 78

[53] Submission 2.15, p.1

per cent of users compared to 67 per cent the previous year, with 1.3 million new subscriptions over the year.[54]

3.33 The use of the internet in homes is increasing rapidly. The Australian Bureau of Statistics (ABS) reports that between the 2001 and 2006 censuses, the rate for domestic internet use had increased from 35 per cent to 63 per cent. At the national level, 66 per cent of dwellings in major cities have access to the Internet, compared to 42 per cent of households in very remote Australia. The corresponding figures for use of broadband were 46 per cent and 24 per cent.[55]

3.34 ABS analysis of household use of information technology based on the census data showed that, in 2006, 70 per cent of households in metropolitan areas in New South Wales had access to internet with 51 per cent of households using broadband connections. For non-metropolitan households, the corresponding figures are 55 per cent and 33 per cent.[56] The following table shows the distribution of internet and broadband connections in households in New South Wales in the 2006 census by remoteness category. These figures vary slightly from the percentages in ABS reports based on the same data because the number of households not answering the question has been retained rather than averaged out.

Table 3.3 Patterns of Internet Access by Household in Remoteness Classifications in NSW

	No Internet connection	Any Internet	Broadband connection	Dial up connection	Other connection	Un-known	Total
Major Cities							
Number of dwellings	535,772	1,070,803	756,913	302,817	11,073	57,905	1,664,480
Proportions	32.2%	64.3%	45.5%	18.2%	0.7%	3.5%	100.0
Inner Regional							
Number of dwellings	200,152	274,479	148,153	123,665	2,661	15,773	490,404
Proportions	40.8%	56.0%	30.2%	25.22%	0.5%	3.2%	100.0%
Outer Regional							
Number of dwellings	74,701	79,493	35,180	43,419	894	5,766	159,960
Proportions	46.7%	49.7%	22.0%	20.9%	0.7%	4.8%	100.0%
Remote							
Number of dwellings	5,876	5,392	2,837	2,471	84	562	11,830
Proportions	49.7%	45.6%	24.0%.	20.9%	0.7%	4.8%	100.0%
Very Remote							
Number of dwellings	752	714	460	236	18	77	1,543
Proportions	48.7%	46.3%	29.8%	15.3%	1.2%	5.0%	100.0%

Source: derived from Australian Bureau of Statistics *Census Data Community Profiles Type of Internet Connection by Dwelling Structure for New South Wales Regions*

[54] ACMA *Communications Report 2007-2008*, November 2008, p.14

[55] Australian Bureau of Statistics 2007 *Patterns of Internet Access in Australia* • 8146.055.001 2006 p.8

[56] Australian Bureau of Statistics 2008 *New South Wales in Focus* 1338.1 p.41

3.35 This table shows that the rate of internet use is lower than the national average in areas more remote than the "Major Cities" category although the difference becomes starker in the "Outer Regional" areas where less than half of households reported having an internet connection and rates of broadband use are below 30 per cent.

3.36 The ABS reported that the rates of internet connection varied within areas of similar levels of remoteness. While areas around Sydney, along with some inner regional centres such as Armidale, Albury, and Bathurst have the highest level of Internet access (75 per cent or more), some areas in north western New South Wales in remote and very remote areas also had this level of access. Most localities in inner regional areas had at least 70 per cent of houses with internet connections. The lowest 20 per cent, with less than 50 per cent connectivity, mostly comprises places in remote and very remote areas, with the exception of some outer regional areas in north eastern NSW.

3.37 In relation to the use of broadband, the ABS found that while the top 20 per cent of areas (with at least 55 per cent broadband connectivity) were mostly in inner city areas, this group also included several districts from the sparsely populated remote and very remote areas of North Western parts of the State. Areas in and around the regional centres generally had connectivity ranging from 35 to 55 per cent. Areas with less than a quarter of households with broadband connections were mostly in remote and outer regional areas, but there are some from inner regional areas as well.[57]

3.38 The Committee acknowledges that factors besides service availability affect the rate at which households would use the internet. This includes the quality of the service, the cost, relative income levels and the perceived benefits of the service.[58]

3.39 The ABS undertook complex analysis of the census data to allow for the influence of other factors on internet use such as income, number of children and level of education. On this basis, they concluded that non-metropolitan households are significantly less likely to have internet connections than households in the city. The proportions for the whole country are included in the following table.

Table 3.4 Likelihood of having Internet and Broadband Connections in Regional and Remote areas compared to Urban areas in Australia

	Any internet connection Percentage less likely than in urban areas	**Broadband** Percentage less likely than in urban areas
Inner Regional	17%	40%
Outer Regional	29%	54%
Remote	35%	53%
Very Remote	61%	59%

Source: Adapted from Australian Bureau of Statistics 2007 *Patterns of Internet Access in Australia* 8146.055.001 2006, pp.71-72, p.68

3.40 On the basis of this analysis, it seems clear that the lower levels of usage may be attributed largely to lower levels of availability of affordable service.

3.41 This conclusion is supported by a more recent research on a key rural industry. In 2008, the Australian Communications and Media Authority published the results of a survey of the use of the internet by 2,000 farmers around Australia. While 74 per cent of farmers reported using the internet, only 35 per cent of them had broadband

[57] Australian Bureau of Statistics 2007 *Patterns of Internet Access in Australia* • 8146.055.001 2006, p.28

[58] *ibid.*, p.28

connections. This continuing reliance on dial up internet services was attributed to limited availability of terrestrial broadband and relatively higher cost of satellite technology. Within New South Wales, more than half of the surveyed farms with broadband connections received it via satellite with 23 per cent receiving it through ADSL, 16 per cent through HCF cable and 3 per cent through wireless.[59]

Speeds

3.42 As mentioned above, "broadband" can mean any data service with a download speed of 256 kbps. Rural and regional customers are less likely to have access to the higher bandwidths available through cable and ADSL and are not keeping pace with new developments in metropolitan areas. In its 2008 survey of Internet Service Providers with 10,000 subscribers or more, the Australian Bureau of Statistics reported large increases in the number of business and household subscribers with download speeds of 1.5 Mbps or more. This had risen from 2.47 million or 36 per cent of subscribers in December 2007 to 3.1 million, or 43 per cent of subscribers, in June 2008.[60] ACMA attributed this change to the evolution of DSL services from ADSL to ADSL2+.[61]

3.43 These increased speeds enable people to use the internet in different ways and use a wider range of technologies. The Department of State and Regional Development provided the Committee with the following list of times to download various media types with different ways of accessing the internet.

Table 3.5 Time required to download various media types for different access speeds

Media	Typical	Maximum Theoretical Access Speeds							
	File Size (MB)	56kps	256kbps	512 kbps	6 Mbps	12 Mbps	30 Mbps	100 Mbps	1 Gbps
Access type		**Dial up**	**ADSL**	**ADSL/ BDSL**	**WiMAX Wireless vers 1**	**WiMAX Wireless vers 2**	**Cable**	**Fibre to the Node**	**Fibre to the Home**
Small image	0.1	12.5 sec	3.1 sec	1.6 sec	0.13 sec	0.07 sec	0.03 sec	0.01 sec	0.001 sec
Quality Photo	0.55	68.8 sec	17.2 sec	8.6 sec	0.73 sec	0.37 sec	0.15 sec	0.04 sec	0.004 sec
MP3 Audio Single	7	15 min	3.6 min	1.8 min	9.3 sec	4.7 sec	1.9 sec	0.56 sec	0.056 sec
CD single	43	1.5 hrs	22.4 min	11.2 min	57.3 sec	28.7 sec	11.5 sec	3.44 sec	0.34 sec
CD	640	22 hrs	5.6 hrs	2.8 hrs	14.2 min	7.1 min	2.8 min	51.2 sec	5.12 sec
DVD	9,400	13.6 days	3.4 days	40.8 hrs	3.5 hrs	1.7 min	41.7 min	12.5 min	1.3 min

Source: Adapted from Department of Commerce cited in Submission 1.35 p.7

3.44 The Department also provided the following indicative bandwidths requirements for particular services:

[59] ACMA, *Telecommunications Today Report No 3: Farming Sector attitudes take up and use*, p.5 and p.11

[60] Australian Bureau of Statistics 2008 *Internet Activity, Australia*, 8153.0

[61] ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.2

Table 3.6 Bandwidth requirements for Particular Services

Service	Bandwidth (downstream)
Broadcast TV (Standard definition)	2 to 6 Mbps
High Definition TV	6 to 12 Mbps
Pay per View	2 to 6 Mbps
Video on Demand	2 to 6 Mbps
Picture in Picture	Up to 12 Mbps
Personal Video Recorder	2 to 6 Mbps
Interactive TV	Up to 3 Mbps
High speed internet	3 to 10 Mbps
Video conferencing	300 to 750 Kbps
Voice/ video telephony	64 to 750 kbps

Source: Submission 1.35 p.9

3.45 This shows that having slower internet connections can reduce the likelihood of subscribers using these technologies to their fullest potential for entertainment, education, social interaction or business purposes.

3.46 A survey of 1,000 households in 2007 around Australia confirmed the statistical information about the ongoing difference in internet usage between urban and regional areas. It showed that 77 per cent of metropolitan respondents used the internet compared to 65 per cent of rural respondents. Urban households were also more likely to have broadband connections (rather than dial up connections) than rural households (83 per cent and 70 per cent). The survey showed that significant correlation between having broadband and spending significant proportions of time online. The report of the survey concluded that people with access to broadband use the internet differently to those with dial up access and have richer engagement with the possibilities of the medium. [62]

Price

3.47 In general, broadband services are considerably more expensive for satellite services and wireless services across 3G networks than over fixed-line or other fixed wireless services.[63]

3.48 In its submission to the Committee, the Department of State and Regional Development also reported on a survey of Regional Development Boards that considered that the relatively low use of broadband was caused by a lack of cost-effective services in rural and regional areas. Respondents attributed this to a lack of investment in infrastructure by telecommunications companies and a lack of retail competition so the cost of broadband was relatively higher than it would be in metropolitan areas.[64]

3.49 The Department of State and Regional Development noted that although Telstra offers the same price for the same services throughout the State, broadband services

[62] S Ewing, J Thomas and J Schliessl 2008 *CCi Digital Futures Report: The Internet in Australia, p.6, p.9*
[63] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* p.20
[64] Submission 1.35, p.17

were relatively more expensive in non-metropolitan areas because of the lack of availability of cheaper delivery mechanisms through ADSL and cable.[65]

3.50 The Committee notes that Telstra offers the same price for the same services around Australia. However Federal government policies have reduced the likelihood of competing companies offering lower fees for regional subscribers to ADSL broadband services because the ACCC had determined a higher wholesale broadband price for non-metropolitan exchanges than for metropolitan exchanges. The Committee heard from a Telstra representative that their competitors were far more likely to establish ADSL services in exchanges with lower wholesale prices and this meant that there was less competition in rural and regional areas.[66]

3.51 The higher price paid for satellite services is borne out by a survey by ACMA of 2,000 farmers throughout Australia. The following table compares the average amounts spent on each mode of delivery for those users with broadband connections:

Table 3.7 Average amount spent each month on Broadband by Farmers in Australia

Mode of delivery	Average monthly cost
Broadband cable	$36
Broadband ADSL	$37
Satellite	$59
Wireless	$33

Source: ACMA *Telecommunications Today Report 3: Farming Sector attitudes to take-up and use* p.16

3.52 The high cost of broadband can stop subscribers making the most of the possibilities of the technology, especially when they have limited discretionary income. For instance, a national baseline survey of the use of broadband in schools in Australia showed that even though a significant minority of schools had broadband services through fibre, around 80 per cent of them had data speeds below 4 Mbps. The baseline survey attributed this in part to concern about costs. A higher proportion of non-metropolitan schools had slower broadband speeds than metropolitan schools.[67] This situation could compromise the equitable delivery of high quality education to metropolitan and non-metropolitan students.

3.53 This problem is not confined to rural and regional areas. The Australian Local Government *State of the Regions Report 2008* argues that broadband is still relatively expensive compared to other countries and cost is a deterrent to businesses delivering services via broadband.[68] Infrastructure Australia noted, broadband services in Canada are slightly cheaper than in Australia, yet offer six times the speed and 30 times the quantity of downloads.[69] However, in major cities where ADSL or other service delivery methods are available, this situation is improving. ACMA reports that on a national basis the cost of internet services per

[65] Submission 1.35, p.21

[66] Transcript of Hearing 23 June 2008, p.43

[67] DEEWR *Fibre Connections to Schools National Baseline of School Broadband Connectivity* 2008, p.4

[68] Australian Local Government Association 2008 *State of the Regions Report 2008-09,* p.71

[69] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* p.20

gigabyte is falling and the amount downloaded by individual customers is increasing.[70]

Conclusion

3.54 This Chapter has shown that while telecommunications and broadband are available in some form throughout New South Wales, services are of poorer quality and more expensive in large parts of rural and regional New South Wales than in metropolitan areas. In particular, there are large gaps in the availability of "normal" mobile phone services and broadband through ADSL connections. Alternative delivery solutions are more expensive and of lesser quality.

3.55 The telecommunications sector is changing rapidly as new technology develops but communities in rural and regional areas are not keeping up.

[70] ACMA *Communications Report 2007-2008*, November 2008, p.176

Chapter Four - Why Communications Services should be improved

4.1 This Chapter provides a brief discussion of the major benefits high quality communications services can bring to rural and regional communities in the areas of economic development, social interaction and the provision of health and education services.

4.2 As a corollary, it then examines the consequences of the shortfall in service quality, including threats to economic and social development and reduced availability of health and educational services. Some submissions argued a lack of broadband services even reduced the likelihood of people moving to particular areas. Others suggested that it contributed to people leaving regional areas. Higher costs can be a burden on communities already disadvantaged by long distances from commercial centres and the services that are available in metropolitan areas.

Benefits of improving broadband services

4.3 Broadband services are seen as one of the key drivers of economic growth and competitiveness with businesses developing significant benefits from more efficient ways of operating and enhanced competitiveness. High rates of adoption mean that there are "network benefits" for businesses in dealing with others using improved communications practices. The Committee received a submission from Tim's Computer Service, a regional computer business, suggesting that the next generation of broadband services should be seen as critical infrastructure, no different to roads, water and electricity. The New South Wales Department of State and Regional Development submission argued that regional businesses needed broadband services to continue to participate and compete in the global economy.[71]

4.4 Infrastructure Australia recently reported to the Council of Australian Governments that a world-class telecommunications network is essential to an increasingly knowledge-based economy and cited recent estimates that universal availability of broadband could produce national economic benefits ranging from $12 billion to $30 billion per annum.[72]

4.5 The former Minister for State and Regional Development identified the main areas of benefit from access to affordable broadband services:

- Enhanced business competitiveness by allowing access to global supply chains, new business models and customers;
- Improved ability for communities to engage with social and community life and participate in distance education;
- Improved cost effectiveness of government service delivery to rural and regional areas; and
- Improved equity in service delivery.[73]

[71] Submission 2.19 p.4, Submission 1.35 p.4

[72] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* pp.20-21

[73] Letter from the Hon Tony Kelly MLC Minister for State and Regional Development covering submission 1.35

Business Competitiveness

4.6 There is a wide range of businesses in rural and regional communities, from multinational mining companies and large-scale agricultural operations to small tourism operators and retail businesses. Most of them could benefit in some way from access to broadband services. For instance, the direct benefits of the technology include reduced transaction costs, easier communication with suppliers, restructuring supply chains, enabling customers to make purchases online, enabling information about the business to be available for a greater period of the day and giving access to larger markets. Broadband can reduce many of the disadvantages rural and regional businesses might face in being distant from cities and could enable them to find customers outside the immediate community.[74]

4.7 In some cases, broadband lets businesses to operate where it suits them to operate rather than where the customers are. The Department of State and Regional Development provided the example of a factory at Uralla called Phoenix Foundry which allows customers to order bronze plaques online. This has extended the reach of the company around the world. An engineering company based in Orange recently won the contract to design a shopping centre in Singapore and noted that most of its business is from overseas and interstate.[75]

4.8 The Department of State and Regional Development reported the agriculture industry is becoming increasingly reliant on broadband technology to manage its operations efficiently. For instance, irrigation and fertiliser mapping systems are operated remotely and if a piece of machinery breaks down, repairs can occur more quickly if a digital image of the broken component can be sent to the manufacturer for analysis.[76]

4.9 The former Department of Communications, Information Technology and the Arts (DCITA) has also undertaken a number of case studies into the use of broadband in regional areas and found that broadband has helped farmers deal with banks more efficiently, provided farms with a competitive advantage, streamlined selling directly to world markets and allowed farmers to access weather updates and news.[77]

4.10 Telstra reported that a study of the use of the Next G mobile broadband network by 26 businesses in 15 industries found productivity gains of around 9.3 per cent. The highest gains were amongst businesses in rural and remote areas and those with staff out of the office who could use the system to work as effectively as they would if they had been in the office. The study noted that there were benefits in sending video images of difficult repair tasks to colleagues for discussion rather than just describing them.[78]

4.11 The Department of Commerce considered that broadband could stimulate local economic development and growth by allowing local businesses to take advantage of the lower cost structures in rural and regional areas. It could also enable residents to telecommute to offices in major centres rather than relocating.[79]

[74] Submission 1.35 p.10
[75] *ibid.*, p.12
[76] *ibid.,* p.21
[77] ACMA, 2008 *Telecommunications Today Report 3: Farming Sector Attitudes to Take up and Use*, p.14
[78] Submission 2.24, p.12
[79] Submission 1.30 p.6

4.12 Tim's Computer Service which operates stores in the rural towns of Gundagai and Tumut reported that its business relied on downloading and uploading information and that its productivity would double if faster broadband services were available.[80]

Opportunities for innovation

4.13 Broadband services can enable the development of other innovations in technology. The Australian Local Government and Shires Association considered that improved broadband connectivity could assist implementing energy reduction strategies such as "smart" power network grids which could minimise the amount of energy required by households and industry. The Association estimated that total benefits of smart networks and e-health applications were in the order of $40 to $50 billion over ten years.[81]

4.14 The Committee had the opportunity of seeing a demonstration of smart grid and smart meter technologies when it visited the Intelligent Network Research and Demonstration Centre at Queanbeyan in August 2008. This joint Country Energy/IBM initiative is deployed using broadband over powerline solutions. The centre demonstrates in a home setting how the intelligent network works.

Community Benefits

4.15 Access to broadband services enables members of rural and regional communities to participate in the social, entertainment and educational applications of the medium. For instance access to online banking, trading and shopping provides better opportunities for consumers than would be available in small communities.[82]

4.16 The Department of State and Regional Development noted that improved services in rural and regional communities would mean that there would not be a digital "underclass" of people who do not have access solely on the grounds of location.[83]

Government Services

4.17 The Committee notes that broadband can help address the difficulties government agencies face in providing services to small populations in far-flung settlements.

4.18 Much government information is now available from websites and it is becoming essential for people dealing with government to have internet access. As noted by Ms Lynda Summers of the Regional Communities Consultative Council, it is ironic that people in rural and regional communities who have the greatest need to obtain information online are the ones who find it hardest to gain access to it because of the lack of broadband services.[84]

Health

4.19 High speed broadband has the potential to improve the level of health care available in rural and regional areas. For instance, health services can benefit from tele-health applications where specialists can diagnose and treat patients no matter where they are. Centralised electronic storage of patient records can streamline information

[80] Submission 2.19 p.4

[81] Australian Local Government Association 2008 *State of the Regions Report 2008-09, pp.70-71*

[82] Submission 1.30, p.6

[83] Submission 1.35 p.14

[84] Transcript of Hearing 23 June 2008, p.36

management and mean that all clinicians have access to the most up to date information. With high speed broadband connections, health monitoring can be conducted in a patient's own home rather than requiring regular travel to a hospital.

4.20 The Department of State and Regional Development considered that these were the main possibilities for regional hospitals and medical practitioners from health applications of broadband services:

- Improved availability of skills by having access to specialists and other resources at larger hospitals;
- Remote access to clinical information form smaller clinics;
- Digital X-ray production technology so images can be transmitted online;
- Using video conferencing to enable remote diagnosis of patients including enabling discussions between the patient, a local health provider and experts in major metropolitan hospitals; and
- Enhanced professional development for staff by enabling ongoing access to the knowledge of colleagues in other areas. [85]

4.21 Associate Professor Ian Pettigrew noted that broadband was helpful in allowing rural practitioners to have access to metropolitan services by video conference and telemedicine and to use expensive medical technology that is not available in rural areas. Broadband would also help the development of electronic medical records that could be exchanged between practitioners and hospitals.[86]

4.22 The Central NSW Regional Organisation of Councils provided a case study showing the importance of broadband services for improving rural medicine in Mudgee. The University of Wollongong offered to place three or four medical students in the area, local practices were willing to support them and the University was offering funding towards extending practices to provide additional study and consultation areas. This would have benefited the local community by increasing the level of medical services and lead to the creation of succession planning in practices. The availability of broadband was vital to the success of this proposal as these students would need to participate in lectures in an online environment and send and receive large technical files.[87]

4.23 A submission from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists saw the development of electronic central records as of particular importance for indigenous women who may receive care from many different providers in many places.[88]

4.24 The Committee heard from Mr Craig Smith of NSW Health that affordable broadband services with high speed and high levels of availability and security were essential for clinical systems and managing patient information. He explained the benefits of a program of remote image analysis included shortening the time for diagnosis of a State-wide imaging program where images could be sent from a regional hospital instantly rather than by courier which could take some days.[89]

[85] Submission 1.35 p.14
[86] Submission 2.8, p.1
[87] Submission 2.10, p.8
[88] Submission 1.39, p.1
[89] Transcript of Hearing 23 June 2008, p.29, p.32

Education

4.25 Broadband services are transforming the way education is delivered by increasing the range and nature of resources available to teachers and students.

4.26 In rural and regional areas, broadband can enable improved distance education services. For instance, many university and TAFE courses are becoming available online. Broadband has improved the choice of subjects available in regional high schools by enabling students to participate in classes by video link to other schools.

4.27 These services mean that students do not need to leave rural and regional areas to obtain a high quality education and can complete secondary and tertiary studies remotely. In some schools the use of videoconferencing technology has enabled them to offer year 11 and 12 subjects for the first time.

4.28 A submission from the Department of Premier and Cabinet described how the Distance Education Access Program links 22 schools in five geographical clusters across rural parts of the state to offer a shared year 11 and 12 curriculum pooling the schools' teaching and financial resources. In the Orange area, a group of schools is using broadband services to offer an additional 36 subjects across the schools involved.[90]

4.29 The Royal Australasian College of Dental Surgeons has advised the Committee that, in the near future, the college is expecting to deliver its intensive Orientation Course and Finals Workshop via a web-based streaming technology. [91]

4.30 The medium also enables lifelong learning from distance education and provides opportunities for people in these rural and regional communities to enhance their skills or retrain.[92]

Consequences of lack of investment

4.31 As noted previously, there are major differences in access to high speed broadband services in regional areas compared with urban areas, with a significantly lower rate of internet access in many regional areas. The availability of ADSL, much less ADSL2+ services in rural and remote areas, is limited and cable is rarely available at all. The Committee heard much evidence about the potentially dire economic and social consequences of not upgrading broadband services. For instance Ms Lynda Summers of the Regional Communities Consultative Council noted that:

> Rural and regional communities continue to be impacted on a number of fronts, which challenge their long-term viability, but poor connectivity also acts in concert to reduce opportunity, stifle entrepreneurial initiatives and innovation, and severely degrade the quality of life for individuals and families.[93]

Diminished business competitiveness,

4.32 The Department of Commerce noted that every industry sector of rural and regional areas including forestry, mining, broad-acre faming, meat and livestock and rural manufacturing had identified the urgent need for a new generation of voice, data,

[90] Submission 2.18, p.3
[91] Submission No 40
[92] Submission 1.35 p15
[93] Transcript of Hearing 23 June 2008, p.35

video, telemetry and telematics. Without these services these businesses will miss out on productivity gains and improved services.[94]

4.33 As noted by Infrastructure Australia, while much of the country's population is based in major cities, much of the infrastructure and industry that supports our economy is located in rural and regional areas. Infrastructure Australia considered that the inability to access fast, affordable broadband in significant parts of Australia would hinder the achievement of important economic, social and environmental goals.[95]

4.34 The 2008 Australian Local Government Association's *State of the Regions Report* demonstrated a significant correlation between regions with low income and unemployment areas and low ADSL speeds. It concluded that these regions were already lagging and inadequate communications was making them less attractive to high technology start up firms. It estimated that unless these speeds were made comparable to those in metropolitan areas, the gross regional product would be reduced by $2.7 billion and 30,000 possible jobs would not eventuate.[96]

4.35 The Department of State and Regional Development provided the example of the Hermes Poll Dorset Stud in Cowra which is unable to obtain broadband except by satellite services which it considered prohibitively expensive. The business relies on exchanging large amounts of information about particular beasts with customers. The current dial up connection can take two to three hours to download files and occasionally up to 12 hours. Lack of broadband means the stud cannot use innovative farming practices such as remote operation of irrigation systems and gates or fertiliser mapping.[97]

4.36 Councillor Ian Tiley, Mayor of Clarence Valley Council noted the importance of improved broadband services for economic development in his region:

> My council has a creative industries policy, we have a film policy, and we also have an economic development strategy and a dedicated economic development unit. In the process of developing each of those strategies, many people made the point that faster speeds were critical to their businesses. We, too, have boat builders, as you mentioned this morning. We have a guy who builds boats for China, and it is a continual problem for him downloading huge amounts of stuff overnight. We have a fellow at Brooms Head who does the set-out for a section in the *Sydney Morning Herald* each night from home; he desperately needs faster speeds. So it is a big issue. We have over 10,000 ABNs in the valley, and that is growing rapidly. So it is a really important issue in terms of faster speeds for the realisation of economic potential.[98]

4.37 The then Minister for State and Regional Development noted that the risks of not improving broadband access to particular areas include not attracting new businesses.[99] The Committee recognises that businesses make decisions to operate in particular areas for pragmatic reasons such as distance from source materials, operating costs and links to markets but the availability of telecommunications can be important. As pointed out by the Department of State and Regional Development submission even though the presence of adequate services would not necessarily be

[94] Submission 1.30, p.7

[95] Infrastructure Australia 2008 *A Report to the Council of Australian Governments,* p.60

[96] Australian Local Government Association 2008 *State of the Regions Report 2008-09* Preface

[97] Submission 1.35 p.28

[98] Transcript of Hearing 1 August 2008, p.1

[99] Letter from the Hon Tony Kelly MLC, Minister for State and Regional Development covering submission 1.35

the only factor determining future levels of development, areas with inadequate communications risk being left behind with the possibility of slowed regional growth and economic dislocation. [100]

4.38 The Central New South Wales Regional Organisation of Councils noted that the consequence for businesses of not having access to broadband services is expensive installation of alternatives. For instance mining operations in Mudgee have installed their own terrestrial broadband solution.[101] The Griffith City Council noted that the lack of adequate broadband services had led to some businesses establishing some of their operations in major cities in order to obtain better broadband services there.[102] The Committee notes that not all businesses can afford such solutions.

4.39 The Department of State and Regional Development considers that lack of investment in broadband services will have both short and long term consequences. A lack of current services may discourage business investment decisions at the moment. But if businesses perceive that there is a risk in the longer term that adequate services are not maintained at levels comparable to metropolitan areas, they might be unlikely to make further investments in regional areas.[103]

Attracting and Retaining Population

4.40 The Committee heard that people can leave rural and regional areas if telecommunications services do not meet their particular needs. For instance, the Department of State and Regional Development submission noted that the availability of broadband is likely to be a key factor in retaining local students and people in regional areas.[104]

4.41 The Committee also heard that the lack of services could deter people from moving to particular areas. For instance, a submission from the Griffith City Council noted that the Riverina region is experiencing a shortage of skilled and semi-skilled workers and saw a lack of broadband services as one factor:

> Half the battle in attracting quality workers to regional areas is providing an appropriate lifestyle for their families. Most of these families have become accustomed to a certain standard of broadband delivery in the capital cities and they expect the same when they move to a regional area.[105]

4.42 Ms Brianna Casey of the NSW Farmers' Association commented that:

> For us, the attraction and retention of skilled professionals is crucial. If we cannot attract young doctors, young lawyers and young accountants into rural areas with some of the basic necessities they get in the city, it presents another layer of challenge for us.
>
> We need to ensure, particularly for our younger farmers and their partners coming through, that they have what they expect to have in the city, and we grew up with basic telecommunications as a basic need. If we can look towards solutions, we will start having a positive ripple effect towards rural communities more broadly.[106]

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[100] Submission 1.35 p.3
[101] Submission 2.10, p.7
[102] Submission 2.21, p.3
[103] Submission 1.35 p.23
[104] *ibid.*, p.12
[105] Submission 2.21, p.3
[106] Transcript of Hearing 23 June 2008, p.6

Reduced access to education and training

4.43 The Committee heard that while many educational institutions had high quality telecommunications services on site, students still needed services where they lived in order to complete tasks.

4.44 The Department of State and Regional Development reported that although the Riverina Institute of TAFE offers online delivery of many of its distance education courses, lack of broadband services reduces the ability of students to participate fully and access research material. Some had even failed subjects because they could not email assignments.[107]

4.45 Dr Paul Clark of Southern Cross University also noted that affordable high speed internet access enhanced the educational experience for distance students by allowing them to take full advantage of educational resources and have real time access to fellow students and teachers.[108] In evidence before the Committee, Ms Maria Gillam of the University explained that the high cost of broadband services was a significant impediment for students trying to use the University's resources remotely.[109]

Lower quality services,

4.46 The Committee notes that lack of broadband services could have profound social and economic consequences for rural and regional people, particularly in relation to the increasing electronic rather than "face to face" delivery of government services.

4.47 Mr Craig Smith of NSW Health reported that if broadband services were not reliable, health services could suffer as clinical information would not be as readily available noting:

> We see those as having a high-availability requirement because if we do take away the paper-based record—it is the point of these electronic systems to facilitate access of information—we require highly available solutions, but when they are down, we have to revert back to our siloed work processes and work practices, which means that potentially we cannot very easily disseminate that information outside of the facilities that it was created in.[110]

4.48 NSW Health reported that fewer hospitals in rural and regional areas were capable of transmitting scans and X-Rays and teleconferencing for diagnosis than in metropolitan areas. The Committee notes, however, that this technology is still in its early stages as only 32 per cent or 72 out of 222 hospitals across the whole State have this capacity.[111]

What is Needed

4.49 Infrastructure Australia has described the comparative lack of availability of communications technologies in remote and regional areas as a failure to keep up with new developments available in the cities rather than as a decline in service.[112]

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[107] Submission 1.35 p.30

[108] Submission 2.15, p.2

[109] Transcript of Hearing 1 August 2008, p.11

[110] Transcript of Hearing 23 June 2008, p.32

[111] Correspondence from Mr Craig Smith Deputy Chief Information Officer NSW Health, 4 July 2008

[112] Infrastructure Australia 2008 *A Report to the Council of Australian Governments,* p.60

The Committee supports this view and notes that not upgrading services now could have serious long-term economic effects.

4.50 The Committee tried to determine what is needed to deliver the benefits from broadband services to regional and rural communities both now and into the future.

4.51 It heard from Mr Alan Brown Chair of the Rural Affairs Committee of the NSW Farmers' Association who told the Committee that existing satellite services were just not adequate any more:

> The high-speed broadband Internet has become a critical service to business and consumer alike, with many businesses now finding their broadband Internet connection to be more important than a basic phone service. Even the way I do business, we use the Internet all the time. I am on two-way satellite, and when you see what other people can do and what I have to do, you can still set the thing going to pick up an Internet site, go away and get a cup of tea and when you come back it is not there. It is just not acceptable any more. You see the way the businesses that supply me work. They work extensively off the Internet. You need high-speed broadband for a whole lot of reasons more than I am saying now. When you provide a service like this people find ways to utilise it even better.[113]

4.52 Ms Lynda Summers of the Regional Communities Consultative Council provided the Committee with a list of current needs:

> The RCCC considers that digital telecommunications requires infrastructure to be of a standard that is capable of supporting digital, voice and video applications for telehealth, telemedicine and telepsychiatry have all demonstrated the potential to deliver enormous service improvements as well as addressing the acute skill shortages that exist in those sectors. The standards for telecommunications and broadband services should be consistent with industry best practice and preferably global best practice and capable of supporting scalable data speed with capacity to support committed bit rate services, which is a quality of service requirement, such as voice over internet protocol, video conferencing, video streaming on ratios on a symmetrical service that allows seamless connectivity between parties. That means both ends need to have the same size pipe so you do not get the jitter that often occurs as people in the country with slower speeds try and connect with people in the city.[114]

4.53 The Committee considers that Ms Summers has provided a comprehensive list but that this is unlikely to meet all future needs. The communications sector is growing rapidly. As Telstra noted, between 2001 and 2006 the amount of data carried on Telstra's networks had grown 40 times over from 200 terabytes (2,000 gigabytes) to 8,000 terabytes per month. By November 2007, the volume had increased to 18,000 terabytes.[115]

4.54 The Committee agrees with the comment of Dr Paul Clark of Southern Cross University that although the proposed National Broadband Network is to offer broadband services at 12 Mbps, this is unlikely to be adequate in the future owing to increased demands for bandwidth from new applications such as virtualisation of software. He considered that the higher bandwidths offered by fibre will be needed in the future.[116]

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[113] Transcript of Hearing 23 June 2008, p.2

[114] *ibid.*, p.36

[115] Submission 2.24, p.9

[116] Submission 2.15, p4

4.55 The New South Wales Department of State and Regional Development noted that the communications needs of rural and regional communities are constantly growing with demands for high bandwidth activities likely to grow in the future. Meeting these needs will require service providers to make ongoing investment in equipment and networks. With such investments the submission suggested rural and regional communities could realise the benefits of the technology:

> More importantly, the availability of adequate broadband services will enable regional and rural communities to transition from being just consumers to becoming "prosumers", that is producers and consumers. This will support their continuing contribution to national welfare as well as raise regional living standards.[117]

4.56 The Department stressed that it was not possible to define a minimum standard for "adequate" broadband services because this would change over time and it was more appropriate to relate these services levels to those available in metropolitan areas.[118] The Committee supports this view and considers that any consideration of the communications needs of rural and regional communities needs to be on the basis of a comparison to those available in metropolitan areas.

Conclusion

4.57 This Chapter has shown that there are social and economic benefits to improving the level of access to broadband services in rural and regional communities.

4.58 The Committee considers that on the grounds of equity the Government should help these people receive services as close to parity with services available in cities as possible.

[117] Submission 1.35, p.9

[118] *ibid.*, p.17

Chapter Five - Infrastructure Issues

5.1 As discussed in Chapter Three, access to telecommunications and broadband services in rural and regional areas of New South Wales is uneven. This Chapter examines the particular concerns raised throughout this inquiry about the standard of infrastructure firstly in relation to mobile phones coverage and secondly in relation to broadband access. It then identifies the barriers and disincentives to making improvements.

Mobile Phone Coverage

5.2 The Committee notes that mobile phone services through terrestrial networks are not available in all parts of the New South Wales. In some areas antennas need to be used to boost mobile signals or satellite phones must be used.

5.3 In 2008, ACMA published the results of a survey of 2,000 farmers across the major agricultural areas in regional Australia. Although 52 per cent of them considered that they needed to be contactable at all times for work, 47 per cent of them reported that their job often takes them outside of phone network range.[119]

5.4 Submissions to the inquiry made during the transition from the CDMA to the Next G network noted that there were differences in coverage between the two networks and that Next G did not work in some areas where CDMA did.[120] The Committee acknowledges the evidence of Telstra that the Next G network covers two million square kilometres compared to the 1.3 million of the CDMA network[121] but notes that the differences in coverage could be a source of concern for those relying on phone services.

5.5 Ms Lynda Summers of the Regional Communities Consultative Council noted anecdotal evidence that there was some frustration about the closure of the CDMA network in some places but people in other places thought it was fine. She also made the point that while the new network had data capacity, it was considered too expensive to use extensively.[122]

5.6 Councillor Ian Tiley of Clarence Valley Council told the Committee that the early model handsets available for the new network were not very effective. In fact he nearly threw his first phone “up a gully” but his current phone was certainly much better. He considered the transition period had been quite difficult.[123]

5.7 The Committee asked Mr Brett Riley, Executive Director Telstra CountryWide about the transition process two months after the CDMA network was turned off. He indicated the reaction was a lot more positive than had been expected:

> Since the switch-off date I would describe the aftermath as a deathly silence. I had all my staff ready to go and attend to customer issues the next day. Really we did not hear a peep. I think that is because a lot of the work was done and the extension allowed a lot of people to sort out their issues. I am not aware of a single case right now. I am

[119] ACMA 2008 *Telecommunications Today Report 3: Farming Sector Attitudes to Take up and Use* p.8
[120] eg Submission 2.10, p.6, transcript of hearing 23 June 2008 p. 4
[121] Transcript of Hearing 23 June 2008, p.41
[122] *ibid.*, p.40
[123] Transcript of Hearing 1 August 2008, p.4

> sure someone will say, "What about so-and-so" but there is not one on our books that says we have a problem in a certain area. We had our coverage equivalence declared by a Federal Government independent committee. We have basically cleared up all the issues we have been going through in Telstra CountryWide. So, we are not aware of any network equivalence issues at all. Really it has gone very quietly since we turned off the CDMA.[124]

5.8 The Committee accepts that the issues about the transition appear to have been resolved.

5.9 In many parts of regional and rural New South Wales there is only one mobile phone carrier available. This means that residents have no choice about which network to use. The Committee notes that the Regional Telecommunications Independent Review Committee recommended that there be mandatory roaming by other carriers in areas where only one carrier is available. This issue is considered further in Chapter Seven

Existing Infrastructure is inadequate for Broadband

5.10 The Committee heard that the existing infrastructure is not adequate for delivering broadband services to all rural and regional communities. The Committee notes that major infrastructure investment will commence in the next few years as a result of the National Broadband Network but, until the delivery of this project is determined, there is uncertainty about when and if particular rural and regional communities will benefit from the network.

5.11 As mentioned in Chapter Three, regional development boards attributed the relatively low levels of use to a lack of cost-effective services caused by a lack of investment in infrastructure by telecommunications companies and a lack of retail competition.[125] Infrastructure Australia reported to the Council of Australian Government that:

> Much of the infrastructure in remote areas and communities is at capacity or is outmoded technology. Extending telecommunications infrastructure beyond the existing Telstra network to small, remotely located communities is prohibitively expensive. High capital costs impede investment by Telstra and other private players, especially where the return on investment may not be clearly defined.
>
> However, without new telecommunications infrastructure, communities and businesses will not have access to the same coverage and level of performance that is available in other areas of the country.[126]

5.12 The Department of State and Regional Development noted that regional communities remain concerned about the adequacy of their broadband services despite improvements in recent years. As ADSL technology does not work beyond a certain distance from an exchange, many consumers in rural and regional areas with low population densities miss out. The Department also reported that while wireless broadband has been used for “last mile” service delivery, businesses did not consider that this was of the required standard.[127]

5.13 Griffith City Council noted that many of Griffith’s major businesses such as wineries and large scale poultry producers, were located outside of the town. They could not

[124] Transcript of Hearing 23 June 2008, p.42

[125] Submission 1.35, p.17

[126] Infrastructure Australia 2008 *A Report to the Council of Australian Governments* p.61

[127] Submission 1.35 p.18

obtain high speed broadband services and some of them were travelling to town to download files rather than taking up to 20 minutes to use a dial up connection.[128]

5.14 Moreover, the Department of Commerce noted that the existing copper network had deteriorated over time and in some places was not able to support basic DSL services.[129] The Griffith City Council submission noted that the ageing and failing copper network was causing unnecessary disruptions to services and has contributed to problems for many local businesses in obtaining broadband access.[130] The Central Regional Organisation of Councils cited the view of an ISP in Mudgee that the line quality installed as recently as five years ago was of inadequate quality to support ADSL.[131]

5.15 Mr Alfredo Bonanno noted that in his area of Billen Cliffs in northern New South Wales, the surrounding localities have high quality telecommunications, television and broadband access but his immediate neighbourhood had missed out. The local exchange is outdated and they experience numerous phone drop outs in the area. At the time of the submission, ADSL had been installed but was not operating. In any case, his residence was too far from the exchange for ADSL to work.[132] In August 2008, Councillor Ian Tiley Mayor of the Clarence Valley stated that ADSL had recently been rolled out in significant parts of the local government area, so that only three rather than 16 villages did not have access. He also noted that of the 16 villages that did not have broadband access in 2005, only three did not have it at the time of the hearing and that he had been advised that Telstra considered that 50 customers in a particular areas was a minimum for installing the service. He considered there was an urgent need for faster speeds only available through ADSL2+.[133]

5.16 Councillor Tiley told the Committee about the challenges of establishing effective communications between all council operations in a widely dispersed local government area that covered 43 towns and villages in 10,500 square kilometres of often extremely hilly terrain. For some council operations there is no access to ADSL2+ and five council sites operate on Next G because there is no other option but this was not ideal given the significantly higher costs.[134]

Longline ADSL

5.17 The Committee's discussion paper noted that two submissions had raised the issue of "longline ADSL", a technology trialled by Telstra from 2005 which was hoped to enable the extension of ADSL availability up to 20 kilometres from the nearest exchange.[135]

5.18 A submission from Telstra noted that that the trial did not find this technology economically viable but that it would be superseded by the National Broadband

[128] Submission 2.21, p.2
[129] Submission 1.30 p.6
[130] Submission 2.21 p.2
[131] Submission 2.10, p.6
[132] Submission 2.4, p.1
[133] Transcript of Hearing 1 August 2008, p.2, p.5
[134] *ibid.*, p.2
[135] Submissions 1.21 and 1.2

Network.[136] In evidence to the Committee Mr Brett Riley provided further details of why it was not feasible to adopt this as a wider solution:

> ADSL extenders are technology you can put on to promote the strength of a signal. However, to deploy that you need a separate copper pair. I am not fully conversant with the technology, but the limiting factor in most rural exchanges is availability of spare copper pairs. If you think about all of the copper that runs out of an exchange, most of it is occupied by users at the other end. So, the economics fall down pretty rapidly. We have run a trial and found it to be extremely uneconomic to deploy. Especially when you compare it to other means of deploying broadband, like wireless, which is both faster and more economic to deploy.[137]

5.19 The Committee accepts this explanation of why longline ADSL was not implemented.

Capacity of Satellite service

5.20 The Committee notes that the two-way satellite services, the only choice of technology in some parts of the state, do not enable comparable data services to other delivery mechanisms and are significantly dearer.

5.21 The New South Wales Farmers' Association told the Committee that while the satellite services provided under the Broadband Guarantee had made a significant contribution to improving services they could not provide a solution for the whole of regional Australia. Over time the gap between service quality in metropolitan areas and that available from satellite services would grow. The Association was concerned that demand for satellite services would grow as a result of not investing in broadband infrastructure.[138]

5.22 YLESS4U, a regional ISP, noted that upload speeds for satellite services were significantly poorer than download speeds and there is a growing need for more symmetrical services in rural areas.[139]

National Broadband Network

5.23 The Committee heard concerns about the timing of promised improvements to services. The NSW Farmers' Association was concerned that the National Broadband Network appeared to be focused on cities and might take until 2013 to reach many regional centres.[140] The NSW Farmers' Association expressed concern at the cancellation of the OPEL contract in 2008 by the Federal Government and its replacement with the proposed National Broadband Network, arguing that the new network will cover only 98 per cent of the population compared to 99 per cent under the OPEL system. The Association considered that the one missing per cent is likely to include a significant number of primary producers.[141]

Case studies

5.24 The Department of State and Regional Development provided a case study of how a lack of infrastructure had impeded business activities. In 2004, ADSL services were enabled in Uralla in the New England Region. IT firms were attracted to the area

[136] Submission 2.24, p.7
[137] Transcript of Hearing 23 June 2008, p.44
[138] Submission 2.22, p.3
[139] Submission 2.25, p.5
[140] Submission 2.22, p.4
[141] *ibid.*, p. 2

including the Data Mill which provides customised IT programming and training services to businesses both within Australia and overseas. Unfortunately, once the company had moved there it was discovered the exchange was at maximum capacity. For the six months it took for the exchange to be expanded, the Data Mill operated from the local Community Technology Centre and travelled to Sydney for bigger projects.[142]

5.25 The Department also provided the example of how poor communications infrastructure hampered the operations of Outback Beds, a network of farmstays and accommodation providers across western New South Wales and Queensland. Some of the members use older satellite broadband services with one member reporting that the service is only available at 30 to 40 per cent of the advertised speed for the service and there was no assistance available to upgrade the infrastructure. This meant members could not communicate by voice over the internet (VOIP) or video conference. Many members did not have mobile phone coverage and would lose bookings if no-one was available to answer the landline as was common when working on a farm.[143]

5.26 The Committee received a submission from Tim's Computer Service, a small computer business with stores in Gundagai and Tumut. The stores are linked by an ADSL connection at speeds of 8000kb/384kb but the uploading speed is completely inadequate for running a network between the stores. Instead data is transferred between the stores on CD by car. This takes an hour and twenty minutes for a round trip and is not an efficient way of running a business. With a better connection the company could avoid running separate accounting packages for the two stores.[144]

5.27 A submission from Mr Geoff Rose from April 2008 who was developing a 238 lot residential subdivision in Ballina noted his disappointment in not being able to guarantee availability of high speed broadband services for the development from either Telstra or Vodafone. Telstra had advised that some of the development could use ADSL on copper wires but the Ballina exchange was not scheduled for upgrading at that stage.[145]

5.28 Mr Alfredo Bonanno has been campaigning for terrestrial broadband access in his village of Billen Cliffs for five years. It is difficult terrain with a small population but he has disappointed by the lack of infrastructure spending in his area.[146]

5.29 Mr Jean-Pierre Joly told the Committee about the difficulty he faced in running a pool construction business from his home in a caravan. In order to communicate with clients he needed access to broadband and he was informed that the service was available before he moved to the park. On arrival he found that he could not receive broadband because the cable had been split so that it was already at maximum capacity and it would need to be upgraded to provide additional services. His neighbours had access but he did not.[147]

[142] Submission 1.35 p.27
[143] *ibid.*, p.29
[144] Submission 2.19, p.5
[145] Submission 2.7, p.1
[146] Transcript of hearing 1 August 2008, pp.16-19
[147] Submission 2.13, p.1, Transcript of Hearing 1 August 2008, pp. 22-25

Barriers and Impediments to improvements

Lack of regional competition

5.30 Submissions pointed to a lack of effective competition between service providers in rural and regional areas because of the difficulty in attracting companies to deliver services. There is a *de facto* monopoly in parts of the State which reduces consumer choice, arguably increases the prices paid and limits incentives to provide improved services.

5.31 In contrast, in metropolitan areas there is a high level of facilities-based competition in mobile phone services and in ADSL services where companies are able to install equipment in an exchange alongside that belonging the network owner.[148] This does not happen in regional and rural areas for commercial reasons including the relatively smaller number of customers and the higher wholesale price of access to rural and regional exchanges.

5.32 Mr Alfredo Bonanno stated in a submission to the Committee that while there were numerous wireless broadband service providers in his region and many had been approached by local residents of Billen Cliffs, none of these service providers had found it feasible to deliver broadband.[149]

5.33 Mr Peter Godden considered that the lack of competition for broadband services in the Nimbin area meant that the cost was too high.[150] Mr Gordon Shannon argued that neither Telstra or other companies were interested in providing services outside areas with large populations.[151]

5.34 Ms Lynda Summers of the Regional Communities Consultative Committee reported on a survey of businesses of her local community of Table Top in the Murray region of New South Wales that there was a high level of frustration that what customers wanted did not fit the options the carriers wanted to provide. A couple of dozen of them had established their own microwave links to establish connectivity. The Committee learnt on its visit to Griffith that some large local businesses had made arrangements to install fibre to their premises themselves.[152]

Lack of available regional spectrum

5.35 Wireless broadband services depend on access to radiocommunications spectrum. A barrier to new carriers in regional areas can be that the licences for the appropriate bands are owned by other parties who have chosen not to use them themselves. Ms Lynda Summers of the Regional Communities Consultative Council explained this was the result of the allocation of spectrum licences on a national basis even though licence holders chose to deploy infrastructure only in more commercially viable areas. She argued that radiofrequency spectrum should be made available to regional communities when it was not being used by major carriers:

> We need to recognise the economic and productivity value and public value of spectrum and agree on appropriate allocation of globally compliant spectrum bands for

[148] ACMA and ACCC *Communications Infrastructure and Services Availability in Australia 2008*, p.1, pp.3-4

[149] Submission 2.4, p.2

[150] Submission 2.5, p.1

[151] Submission 2.6, p.1

[152] Transcript of Hearing 23 June 2008, p.39; information from meeting with local businesses Griffith February 2009.

> mobile and wireless broadband data on a regional basis for the benefit of regional communities.[153]

5.36 The Committee notes that the allocation of radiofrequency spectrum is a matter for the Federal Government but will consider options to address this concern in Chapter Seven.

Access to Crown land

5.37 The Committee heard from YLESS4U, a small rural telecommunications carrier and wireless Internet Service Provider, that one problem it faced in delivering services was gaining access to Crown land for installing equipment. The Crown often owns the highest points available, such as disused trigonometry stations. There are annual fees for using such sites and these do not distinguish between the size of companies and the level of resources available to them.

5.38 The company argues it provides significant community benefits services including free services to community groups and associations. The company currently finds it more cost-effective although less efficient to negotiate agreements with private landholders for the use of their land. This is not ideal and it recommended that consideration be given to reducing fees on a case by case basis in areas of low population density.[154]

Lack of incentives

5.39 A submission from Telstra considered that rural and regional communities would benefit more from incentives to carriers to extend their networks to areas that are not commercially viable than from additional regulation.[155]

5.40 The Committee notes that incentives do not always work unless a commercial case can be made. For instance, under the Mobile Connect Program, the Federal Government offered $8 million in 2008 for extending terrestrial mobile phone coverage to priority locations that do not currently have coverage and for which there are no current plans to provide coverage. No carriers applied for funding under the program. The Department of Broadband, Communications and the Digital Economy considered that this showed that carriers were at the limits of their interest in extending networks, especially in areas without accessible backhaul infrastructure.[156]

5.41 YLESS4U also noted that there are no specific grants to provide innovation in telecommunications at either Federal or State level for rural or remote services. YLESS4U argued eloquently for some form of government assistance for smaller companies, stating that there were now many smaller telecommunications companies with a genuine interest in particular rural and regional areas:

> These providers garner strong support from the communities they enable…. More flexibility is required to assist these innovative, niche companies, who provide solutions under some of the most challenging conditions, including vast operating areas and low but important populations. These companies close the gap between the regional areas

[153] Transcript of Hearing 23 June 2008, p.37

[154] Submission 2.25, pp.3-4

[155] Submission 2.24 p.7

[156] DBCDE [http://www.dbcde.gov.au/communications_for_business/funding_programs__and__support/mobile_connect] 19 January 2009

of more interest to the larger providers, and the small communities that exist outside those areas. [157]

Conclusion

5.42 It is clear that the telecommunications infrastructure in rural and regional communities in New South Wales does not support universal mobile phone and broadband coverage.

5.43 The Committee acknowledges that much communications infrastructure is owned and operated by private sector carriers and decisions about upgrading it are based on commercial imperative but notes that in some cases, it is reasonable for the government to intervene. It is unlikely that current Federal Government programs will address the gaps in services in the immediate future and it is uncertain when the National Broadband Network will reach New South Wales rural and regional communities. Possible solutions to these issues are addressed in Chapter Seven.

[157] Submission 2.25, p.5

Chapter Six - Consumer Issues

6.1 This Chapter provides an overview of the issues raised by stakeholders as consumers of telecommunications and broadband services. These include knowledge gaps about the availability and cost of services, problems with the continuity of particular services and a lack of knowledge about the possible benefits of services.

6.2 It does not consider the most commonly raised issues about lack of services and higher costs in regional areas as these are a consequence of infrastructure shortages and lack of competition in regional areas and have been discussed in previous chapters.

Lack of information about Services and Costs

6.3 The Department of State and Regional Development noted that a survey of regional development boards found that in areas where there were a number of service providers, it was difficult for businesses and householders to obtain independent advice about the benefits of particular broadband delivery options or which option would best address their needs.[158]

6.4 Moreover, respondents suggested that information provided by service providers about access in a particular region was misleading or did not accord with their own experience. For example, information on broadband coverage is shown on an aggregated regional basis which does not reveal areas within regions without access for topographical or other reasons. As mentioned above, Mr Jean-Pierre Joly reportedly was misled about the availability of broadband services in a caravan park in Lismore before he moved there.[159]

6.5 Mr Alfredo Bonanno was particularly concerned that there was no information about the timing of availability of upgrades to install ADSL in particular exchanges on the Telstra website at the time of writing his submission.[160]

6.6 The NSW Farmers' Association emphasised the importance of timely accurate information to their members noting that there was a real gap in the information available to them. For instance Ms Brianna Casey Senior Policy Officer with the Association told the Committee:

> We did a Next G survey of members in January this year just to get a feel from the grassroots of what was happening with CDMA, what was happening Next G and how members are reacting. It is fair to say that we were overwhelmed by the response that we got. In a five-day period to get more than 1,000 [responses] in January from farmers was extraordinary. That said that farmers were not only aware of the issue but were unbelievably interested in it. So, for us, it has been members giving input to us but also us giving feedback to them. So any major developments we hear about in the world of telecommunications we feed straight back to members through our internal newsletters, networks et cetera because we are finding that they do not always receive that information on a commercial basis.[161]

[158] Submission 1.35, p.17

[159] *ibid.*, p.19, Submission 2.13

[160] Submission 2.4, p.2

[161] Transcript of Hearing 23 June 2008, p. 7

Customer Support

6.7 Submissions and witnesses were also concerned about the standards of customer service in rural and regional areas. Mr Richard Widows, Policy Officer, Rural Affairs for the NSW Farmers' Association noted that members seemed to find it difficult to find the appropriate information:

> I think they tend to get frustrated as well. There is a level of frustration with people not knowing where to go. They might call Telstra to report a problem but if you call the Telstra hotline it can take half an hour to get onto an actual person. So having the right numbers is our job. We make sure that we try to inform our members about where to go. But I do not think, on the broader scale, that is necessarily very clear to people. They tend not to know what to do to improve their situation with telecommunications. It is a bit beyond them, so they neglect it.[162]

6.8 Mr Kevin Farrell told the Committee about the difficulties he faced in obtaining satisfactory service when setting up a wireless broadband service at considerable time and expense. Another submission alleged that Telstra provided misleading advice to a third party that broadband was not available at a particular address but was able to offer the service itself.[163]

6.9 The Committee acknowledges that in a business the size of Telstra mistakes can happen and trusts that the customer complaint mechanisms under the Federal regulatory regime are effective.

6.10 Ms Lynne de Weaver of the Northern Rivers Regional Development Board noted that senior citizens in particular found it difficult to find reliable information about the best services and ended up defeated by the process. Cheaper services might have lower levels of customer support and dealing with offshore call centres was difficult for many people.[164]

6.11 The Central NSW Regional Organisation of Councils considered that there was a reduction in the level of technical support staff in regional areas. This led to delays in repairing equipment that could not be fixed remotely. While acknowledging there were regional retail shops, the submission considered that these shops were focussed on making sales rather than dealing with billing or other inquiries about service quality.[165]

Service Quality

6.12 The Department of State and Regional Development noted that respondents to a survey of regional development boards were concerned that promised maximum speeds of broadband were rarely available.[166] The Committee notes that this issue is not confined to rural and regional areas.

[162] Transcript of Hearing 23 June 2008, p. 7
[163] Submission 2.3
[164] Transcript of Hearing 1 August 2008, p.9
[165] Submission 1.18, p.15
[166] Submission 1.35 p.19

Support Costs

6.13 The Northern Rivers Regional Development Board also pointed out that businesses in the area usually rely on communications suppliers from outside their region and pay higher costs than urban businesses for equivalent services.[167]

Government Broadband Service

6.14 Government agencies in many regional centres are reliant on broadband services procured from Soul through the Government Broadband Service.

6.15 The Committee heard that Soul's network was subject to performance measures and there are regular reports monitored by the Department of Commerce.[168]

6.16 Given the importance of this service for the delivery of government programs in regional and rural communities, the Committee asked government officials about Soul's performance. While the Department Commerce advised that it could not advise about the overall performance of the scheme for commercial reasons, the Department of Health advised that it was highly satisfied with its performance.[169]

6.17 The Committee trusts that any customer service issues from the service will be addressed through the administration of the contract.

Continuity of Service

6.18 The Committee notes that a number of submissions were concerned about decisions by carriers to change the type of service available. This could lead to uncertainty about how to obtain alternative services and additional costs.

Closure of the CDMA network

6.19 When the Committee was first established, there was a great deal of public concern about Telstra's decision to close its CDMA network and the previous chapter discussed concerns about the coverage of the network. During the transition there was limited information about the types of handsets that would operate on the new network and Telstra eventually developed its "Blue Tick" program for certain handsets and trained staff in how to respond to customer concerns. The Committee was interested in learning how others perceived this transition from a consumer perspective. Mr Alan Brown, Chair of the Rural Affairs Committee for the NSW Farmers' Association commented in relation to the process:

> Generally, reasonably well. There are still some residual problems caused mainly by the quality of handsets that were out there. We still have problems getting some people to come in from the cold, essentially. They are generally people who had a reliable service but then, when they go into an unreliable area, they find out that their handset is not up to it. We have been working very closely with Telstra on this. After some time they actually grasped the nettle and did the job of getting those crook handsets out of the system. Generally speaking I would say that the level of calls that we are getting has fallen away quite dramatically.[170]

[167] Submission 2.14, p.2

[168] Transcript of Hearing 23 June 2008, p.23

[169] Correspondence to the Committee in response to questions on notice, Mr David Callahan Acting Director-General Department of Commerce 1 December 2008, Mr Craig Smith, Deputy Chief Information Officer, NSW Health 4 July 2008

[170] Transcript of Hearing 23 June 2008, p.3

6.20 Mr Brown noted that Telstra has been very responsive to coverage and consumer issues raised by the Association.[171]

Closure of the ISDN network

6.21 Many people in rural and regional communities gained internet access through the ISDN network (that allowed internet access at speeds of up to 128 kbps). Telstra announced that it would not offer new services for home-based customers from November 2007 and closed existing services from the end of December 2008 although business use of ISDN apparently continues.[172] Mr Brett Riley, Executive Director of Telstra CountryWide told the Committee that:

> ISDN is an outdated platform. The world really is moving away from it. We are in the process of migrating our customers over to better products. We found a lot of ISDN customers who actually now can get ADSL. They probably could not get ADSL when they went on to ISDN, but now they can. We are now serving 99 per cent of the population with Next G. So, the old ISDN at 128 kilobytes really is a service that is not meeting the needs of most of our customers.[173]

6.22 The NSW Farmers' Association expressed concern that Telstra's plans would reduce the options for service delivery for many people in regional New South Wales to the Next G network, dial up internet or satellite network which all had significant disadvantages of cost or speed. The Association considered that this was a step backwards.[174]

6.23 The Association has provided information to its members about how to make an informed decision about changing services and surveyed members towards the end of 2008 about whether they had changed over and whether they were satisfied with their current levels of service.[175]

6.24 The Committee acknowledges that the newer technologies would provide better services but is interested in ensuring that Telstra communicates its plans to customers appropriately rather than relying on industry associations.

Lack of knowledge about possibilities of broadband

6.25 The Committee heard that in the past there was a real lack of understanding of the possibilities available from broadband. The Northern Rivers Regional Development Board submission noted that the delivery of communications through various funding programs over the past decade varied significantly from community to community within New South Wales because of differences in what were identified as local needs in the consultation processes at the time of establishing the programs. It had been difficult to conduct a state-wide consultation process with information of relevance to all communities when there was a low level of awareness of the benefits of the technology.[176]

6.26 The level of knowledge of the possibilities of broadband has evolved over time as it has become commonplace in the workplace but there are likely to be groups in the

[171] Transcript of Hearing 23 June 2008, p.5
[172] RTIRC *op. cit.* p.156
[173] Transcript of Hearing 23 June 2008, p.43
[174] Submission 2.22, pp.2-3
[175] NSW Farmers' Association [http://www.nswfarmers.org.au/surveys/isdn_internet_survey]
[176] Submission 2.14, p.2

community that do not appreciate what broadband is for. As explained by Ms Lynne de Weaver of the Northern Rivers Regional Development Board:

> People do not know what they do not know, and the minute they find out that broadband can open the world to them they are very interested.[177]

6.27 Ms de Weaver advocated the importance of the Community Technology Centres in demonstrating the potential benefits of broadband to the community. She argued that there was an ongoing need for training and support for people who were not familiar with how to use computers in order to perform such tasks as finding information about government services or doing their banking.[178]

6.28 Although the level of knowledge about broadband is increasing over time, some sectors of the community are still without access to computers at home and sufficient knowledge to use the internet with confidence. The Committee acknowledges the role Community Technology Centres play in helping these people.

Conclusion

6.29 People in rural and regional communities have raised significant issues as consumers of broadband services. Many of these such as complaints about telecommunications companies' customer service performance are matters for Federal regulation. Others can be addressed by improved communications. Possible solutions to these will be considered in Chapter Seven.

[177] Transcript of Hearing 1 August 2008, p.7

[178] *ibid.*, pp.8-9

Chapter Seven - Solutions

7.1 This Chapter canvasses options for addressing the problems raised in previous chapters about telecommunications and broadband services in rural and regional communities.

7.2 It considers ways of improving communication and coordination between all levels of government and communication carriers. It then addresses how to remove barriers and disincentives for extension of infrastructure in regional areas as well as encouraging competition between carriers. Finally, it considers how to improve community knowledge about broadband services and ways to provide access where it is otherwise unavailable or unaffordable.

Improving Communication and Coordination

7.3 The Committee notes that many participants in this inquiry raised the need for improved cooperation and coordination between all levels of government and the community in delivering broadband services in rural and regional communities.

7.4 In the first round of submissions to this inquiry, Dr Rodney Gray of Rolyngra Telecommunications suggested that there should be an Office of Rural and Regional Telecommunications to develop ICT infrastructure, services and applications at all levels and develop partnerships with the community.[179] In the second round of submissions, Mr Peter Hitchener suggested that such an agency could be the source of expertise to encourage rural and regional communities to develop municipal wireless networks of their own in the absence of other service providers. [180] Dr Paul Clark of Southern Cross University suggested a coordinated approach that could leverage all the opportunities at Federal, State and Local level would be the best way of achieving timely improvements to infrastructure and services.[181]

7.5 The Committee notes that there are already institutional structures in place for communication and coordination but these are in different agencies rather than centralised. The Minister for Commerce currently represents the State on the Online and Communications Ministerial Council. There is also an inter-agency New South Wales Broadband Advisory Panel which was established to identify opportunities for the State in relation to the development of the National Broadband Network. Its members include the Government Chief Information Office, Department of State and Regional Development, NSW Health, Department of Education, NSW Treasury, Department of Premier and Cabinet, Department of Planning, Blayney Shire Council, National Information and Communications Technology Australia and Argo Pacific.[182]

7.6 The Committee is also aware that the Department of State and Regional Development has established an “Innovations Unit” to use the tools of government to enhance innovation in industries in the areas of finance, high-value manufacturing, coal, the creative industries and transport and logistics. This unit does not have a specific rural and regional focus.[183] The Committee also notes that the Department of

[179] Submission 1.32, pp.1-2
[180] Submission 2.20, p.1
[181] Submission 2.15, p.2
[182] Correspondence from Mr David Callahan, Acting Director-General NSW Department of Commerce, 1 December 2008
[183] Transcript of Hearing 23 June 2008, p.21

State and Regional Development is currently advising rural and regional communities on how to establish business cases and apply for funding under the Community Broadband Development Program.

7.7 The Committee considers there is an ongoing need for the State to work with the Federal Government on ensuring that the State advocates for its needs in a national forum in many different technological issues relating to various portfolios. For instance, the Committee heard from NSW Health that it is undertaking a trial of electronic patient records and is hoping to collaborate with Federal Government programs for the National E-Health Transition Authority.[184]

7.8 There may be a role for a central unit to support the coordination of information and policies to different levels of government. Dr Rolyngra suggested that such a unit be located within a central agency such as the Department of Premier and Cabinet.[185] There may be merit in this suggestion or it could be co-located where the expertise on ITC issues is in Chief Information Office or in State and Regional Development which holds much of the policy knowledge about business and rural and regional concerns.

Encouraging Local Entrepreneurship

7.9 One of the key roles of such a unit could be to provide central advice to rural and regional communities on how to attract funding or services to their areas. The Committee notes that there have been several recent examples of rural and regional communities acting to help themselves, either with the assistance of funding from Federal or State programs or by networking with other communities or local businesses.

7.10 The Committee is aware that the community of Yetman in northern New South Wales mobilised support for a new mobile phone tower where it would not have been commercially viable. Government agencies provided some funding and this persuaded Telstra to build a mobile phone tower that could be shared with government agencies in the area.[186]

7.11 On its visit of inspection to Griffith, the Committee learnt about the Riverina First project that generated funding for local infrastructure improvement projects that would not have happened any other way. In 2003, the Riverina Regional Development Board established Riverina First as a telecommunications carrier as a way of improving telecommunications and community services within the Riverina. Local participants using phone services triggered a small payment. Most of these funds went to an infrastructure development fund for projects which otherwise would not have been developed. Mr Alex Portnoy provided the example of the Ballarat Community Enterprise, a community-owned telecommunications company and suggested this model could be used in New South Wales.[187]

7.12 A thoughtful submission from Wagga Wagga City Council proposed that regional inland cities collaborate to attracting internet service providers to their area. Such cooperation could make infrastructure provision commercially viable for companies.

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[184] *ibid.*, p.33

[185] Submission No. 1.32, p.3

[186] "Sol Oh Mio: Town Answers call without Telstra" *Sydney Morning Herald* 16 February 2008, Submission 1.26, p.3

[187] Submission No. 1.3, p.1

The Council suggested that such a network could also be extended to smaller neighbouring communities with the assistance of government grants. These grants would fill in the gaps in service delivery as a strategic and coordinated approach.[188] The Northern Inland Regional Development Board raised a similar proposal and suggested that regional development boards could coordinate such alliances as, historically, neighbouring communities had often competed for scarce services.[189]

7.13 The Committee congratulates local councils and regional development boards for taking such initiatives. It encourages eligible communities to work with the State Government in seeking funding from the Community Broadband Development Fund which is designed to assist communities not likely to be covered by the National Broadband Network to obtain wireless broadband services.

7.14 Ms Brianna Casey of the NSW Farmers' Association considered that one of the most helpful things the State Government could do in relation to supporting improvements in rural and regional communities was publicising knowledge of what was possible, for instance writing up case studies such as the Yetman example and suggesting tools for enhancing local communications.[190] The Committee notes that motivated communities will learn from positive examples and supports Ms Casey's suggestion.

RECOMMENDATION 1: The Government should continue to take leadership in improving knowledge within rural and regional communities of the best ways to enhance broadband services by conducting community engagement activities such as publicising the results of successful case studies in rural and regional areas.

RECOMMENDATION 2: The Government should consider establishing a separate centre of expertise in either the Department of State and Regional Development or Commerce for developing local entrepreneurship in broadband and other communications services and to improve liaison between all levels of government and telecommunication service providers.

Improving infrastructure

7.15 Fundamentally, rural and regional communities need new and improved infrastructure in order to receive telecommunications services of a quality approaching that available in metropolitan areas.

National Broadband Network

7.16 The Committee notes that the major way of improving infrastructure will be the National Broadband Network

7.17 A number of submissions raised concerns about the timing of the delivery of the Network and the risk that rural and regional areas would not have a high priority. Although the delivery of the network is a matter of negotiation between the Commonwealth and the contracted providers, the Committee suggests that the State

[188] Submission No. 1.19, pp.5-6

[189] Submission No. 1.26, pp.4-5

[190] Transcript of Hearing 23 June 2008, p.8

Government could lobby for the network to start in areas which do not currently have access to broadband through existing terrestrial services.

RECOMMENDATION 3: The Government should work with the Federal Government to ensure the National Broadband Network roll-out gives a high priority to areas currently without terrestrial broadband services.

Need for a Strategic Telecommunications Infrastructure Plan

7.18 The Committee notes that there are still gaps in existing telecommunications infrastructure. In its report card on the adequacy of telecommunications infrastructure from late 2007, Engineers Australia noted that programs based on applications for funding from motivated communities and carriers expecting some sort of commercial return on investment would not necessarily deliver services in all the areas that really needed them.

7.19 For instance, as noted in Chapter Five, no carriers applied for the $8 million made available in 2008 under the Mobile Connect program for extending terrestrial mobile phone coverage to priority locations that do not currently have coverage.[191]

7.20 Engineers Australia argued that there should be a national strategic plan for telecommunications infrastructure development. This should be regularly reviewed and updated.[192]

7.21 The Committee notes that the Regional Telecommunications Independent Review Committee recommended strengthening of national planning of infrastructure provision in cooperation with all levels of government. The Federal Government's response to this group of recommendations was to refer them to the Online and Communication Council for consideration.[193]

7.22 The Committee considers that there is merit in extending this concept towards developing a robust strategic plan for telecommunications infrastructure. This is, however, a matter for the Commonwealth to consider. It would raise a number of competition policy issues and require significant cooperation from telecommunications carriers to share proprietary information.

RECOMMENDATION 4: Through appropriate intergovernmental channels, the Government should encourage the Federal Government to develop a national telecommunications infrastructure strategic plan.

Direct infrastructure investment

7.23 The Committee notes that direct funding of infrastructure by Government is appropriate in the case of market failure but it considers that such investments should be targeted to areas of highest need and designed to maximise public value.

7.24 A recent project on the Yorke Peninsula in South Australia showed that a relatively small investment in improving the communications infrastructure can deliver

[191] DBCDE [http://www.dbcde.gov.au/communications_for_business/funding_programs__and__support/mobile_connect] 19 January 2009

[192] Engineers Australia *Telecommunications Infrastructure Report Card* December 2007, p.ii

[193] RTIRC p.xvi, DBCDE *Regional Telecommunications Review Statement of Government Response*, p.10

significant economic benefits. In 2005, there were no broadband services available in the area. The South Australian and the Federal Government provided subsidies at a total cost of around $2.7 million to a company to deliver broadband to the community through a combination of fixed wireless access and ADSL. Importantly, the project included a high capacity microwave backhaul link. A large proportion of the community subscribed at no start up cost. Broadband services are now available from both this company and Telstra.

7.25 A recent analysis of the costs and benefits of the project conservatively estimated the benefits to local businesses of having broadband at $15 million over five years and around $6.4 million to households. The benefits to the State as a whole were estimated at around $25 million which is a significant return on the investment.[194]

7.26 The Committee received suggestions for similar investments from participants in this inquiry. For instance the Gosford City Council suggested the State Government should help where business models of service providers cannot make broadband viable by such means as identifying a customer base or underwriting a service until it becomes viable.[195]

7.27 The Committee notes that the New South Wales Government is currently planning to fund telecommunications infrastructure in areas where the National Broadband Network is unlikely to be rolled out through the $11.6 million Community Broadband Development Fund. The program will provide start up funding in the order of $45,000 to $100,000 for wireless broadband projects in communities of less than 5,000 people which do not already have access.[196]

7.28 The criteria for this model of funding are similar to those used in a successful trial of emerging broadband technology with the Murray Regional Development Board. This used an innovative business and community engagement process to plan for rural and regional telecommunications infrastructure owned on behalf of the community. Ms Lynda Summers of the Regional Communities Consultative Council suggested that financial modelling of this approach had shown this type of project could be self-sustaining but they would "have a foot forward" if they had assistance with start up costs or could leverage off public assets.[197] She told the Committee in a hearing:

> Around the world, communities are increasingly intervening in the deployment of broadband to redress market failure where traditional carriers fail to invest in Next Generation technology. As recently as 8 June 2008, UK analyses of models of public sector interventions throughout Europe and the USA recommended the experimentation of models for public sector interventions in collaboration with commercial stakeholders, government and regulators. This is a concept pioneered in New South Wales by the Murray Development Board's community engagement initiative, the lessons from which are now informing international innovation in the sector.
>
> Case studies of economic development in broadband models exist in communities as diverse as Tallinn in Estonia, Burlington in Vermont and Oklahoma City, Gainesville in Florida and Burlington in Ontario. With variety in chosen technology and business models to suit local environments and needs, a common feature is an all IP network of standards-based technology, which is open access. This enables innovation and competition to flourish at the retail level, resulting in applications to meet local need and

[194] S.Molloy et al 2008 *Creating New Markets: Broadband Adoption and Economic Benefits on the Yorke Peninsula*, Systems Knowledge Concepts Pty Ltd report for South Australian Government, p.8

[195] Submission 2.11, p.1

[196] Department of State and Regional Development *Community Broadband Development Fund Guidelines*

[197] Transcript of Hearing 23 June 2008, pp.36-38

> affordability of access, and leveraging industry and social policy agreements. The allocation of public finance for broadband infrastructure should be based on the ability to meet standards, but also to leverage the new investment for economic and social outcomes.[198]

7.29 Ms Lynda Summers emphasised that this approach needed to be tailored to particular communities:

> We firmly believe that no one size fits all, but models are emerging, such as not-for-profit models, or pseudo utility models. Local government might have a role in some of them. It really needs to be tailor-made to the regions to suit their needs, their demand, their topography, the assets that already exist, and the willingness or unwillingness of carriers that are there either to collaborate or not to collaborate. Regional planning is the way to go.[199]

7.30 The Committee notes that the relatively small amount of funding in the Community Broadband Development Fund could help up to 100 small towns and villages to have broadband access for the first time but the success of the approach relies on local communities knowing about the program and being motivated to apply. The Committee notes the extensive assistance provided by the Department of State and Regional Development in developing project proposals but considers this program will need ongoing publicity to be successful. Evaluation of projects could assist in making a case for further funding for similar projects in other communities if needed.

RECOMMENDATION 5: The Government should regularly evaluate the benefits of projects delivered by the Community Broadband Development Program and the results publicised in regional areas where communities may be eligible for the program.

Extending the Universal Services Obligation (USO)

7.31 The Committee's discussion paper of March 2008 noted in passing that Federal policies had contributed to a lack of broadband services in non-metropolitan areas by not including broadband services in the list of services provided by the USO. It now notes that the USO does not include mobile telephony. One way of ensuring improvements in telecommunications infrastructure might be to extend the USO to include both mobile telephony and broadband services.

7.32 In its submission in response to the discussion paper, Telstra argued that regulation had hampered additional investment in sectors covered by the USO which had become unwieldy over time. For instance, there were more than 50 separate requirements tied to the USO's definition of the Standard Telephone Service. The submission suggested that there were better technological solutions to delivering voice and data services to rural and regional communities at lower cost but the requirements of the Standard Telephone Service specifications hampered this. Telstra argued strenuously against extending regulation into other communication sectors and noted that, in the mobile phone sector, lack of regulation had led to the creation of competing advanced networks. The submission stated:

> Extension of regulation such as that applied to PSTN services today will halt expansion of advanced communications services. This type of regulation is incompatible with

[198] Transcript of Hearing 23 June 2008, pp.37-38

[199] *ibid.*, p. 40

> global standards and will lead to unacceptable and costly forms of technology modification. In addition, regulatory imposts will undermine investment certainty.[200]

7.33 The Committee notes that in its national inquiry into regional telecommunications, the Regional Telecommunications Independent Review Committee (RTIRC) considered the issue of the USO in far greater detail than this Committee has. Its report recommended that the USO be replaced with a new comprehensive framework to create assurance of the public's right to access to voice, mobile, broadband and payphone services. This new framework should be supported by robust and auditable "Communications Services Standards" (CSS). The RTIRC recommended that the Federal Government develop a plan to ensure individuals and small businesses could purchase these services on an equitable basis wherever they lived and worked.[201] This is an important recommendation about a fundamental change in communications policy. The Committee is extremely interested in how the Federal Government will respond to the idea of developing a national standard of service. Such a change of policy could lead to major improvements for people in rural and regional Australia.

7.34 The Committee notes that the Federal Government's response to the RTIRC report deferred consideration of this recommendation until after the outcome of the National Broadband Network procurement process is known.[202]

Streamlining access to Crown Land

7.35 As noted in Chapter Five, the Committee heard from a small regional Internet Service Provider YLESS4U that a major barrier to expanding services was trying to negotiate access to Crown land for the purpose of installing communications equipment at reasonable costs. Policies about access and the price charged of varied between agencies. This created uncertainty about the feasibility and costs when planning projects.

7.36 The Committee notes that a diverse range of agencies across the State own sites that might be suitable for installing communications towers including the Department of Lands, the National Parks and Wildlife Service and Forests New South Wales. It is a complicated task for a small communications company to negotiate with many different agencies with different policies about access. It considers that it would be beneficial if there could be a single point of contact for companies to arrange for use of State land and to consider cases of relief of fees on a case by case basis.

RECOMMENDATION 6: The Government should consider ways to reduce barriers for regional telecommunication companies to gaining access to Crown land held by various agencies (such as NSW Forests, National Parks and Wildlife Service and the Department of Lands) to install communications devices by introducing a central contact point within an appropriate agency such as the Department of Commerce to coordinate such requests and streamline terms of access taking into account the existing development controls relevant to those agencies.

[200] Submission 2.24, pp.6-7

[201] RTIRC *op. cit.*, p.268

[202] DBCDE *Regional Telecommunications Review Statement of Government Response*, p.19

Access to regional spectrum

7.37 A similar barrier exists with access to radiocommunications spectrum. The Regional Telecommunications Independent Review Committee (RTIRC) found that spectrum allocated for telecommunications services in regional areas is being underutilised.[203] This is because carriers may own a licence for particular frequency bands in both metropolitan and regional areas but choose to provide services in metropolitan areas only. Spectrum licences are essentially private property and, under current Federal policy, other companies are excluded from establishing services in bands covered by licences. As a consequence, regional communities may miss out on services unless carriers consider it makes commercial sense to establish them.

7.38 The Committee notes that the RTIRC recommended that the Federal Government conduct future allocations of spectrum licences to ensure that services are delivered in regional areas either by making such licences conditional on a "use it or lose it" provision or by establishing an access regime for radiocommunications spectrum similar to that which exists for other telecommunications infrastructure.[204]

7.39 The Federal Government's response to the RTIRC's report was unequivocal in rejecting this recommendation stating:

> The feasibility and potential implications of incorporating "use it or lose it" provisions in spectrum licences has already been considered in its broader application, and by further considering this issue specifically for regional applications the Government risks inconsistency in the approach for spectrum management at a national level.
>
> Similarly, the recommendation that a spectrum access regime be provided for in legislation is not accepted given the significant complexity this will impose on spectrum management, for questionable net benefit in terms of efficient use of spectrum.[205]

7.40 The Committee accepts this rejection of the general principle of regional allocation of spectrum but considers that there may be opportunities to assist the improvement of regional broadband services in a forthcoming allocation. The Australian Communications and Media Authority (ACMA) is currently planning the process of reallocating some spectrum in the 3.6 GHz frequency band which is suitable for local wireless broadband. The Regional Communities Consultative Council (RCCC) was particularly interested in ensuring that when this is allocated, that these would be affordable for regional communities planning on establishing non-profit local broadband services. The RCCC's preferred result would be for ACMA to allow access to the band without specific licensing under a "class" or "private park" licence.[206]

7.41 At is meeting on 4 December 2008, the Committee resolved to write to the Federal Minister to ask that a portion of the band was made available for non-profit or community uses. In reply, the Minister advised that this was a matter for ACMA which was considering the interests of all potential users, including community groups before making a decision about how the bands should be allocated at some stage in 2009.[207]

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[203] RTIRC *op.cit.,* p.238

[204] *ibid.,* p.239

[205] DBCDE *Regional Telecommunications Review Statement of Government Response*, p.17

[206] Transcript of Hearing 23 June 2008, p.39

[207] Correspondence from Committee Chair to Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy 16 December 2008, Response from Senator Conroy to Committee Chair 19 January 2009.

7.42 The Committee considers that access to radiofrequency spectrum in appropriate bands should be affordable for non-profit community enterprises and considers the State Government should promote this to the Federal Government through appropriate channels such as the Online and Communications Council.

RECOMMENDATION 7: Through appropriate intergovernmental channels, the Government should encourage the Federal Government to make radiofrequency spectrum suitable for wireless broadband applications affordable to non-profit and community enterprises in regional areas.

Increasing level of Cable

7.43 As noted above, although broadband services can be delivered through many media, the increasing hunger for higher speed services as technology develops means that there will be a growing demand for services through optical fibre. The Committee notes that the National Broadband Network is not required to deliver optical fibre all the way to premises but only as far as the "node". The "last mile" can be through a variety of media.

7.44 The Committee notes that unlike in some other countries such as Korea and Hong Kong, currently very few premises in Australia are connected by fibre.[208] It was interested in options for improving this.

7.45 The Committee heard that connecting fibre to existing premises would be extremely expensive requiring "going in and digging trenches through people's fences and rose beds and front yards and all that sort of thing."[209] A submission from Mr Peter Hitchener of Insight Telecommunications Consulting noted that the highest costs involved in establishing a "wired" broadband network is the civil works involved in installing cable. He recommended that local government be encouraged to install fibre or a conduit to provide for the future when making openings for other purposes.[210] Dr Paul Clark of Southern Cross University suggested the Government could ensure all new developments include right of way to infrastructure to support broadband delivery should it be installed at a later date.[211] The Committee considers that these ideas have merit.

7.46 On the other hand, it is far more cost-effective to install fibre at the time of building a new development rather than simply meeting the current requirement to install phone lines. The Committee heard that there are several cases where developers were working with telecommunications companies to install optical fibre at the time of construction on a voluntary basis. One case is such the Aurora project in Victoria which would deliver Fibre to the Home (FTTH) to 8,000 residents in a new estate in the northern suburbs of Melbourne offering voice telephony, data and video services over the network. In New South Wales, Telstra was working with a developer to install fibre at the Windmill Hill Estate near Tamworth so every home in the 970 lot

[208] ACMA and ACCC *Communications Infrastructure and Service Availability 2008*, p.13

[209] Transcript of Hearing 23 June 2008, p.45

[210] Submission 2.20, pp.1-2

[211] Submission 2.15, p.2

estate would have 20 Mbps broadband, digital free to air television and up to four phone lines operating simultaneously.[212]

7.47 The Central Regional Organisation of Councils suggested that the current requirement for new developments to include phone lines should be extended to include broadband capability. The Organisation considered that the State Government could play an active role in setting such minimum standards for new developments. The Committee heard from the Griffith City Council that incentives should be offered to developers to install a higher standard of broadband infrastructure in new housing developments.[213]

7.48 Councillor Ian Tiley Mayor of Clarence Valley Council noted that some local developments would include fibre but he considered that this needed to a mandatory requirement in planning legislation for widespread adoption by developers.[214]

7.49 At a meeting of the Northern Rivers Regional Organisation of Councils in Lismore, the Committee was told councils were unsure whether they could mandate the installation of fibre in new developments themselves. At Rous Water, fibre was installed as a voluntary developer initiative but at Tweed they thought developers would complain about the imposition of an additional cost on building. They considered that this would be easier as a state planning control and suggested it be scaled so that, for instance, a developer of a small number of lots would be exempt.[215]

7.50 The Committee considers that there is merit in using planning provisions to increase the level of cable available to premises. At its meeting on 13 November 2008, it resolved to seek the view of the Minister for Planning about the feasibility of mandating the installation of optical fibre at the time of developments. The Minister's response however was not supportive of this approach because it may be cost prohibitive, especially in remote areas.[216]

7.51 The Committee is disappointed at this reaction to an innovative suggestion but considers that there is merit in the Department providing advice to councils on how to encourage developers to install fibre on a voluntary basis and ensuring that a right of way for access to install fibre later is maintained.

7.52 The Committee also notes the evidence of Mr Todd Clewett Director of the Innovation Unit for the Department of State and Regional Development that there was a possibility that the Broadband Advisory Panel would investigate how to improve the level of fibre to the premises in the context of the National Broadband Network.[217]

[212] ACMA and ACCC *Communications Infrastructure and Service Availability 2008*, pp.12-13, Submission 1.24, p.4
[213] Submission 2.10, p.7, Submission 2.21, p.4
[214] Transcript of Hearing 1 August 2008, p.3
[215] Meeting with NOROC 1 August 2008
[216] Correspondence from the Hon Kristina Keneally MP Minister for Planning, Minister for Redfern Waterloo 23 February 2009
[217] Transcript of Hearing 23 June 2008, p.23

RECOMMENDATION 8: The Department of Planning should consider issuing advice to local government about streamlining arrangements for developers wanting to install optical fibre as a voluntary measure and consider ensuring that new developments retain a right of way for subsequent installation of fibre.

Aggregating procurement

7.53 One of the ways the State Government has extended communications infrastructure in regional and rural areas has been by aggregating procurement of services. This has improved the cost-effectiveness of government services as well as helped the broader community in some cases.

7.54 State Government agencies have significant communications infrastructure needs. For instance the Department of Education operates one of the largest private networks in the world in terms of the number of sites connected to it and has around 250,000 users. State agencies have significant purchasing power and this power is enhanced by combining the needs of agencies together.

7.55 The major way in which the State Government has improved the delivery of communications in rural and regional areas is through the Government Broadband Service. It provides network access points in 24 regional towns in New South Wales. There is a catchment area of 50 kilometres from these access points. The service is used by 25 government agencies. A submission from the Department of Premier and Cabinet stated that this service:

> has led to the provision of additional cost effective broadband services because the size of Government demand created economies of scale which encouraged providers to expand and provide broadband services to the private sector and households in rural and regional NSW. In this case, Government has used its purchasing power as a catalyst for the provision of broadband to rural and regional communities.[218]

7.56 Mr Colin Griffith of the Department of Commerce indicated that the service had led to considerable savings for agencies. For instance, in 2000 the cost of high capacity links for agencies was in the order of $40,000 or $50,000 per year but it was currently around $20,000 for most areas in the State.[219]

7.57 The Committee was concerned about the short term nature of the contract for the Government Broadband Service and the stability of communications for government agencies if the contract was not renewed. Witnesses from the Department of Commerce indicated that the Government had given Soul no guarantee about the ongoing use of the network once the contract was over. Future procurement arrangement depended on a range of factors including the availability of competitive services.[220]

7.58 The Committee also heard about the benefits of aggregating procurement beyond the Government Broadband Service from Mr James Breen from the Department of Education and Training. He was managing the large-scale upgrading of broadband services across 2,500 sites. Once the upgrade is complete only around 20 sites would require satellite services because of the ability to connect to improved systems such as Next G:

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[218] Submission 2.18, p.2

[219] Transcript of Hearing 23 June 2008, p.20,

[220] *ibid.*, p.23

> By buying in big bundles we are able to effectively average, if you like, the installation cost across many sites so that we can get to some of these ones that are perhaps more difficult, and if we do them on a stand-alone basis it would be very expensive. By amortising that cost over a number of sites we are able to bring down the average costs quite substantially. We have got some good outcomes from the first lot of procurement we are doing in that we have got to five times capacity as an identified, locked in solution for effectively the same amount of recurrent that we are paying. That includes a lot of our Sydney metropolitan sites, which are pretty easy for carriers to get to, but it also includes a lot of our remote sites across the State. I think from a network upgrade point of view we are progressively doing quite well getting those services in.
>
> One of the things that I have been talking through with the broadband management committee, of which I am the Department of Education and Training [DET] representative as a whole of government committee, run through the GCIO, is how do we work with particularly Health and Police in some of those remote sites to perhaps the three of us, contributing a bit to its cost, and then through some sort of local community expression of interest type process as to who might sign up for those sorts of broadband services in some of those 20-odd problem sites that we are going to end up with. We may be able to drive some services into those sites. I think it is really only through taking a whole of government as opposed to an individual agency approach that we are going to be able to get a business case or a commercial proposal that any carrier might be interested in.[221]

7.59 The Committee notes that the impact of Federal funding of the National Broadband Network and the Fibre to Schools project will have significant effects on the services available in rural and regional communities.

7.60 It notes the merits of the approach taken by current government procurement policies.

RECOMMENDATION 9: The Department of Commerce should continue to structure its procurement of IT services for government agencies to maximise the possibility of infrastructure extension in rural and regional areas.

Enhancing Competition

7.61 While the fundamental problem in many rural and regional areas is a lack of any telecommunication services, communities are also disadvantaged by a lack of competition between carriers. This reduces consumer choice and in some cases increases the costs of service.

7.62 It can be difficult to attract new competitors when the establishment costs are prohibitively high. This section addresses some options for encouraging competition between communication services.

Sharing Communication Towers

7.63 One way to encourage competition is if new competitors were able to use existing infrastructure such as mobile phone towers for a reasonable fee. Requirements to share infrastructure can be a significant commercial issue for carriers and have the capacity to distort investment decisions. In most cases, these are matters of policy

[221] Transcript of Hearing 23 June 2008, p.12

for the Federal regulators, however, the Committee notes that there are some aspects that the State or local governments can influence.

7.64 The Committee notes that for communications towers of more than five metres in height planning permission must be sought and local communities are often resistant to the visual pollution new towers could produce. For instance, Ian Tiley Mayor of Clarence Valley Council said that such development applications are very contentious in his area and indicated that people did not want a proliferation of unsightly radio towers.[222]

7.65 The Committee notes that competing carriers are able to gain access to existing infrastructure should they choose to and that there is a Federal government policy encouraging the sharing of towers to reduce the number being built.[223] Reinforcing this policy at State and local Government level could address the concerns of the community if, for instance, a carrier needed to demonstrate that existing local infrastructure would not support the services it planned to install. Changing the State and Local government planning requirements would reinforce consistency in decision making in this matter.

RECOMMENDATION 10: The Department of Planning should consider the need to review planning advice to local governments to include a requirement that carriers applying for approval to install communications towers demonstrate why they are unable to share existing infrastructure.

Competition Benefits of Government Broadband Service

7.66 The Committee heard that the Government Broadband Service had increased the level of competition on communication services in the regional centres in which it operates. The Department of Commerce submission attributed the establishment of the Service as the reason why Telstra enabled DSL in the exchanges in these towns. This has led to competitive and scalable access to trunk capacity in regional towns for the first time. Major ways in which the service enables competition are:

- Aggregation of traffic on trunks;
- Promotion of sustainable infrastructure based competition in regional areas;
- Stimulation of competition at the local access level;
- Reductions in the price difference for regional broadband services as the open interconnection arrangement can pass on lower costs to the wider community; and
- Acceleration of broadband deployment.[224]

7.67 The Committee notes that the core network of the Government Broadband Service was designed in such a way that local fibre connections to the access points could be installed by other companies. It was also thought that local ISPs could use the alternative fibre connections for high speed access back to Sydney but the Committee was not able to determine the extent to which this has occurred from the Department of Commerce.

[222] Transcript of Hearing 1 August 2008, p.3
[223] RTIRC *op. cit.,* p.7
[224] Submission 1.30, p.5

7.68 The Committee considered whether it was possible for the Government to ensure small ISPs could use the use the fibre installed by Soul to establish the high-speed connections between centres for the Government Broadband Service. As this is a proprietary network owned by Soul it is not possible for the Government to specify that Soul allow this access.[225] The competitive benefits of the scheme were in creating the additional infrastructure that created opportunities for commercial carriers to offer services to other ISPs if they so chose.

7.69 These benefits are the by-product of the Government's policy of obtaining the best value services for its own operations but there are broader community benefits that should be considered in future procurement decisions.

RECOMMENDATION 11: The Department of Commerce should continue to structure its procurement of IT services for government agencies in order to promote opportunities for competition in rural and regional areas.

Inter-Carrier Roaming

7.70 The Committee notes that in large parts of the State mobile phone services are available from only one company. This is an effective monopoly and, as the Australian Local Government Association noted, this adds to the danger of road travel and makes it difficult for visitors to conduct business.[226] Unlike when travelling overseas there is no requirement for carriers to allow roaming on their networks.

7.71 The Committee notes that there are regulatory and technical barriers to phones operating on multiple networks. The regulator would need to establish an access regime for mobile phones and phone handsets would need to be able to operate on multiple frequencies. Engineers Australia recommended that the Government encourage inter-carrier roaming at least on infrastructure paid for with public funds and suggested that government funding for mobile infrastructure should be focused on investment that enables handsets to operate on multiple networks.[227]

7.72 The Committee notes that the Regional Telecommunications Independent Review Committee recommended that the Federal Government ask the ACCC to inquire into the merits of mandatory inter-carrier roaming in areas where only one carrier provides service.[228]

7.73 The Committee notes that the Federal Government has rejected this recommendation, stating:

> The ACCC has considered mobile roaming in the past and has already indicated it intends to monitor developments with respect to the provision of domestic inter-carrier roaming services, and may initiate a further inquiry should it receive information indicating that declaration of domestic inter-carrier roaming service may be appropriate.
>
> The need for the action proposed by this recommendation is further diminished in light of the announcements by mobile phone carriers in 2008 of commercially negotiated roaming arrangements and of extensions to networks coverage across Australia.[229]

[225] Transcript of Hearing 23 June 2008, p.19 and letter from the Hon Carmel Tebbutt MP, Deputy Premier, received 13 February 2009

[226] Australian Local Government Association 2008 *State of the Regions Report 2008-09, p.70*

[227] Engineers Australia *Telecommunications Infrastructure Report Card 2007*, p.ii

[228] RTIRC *op. cit.,* p.143

[229] DBCDE *Regional Telecommunications Review Statement of Government Response*, p.11

7.74 The Committee acknowledges that this is a policy decision for the Federal Government but considers that there should broader knowledge amongst consumers of the areas without coverage by particular networks. For instance, consumers visiting single carrier areas could be advised of the lack of coverage and to set up a pre-paid account with the major carrier. The Committee notes that in Australia most mobile phone handsets are retailed by mobile phone companies. In other countries dual SIM phones are widely available so people can access multiple phone accounts and networks from one handset. Such handsets are becoming available in Australia but they are not yet widespread.[230]

RECOMMENDATION 12: Through appropriate intergovernmental channels, the Government should encourage the Federal Government to improve the knowledge of visitors to single carrier areas about the lack of coverage by other networks and to advise of appropriate steps to take to avoid complete loss of mobile contact.

Subsidies

7.75 Telstra suggested that the State Government could improve the affordability of broadband by making subsidies directly available to individual users, rather than to service providers. Mr Brett Riley suggested that this be used to provide pricing parity for those people who could not get broadband through ADSL and reduce the cost of other options such as wireless broadband.[231]

7.76 The Committee considers that this is an interesting suggestion but as most other subsidies for communications services have come from the Federal Government this should be its responsibility as well.

Access to Fibre Networks

7.77 The Committee noted that in some areas, small schools have much better broadband access than any other parts of the community. Mr Alfredo Bonanno noted that, in 2005, the Department of Education had laid out 45 kilometres of optical fibre to two schools at Barkers Vale and Larnook primary schools. He considered that this fibre had the capacity to provide the entire valley's population with broadband services but it was not possible for private residents to connect to the fibre.[232] In evidence before the Committee he noted that this was not the best use of what would have been a significant investment.[233]

7.78 The Committee asked a representative of the Department of Commerce about whether access to this could be made available to other ISPs or community members. It was told that in general government agencies were not able to sell services to third parties.[234]

7.79 On the other hand, where agencies own the infrastructure themselves, there might be opportunities for third parties to have access. Councillor Ian Tiley, Mayor of Clarence Valley Council, told the Committee that after the Council was created by amalgamation in 2004 it invested considerable amounts in upgrading the communications links between its premises including a cable linking Yamba and

[230] *The Sydney Morning Herald The Guide,* 2 March 2009, p7
[231] Submission 2.24, p.8, Transcript of Hearing 23 June 2008, p.44
[232] Submission 2.4 p.1
[233] Transcript of Hearing 1 August 2008 p.22
[234] Transcript of Hearing 23 June 2008, pp.26-27

Maclean. He said that the Council had spare capacity on the cable and was investigating ways of selling this to other parties.[235] The Committee congratulates the Council for its entrepreneurial spirit.

7.80 The Committee asked the Department of Commerce about the availability of optical fibre owned by such agencies as the rail authorities that could be used to expand services. Mr Colin Griffiths, General Manager Strategy for the Department explained this was not likely to be a viable option as most of the rail fibre was in metropolitan areas and there is a scarcity of alternative fibre in regional areas.[236]

7.81 The Committee considers that there are extremely limited opportunities for government agencies in rural and regional communities to enable third parties to establish access to their broadband connections.

Addressing Consumer Issues

7.82 The Committee notes that there is a dearth of knowledge about the level of services that are available in particular areas and what they should cost.

7.83 The Regional Development Advisory Council and the Central West Regional Development Board suggested that there could be an independent broker that could advise consumers of the most appropriate broadband access solution for their area and the level of cost as a way of improving knowledge about options.[237]

7.84 The Northern Rivers Regional Organisation of Councils considered public confidence in services would be strengthened if the availability of services were audited independently rather than based on (often questionable) assertions by companies. Mr Alfredo Bonanno provided the Committee with a good description about how hard it was for the public to learn about what infrastructure was available. This is a major challenge is that there is a lot of proprietary information such as the number of exchanges with ADSL and cables.[238]

7.85 The Federal Department of Broadband Communications and the Digital Economy has a hotline to advise on access to broadband. For those already with broadband access, there are two important tools on the Department's website. These are:

- The Broadband Service Locator Mapping Tool (BSL), which provides area contact details of commercial ISPs. If there are no commercial services available at a 'metro-comparable level', the BSL automatically registers the user with Australian Broadband Guarantee to receive a subsidised service; and
- The Data Speed Testing Facility that offers users monthly information about the average data speeds of registered providers. Customers can test their average data speeds (Customer Data Speed Testing) and the Department also conducts Provider Data Speed Testing on a monthly basis. Registered providers are required to meet a 75 per cent availability requirement and users can access an online report which indicates whether a provider passed or failed to provide the required level of service.

7.86 The Committee notes that wider knowledge of this information would go a long way to clarifying the lack of information for consumers.

[235] Transcript of Hearing 1 August 2008, pp.1-2

[236] Transcript of Hearing 23 June 2008, p.20

[237] Submission 2.23, p.1 and Submission 2.26, p.8

[238] Submission 2.1, p.1, Transcript of Hearing 1 August 2008, p.16

RECOMMENDATION 13: Through appropriate intergovernmental channels, the Government should encourage the Federal Department of Broadband, Communications and the Digital Economy to publicise information about the Broadband Service Locator and Provider Data Speed testing more broadly such as by regularly advertising in the rural and regional press

Public Accessibility

7.87 The Committee was also interested in options for improving access to broadband services for those people without connections in their homes or businesses and ways of improving the technological skills of this group.

7.88 The Northern Rivers Regional Development Board argued that the State Government has a key role in ensuring the availability of affordable broadband and mobile phone coverage. It suggested that the Government "leverage the investment it has already made in programs such as the Community Technology Centres (CTC)." The Board argued that CTCs have the capacity to be robust delivery points for government services and should continue to play an important role in economic development but they needed assistance.[239]

7.89 Ms Lynne de Weaver of the Board noted that:

> In the Northern Rivers we tend to have some of the lowest-income communities in the State, and access to broadband services needs to be supported in little libraries in places like Iluka and some of the outlying villages in the Tweed, places like Tyalgum and Uki, and throughout Nimbin and Cawongla. These are all villages that are topographically challenged because of the hills and the surrounds. If the State Government does not say, "We've got to keep delivering broadband into these communities", the people who are on the lowest incomes will not have access to broadband.[240]

7.90 These Centres are also important for providing training to those who may not be skilled in using computers. The Committee notes that the existing Community Technology Centres receive extremely limited support for their operations and perform valuable work.[241]

7.91 The Committee finds that CTCs have a valuable role in enhancing the knowledge and providing broadband access to people in rural and regional communities who would not receive it any other way. However, as Ms de Weaver noted, while using CTCs would suit the average user, home-based businesses would need higher quality access such as would be available from schools' networks.[242] The Committee wondered whether it would be feasible for people to use broadband networks available in government facilities such as schools when they are not being used for their primary purpose.

7.92 The Committee asked Mr James Breen Director Infrastructure Services for the Department of Education and Training about the feasibility of this approach:

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[239] Submission 2.14, p.2
[240] *ibid.*, p.7
[241] *ibid.*, p.7
[242] *ibid.*, p.7

> From the point of view of sharing the network there are a couple of schools of thought. One is, yes, let us open it up to all and try to leverage that investment so that once school finishes at 3.00 p.m. or so there can be alternative uses of the network until the next morning. Conceptually that is a good way of making our investment sweat a bit harder, if you like. My network security people always then go into convulsions about how we are going to manage this and how we know that the sorts of traffic that we allow on the network after hours is appropriate or inappropriate, as the case may be. How do we allow that connectivity, because if we have a service coming into a school that terminates with our equipment, we need to connect out to those other providers? We need to do that either through some sort of wireless-type setup or rooms that people can come into and use equipment.[243]

7.93 Mr Breen noted that schools were being used out of hours for various purposes such as professional development so the idea of these resources being available to others for 18 hours a day was becoming outmoded.[244]

7.94 The Committee appreciates that there are technical and policy barriers to enabling access to government facilities but considers that where people cannot gain adequate broadband services by any other means, there is merit in this approach.

RECOMMENDATION 14: The Government consider ways of improving accessibility to broadband services by developing policies to enable government facilities including schools to be used after hours.

Conclusion

7.95 The Committee considers that communities in rural and regional New South Wales need help to catch up with telecommunications and broadband services available in metropolitan areas.

7.96 The Committee has found that the State Government has limited capacity to deliver services itself but it should continue to use its purchasing power to encourage the extension of infrastructure and regional competition. It should use its planning powers to remove obstacles to the extension of infrastructure. Where appropriate, it should lobby the Federal Government for better communications policies and to ensure the National Broadband Network is rolled out in higher priority areas first. Finally, it should assist people gain confidence with the possibilities of broadband services and investigate ways to provide public access to services.

[243] Transcript of Hearing 23 June 2008, p.14

[244] *ibid.*, p.15

Appendix One – List of Submissions

First Round of Submissions

1. 1 NSW Rural Fire Service Canobolas Zone

1.2 Clarence Valley Council

1.3 Mr Alex Portnoy

1.4 Mr Zlatan Topojani

1.5 Mr Jason Marshall

1.6 Mr John Woo

1.7 Mr Mick Geros

1.8 Mr Ron Coleman

1.9 Mr Toby Ekman

1.10 Wollondilly Shire Council

1.11 Soul Communications Australia

1.12 Mr Stephen Parker

1.13 Axia Real Broadband Pty

1.14 CountryEnergy Australia

1.15 Confidential

1.16 Kempsey Shire Council

1.17 Mr Yves Picard

1.18 Central Regional Organisation of Councils

1.19 Wagga Wagga City Council

1.20 Riverina Regional Development Board

1.21 Mr Kerry Guerin

1.22 Mrs Elisabeth Webster

1.23 Australian Computer Society

1.24 Telstra CountryWide New South Wales

1.25 NSW Farmers' Association

1.26 Northern Inland Regional Development Board

1.27 Mr Matthew Holden

1.28 Dr Ron Hyne

1.29 Namoi Regional Organisation of Councils

1.30 Department of Commerce

1.31 Royal Flying Doctor Service (South Eastern Section)

1.32 Rolyngra Telecommunications Services

1.33 Macarthur Regional Organisation of Councils (MACROC)

1.34 MillersIT

1.35 NSW Department of State and Regional Development

1.36 Department of Health

1.37 Department of Education and Training

1.38 Confidential

1.39 The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG)

1.40 Royal Australasian College of Dental Surgeons

1.41 Royal College of Pathologists of Australia

Second Round of Submissions

2.1 Northern Rivers Regional Organisation of Councils (NOROC)

2.2 Mr Kevin Farrell

2.3 Mr Roger Williams

2.4 Mr Alfredo Bonanno

2.5 Mr Peter Godden

2.6 Mr Gordon Shannon

2.7 Mr Geoff Rose

2.8 Associate Professor Ian Pettigrew

2.9 Mr Ray Coleman

2.10 CENTROC

2.11 Gosford City Council

2.12 WWWalker Web Development Pty Ltd

2.13 Mr Jean-Pierre Joly

2.14 Northern Rivers Regional Development Board

2.15 Southern Cross University (SCU)

2.16 Confidential

2.17 Namoi Regional Organisation of Councils

2.18 Department of Premier and Cabinet

2.19 Tim's Computer Service

2.20 Insight Telecommunications Consulting

2.21 Griffith City Council

2.22 NSW Farmers' Association

2.23 Central Western Regional Development Board Inc

2.24 Telstra CountryWide, New South Wales

2.25 YLESS4U Pty Ltd

2.26 Regional Development Advisory Council

Appendix Two - List of Witnesses

Monday, 23 June 2008 – Parliament House

Organisation	Witness
NSW Farmers' Association	Mr Alan Brown Vice President and Chair of the Rural Affairs Committee Ms Brianna Casey Senior Policy Officer Mr Richard Widows Policy Officer, Rural Affairs
Department of Education and Training	Mr Jim Breen, Director, Infrastructure Services
Department of Commerce	Mr Colin Griffiths General Manager, Strategy Mr Ben McCarthy Acting Director of Telecommunications Government Chief Information Office
Department of State and Regional Development (NSW Broadband Advisory Panel)	Mr Todd Clewett Director of Innovation
Department of Health	Mr Craig Smith Deputy Chief Information Officer/Director Strategic Initiative
OPTUS	Mr Dean Smith General Manager, Government Relations
Regional Communities Consultative Council and Office of Regional Affairs	Ms Lynda Summers Chair, Regional Communities Consultative Council Ms Fran Schonberg Manager, Office of Rural Affairs and Office of Rural Affairs
Telstra Corporation	Mr Brett Riley Executive Director, CountryWide Ms Lucy Wicks Corporate Affairs Manager NSW/ACT Mr Paul Mitchell Group Manager, NSW Government

Friday 1 August 2008 – Lismore

Organisation	Witness
Clarence Valley Council	Cr Ian Tiley
Northern Rivers Development Board	Ms Lynne de Weaver
Southern Cross University	Ms Maria Gillam Director, IT Services
Billen Cliffs Village Strata Plan	Mr Alfredo Bonanno Secretary
Individual	Mr Jean-Pierre Joly

Appendix Three – Visits of Inspection

Orange

On 31 October 2007, a delegation of the Committee (Mr Phillip Costa MP, Mr Gerard Martin MP, Mr David Harris MP, Mr Geoffrey Provest MP, Mr Steven Whan MP and Mrs Cheryl Samuels) travelled to Orange to meet representatives of state and local government, regional carriers, the business community and residents to discuss the telecommunications needs of the region. The Committee held discussions with the following people:

Organisation	
Central Regional Organisation of Councils (CENTROC)	Cr John Davis, Mayor, Orange City Council Mr Garry Styles, General Manager, Orange City Council Mr Dan Grant, Group Manager, Corporate and Community Services, Mid Western Regional Council Mr Stephen Harding, Assistant General Manager, Cabonne Shire Council Mr Gavin Priestley, Consultant Ms Jennifer Bennett, Executive Officer, CENTROC
	Mr Kerry Guerin
Department of State and Regional Development	Mr Edward Frater, Business Development Manager, Development Mr Sandy Morrison, Central West Regional Development Board
Cirrus Communications	Mr Bob Nash, Regional Manager
NSW Rural Fire Service	Mr David Hoadley, Zone Manager, Canobolas Zone Mr David Cullane, Group Officer Mr Bruce Noble, Group Officer
NSW Farmers' Association	Mr Geoff Knight, Regional Service Manager

Griffith

On 21 February 2008, a delegation of the Committee (Mr Phillip Costa MP, Mr Greg Piper MP, Mr David Harris MP, Mr Geoffrey Provest MP, Mr Steven Whan MP and Ms Vicki Buchbach) travelled to Griffith to meet representatives of local government and businesses to discuss the telecommunications needs of the region.The Committee held discussions with the following people:

Organisation	**Name**
Riverina Regional Organisation of Councils	Cr Dino Zappacosta, Mayor of Griffith City Council Cr Russell Campbell, Deputy Mayor, Carrathool Shire. Mr Andrew Crackanthorp, Group Manager Governance and Compliance, Griffith City Council
Department of State and Regional Development	Mr Peter Dale, Riverina Regional Development Board
Organisation	**Name**

Representatives of Local Businesses	Mr David Alpen, Casella Wines, Mr Paul Foley, DeBortoli Wines, Mr Kingsley Massey and Carl Bowman, Nugan Foods, Mr Tony Roach, A&G Engineering Mr Andrew Rogers and Mr Andrew Cremasco, Bartter Enterprises
Griffith Chamber of Commerce and Industry	Mr Craig Tilston, President (Elders Limited) Mr Domenic Fondacaro, Business Development Manager Ms Adele Dean, member Mr Peter Bonaventura, member (Optus)

Canberra and Queanbeyan

On 7 August 2008, a delegation of the Committee (Mr Phillip Costa MP, Mr David Harris MP, Mr Geoff Provest MP and Mrs Cheryl Samuels) travelled to Canberra and Queanbeyan to discuss communications policy with representatives of the Federal Government, to visit a trial of broadband over powerline technology and to meet representatives of a local telecommunications company.

The Committee held discussions with the following people:

Organisation	**Name**
Department of Broadband, Communications and the Digital Economy	Mr Simon Cobcroft, Assistant Secretary, Broadband Division Mr Damian Stevens, Director, Broadband Infrastructure Policy Ms Lisa Walker, Regional Telecommunications Independent Review Committee Secretariat Ms Clare Johnson, Departmental Liaison Officer, Office of the Minister for Broadband, Communications and the Digital Economy
CountryEnergy	Mr Brett Hamilton, General Manager, Corporate Strategy Mr Paul Spencer
YLESS4U	Mr Anthony Goonan Dr Anne Goonan

Appendix Four – Extracts from Minutes

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 1)
11.00 am Thursday 28 June 2007
Parliament House

Members Present
Mr Constance MP
Mr Costa MP
Mr Harris MP
Mr Piper MP
Mr Whan MP

Apologies
Apologies were received from Ms Hodgkinson MP and Mr Martin MP.

Introduction
The Clerk-Assistant (Committees) opened the meeting and read the following extract from the Votes and Proceedings of Thursday 21 June 2007, entry 13 (11) –

Mr Aquilina moved, by leave:

"Committee on Broadband in Rural and Regional Communities

That:

(1) A standing committee be appointed to inquire into the needs of rural and regional communities in relation to telecommunications (including broadband) and other technology services and, in particular, to report on the following terms of reference:

(a) The availability of telecommunications (including broadband) and other technology services in rural and regional communities;

(b) The benefits and opportunities for rural and regional communities of having access to telecommunications (including broadband) and other technology services;

(c) Disincentives and barriers to the provision of telecommunications (including broadband) and other technology services to rural and regional communities;

(d) The consequences for rural and regional communities of not having, or not having adequate, access to telecommunications (including broadband) and other technology services, having regard to likely future industry and technological developments; and

(e) Options for encouraging providers of telecommunications (including broadband) and other technology services to extend services to rural and regional communities.

(2) That the Committee consist of seven members comprising:

(a) Four Government members;
(b) Two Opposition members; and
(c) One independent member.

(3) The members be nominated in writing to the Clerk of the Legislative Assembly by the relevant party leaders and the independent members respectively within seven calendar days of the passing of this resolution.

(4) The Committee have leave to make visits of inspection within the state of New South Wales and other states and territories of Australia, but not outside Australia."

Membership
The Clerk-Assistant (Committees) reported that the Clerk of the Legislative Assembly had received correspondence nominating the members of the committee as: Mr Costa, Mr Harris, Mr Martin and Mr Whan representing the Government; Mr Constance and Ms Hodgkinson representing the Opposition; and Mr Piper an independent.

Election of Chair and Deputy Chair
Pursuant to Standing Order 282—
Resolved, on the motion of Mr Whan, seconded by Mr Harris:
That Mr Costa be elected Chair of the Committee.

Resolved, on the motion of Mr Whan, seconded by Mr Harris:
That Mr Martin be elected Deputy Chair of the Committee.

Procedural Motions
Resolved, on the motion (*in globo*) of Mr Whan, seconded by Mr Piper:

1. That arrangements for the calling of witnesses and visits of inspection be left in the hands of the Chair and the Committee Manager to the committee.
2. That, unless otherwise ordered, witnesses appearing before the Committee shall not be represented by any member of the legal profession.
3. That, unless otherwise ordered, when the Committee is examining witnesses, the press and public (including witnesses after examination) be admitted to the hearing being conducted by the committee.
4. That persons having special knowledge of the matters under consideration by the Committee may be invited to assist the committee.
5. That press statements on behalf of the Committee be made only by the Chair after approval in principle by the committee or after consultation with Committee members.
6. That, unless otherwise ordered, access to transcripts of evidence taken by the Committee be determined by the Chair and not otherwise made available to any person, body or organisation: provided that witnesses previously examined shall be given a copy of their evidence; and that any evidence taken *in camera* or treated as confidential shall be checked by the witness in the presence of the Committee Manager to the Committee or another officer of the Committee.
7. That the Chair and the Committee Manager to the Committee be empowered to negotiate with the Speaker through the Clerk of the Legislative Assembly for the provision of funds to meet expenses in connection with advertising, operating and approved incidental expenses of the committee.
8. That the Chair be empowered to advertise and/or write to interested parties requesting written submissions.
9. That upon the calling of a division or quorum in either House during a meeting of the Committee, the proceedings of the Committee shall be suspended until the Committee again has a quorum.
10. That the Chair and the Committee Manager make arrangements for visits of inspection by the Committee as a whole to undertake the entire itinerary.
11. That pursuant to Standing Order 297, evidence, submissions or other documents presented to the Committee which have not been reported to the House are not to be

disclosed or published by any Member or by any other person unless first authorised by the House or the Committee.

General Business
The Committee deliberated about staffing arrangements.

The Committee deliberated about the terms of reference and stakeholder engagement.

The Chair invited members for suggestions in relation to participation in the inquiry process.

The Committee adjourned at 11.22 am until a date to be determined.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 2)
12.00 noon Wednesday 22 August 2007
Parliament House

Members Present
Mr Costa MP (Chair)
Mr Harris MP
Mr Piper MP
Ms Hodgkinson MP
Mr Whan MP

Apologies
Apologies were received from Mr Constance MP and Mr Martin MP.

Minutes
Resolved, on the motion of Mr Piper, seconded by Mr Whan:
That the minutes of the meeting on 28 June 2007 be confirmed and published.

Deliberation
The Chair updated the Committee on possible approaches for the Committee to conduct its work, including:

- briefings with key stakeholders and individuals;
- identifying the various issues under each specific term of reference;
- obtaining comparative information from analogous jurisdictions;
- highlighting inquiries and media releases;
- undertaking regional visits of inspection.

Briefings
The Committee admitted Brett Riley (Executive Director, Telstra CountryWide NSW), Lucy Wicks (Corporate Affairs Manager – NSW/ACT) and Paul Mitchell (General Manager – NSW Government Account), all of Telstra, for a briefing.

The Committee admitted Michelle Phillips (Manager - Government and Community Relations) of Optus for a briefing.
The Committee admitted Steven Legge (Chief Operating Officer) of Soul Australia for a briefing.

General Business
The Committee deliberated about the type of information to be sought and how that information might be gathered including obtaining the perspective of PC users, publicly available research papers, seeking submissions, hearings and analysis of gaps in existing services.

The Committee discussed undertaking a visit of inspection on 30 and 31 October 2007.

The Committee adjourned at 2.43 pm until 8.30 am on Thursday 27 September 2007.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 3)
8.30 am Thursday 27 September 2007
Parliament House

Members Present
Mr Costa MP (Chair)
Mr Constance MP
Ms Hodgkinson MP
Mr Piper MP
Mr Harris MP
Mr Martin MP
Mr Whan MP

Minutes
Resolved, on the motion of Mr Piper, seconded by Mr Harris:
That the minutes of the meeting on 22 August 2007 be confirmed and published.

Deliberation
The Chair advised the Committee that the inquiry had been advertised and that media releases had been sent to rural and regional media outlets. The Chair also outlined possible approaches for the Committee to develop a discussion paper on issues raised in submissions:

- Holding public hearings towards end of February - mid March 2008;
- Undertake visits to various regions in NSW for the purpose of meeting with Regional Organisation of Councils and Chambers of Commerce.
- It was agreed that the first visit would be to Cowra on 31 October 2007 to meet with the Central Regional Organisation of Councils (CENTROC).

General Business
The Committee deliberated about the possible briefings with Professor Joshua Gans of Melbourne University, Cirrus Communications, Microsoft and IBM on issues of telecommunications and technological advancements.

The Chair tabled correspondence on recent NSW Rural and Regional Broadband Initiatives by the Federal Government entitled “Recent NSW Rural and Regional Broadband Initiatives dated August 2007.

The Committee adjourned at 9.00 am until 8.30 am on Thursday 25 October 2007.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 4)
8.30 am Thursday 25 October 2007
Parliament House

Members Present
Mr Costa MP (Chair)
Mr Constance MP
Mr Piper MP
Mr Harris MP
Mr Whan MP
Mr Martin MP

Membership Change
The Chair reported that on 18 October 2007, Votes and Proceedings no. 24, entry 17, Mr Provest MP was appointed to the Committee in place of Ms Hodgkinson MP, discharged.

Apology

An apology was received from Mr Provest MP.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Piper:
That the minutes of the meeting on 27 September 2007 be confirmed and published.

Submissions
Resolved on the motion of Mr Piper, seconded by Mr Constance:
That submissions numbered 1 – 14 and 16 and 17 on the circulated list be published.

Resolved that on the motion of Mr Harris, seconded by Mr Constance:
That submission number 15 be confidential.

Deliberation
It was noted that, for logistical reasons, the proposed regional visit to Cowra had been moved to Orange and would take place on 31 October 2007.

General Business
It was agreed that the Committee should receive a briefing from the Office of Rural Affairs on 8 November 2007.

The Committee adjourned at 8.41 am until 10.30 am on Wednesday 31 October 2007 in Orange.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 5)
Wednesday 31 October 2007
Orange City Council Chambers

Members Present
Mr Costa MP (Chair)
Mr Harris MP
Mr Martin MP
Mr Provest MP
Mr Whan MP

Apologies
Apologies were received from Mr Constance MP and Mr Piper MP.

The meeting commenced at 10.35 am.

The Committee met with the following persons:

- Representatives of the Central Regional Association of Councils (CENTROC)
  Cr John Davis, Mayor, Orange City Council
  Mr Garry Styles, General Manager, Orange City Council
  Mr Dan Grant, Group Manager, Corporate and Community Services, Mid Western Regional Council,
  Mr Stephen Harding, Assistant General Manager, Cabonne Shire Council
  Mr Gavin Priestley, consultant
  Ms Jennifer Bennett, Executive Officer, CENTROC.

  Mr Grant provided supplementary documentation to the CENTROC Submission (No 18).

- Mr Kerry Guerin, Submission No. 21. Mr Guerin's submission was tabled and ordered to be printed. (Resolved: Mr Martin, seconded Mr Whan). Mr Guerin also provided supplementary documentation relating to Extel technology.

- Mr Edward Frater, Business Development Manager, NSW Department of State and Regional Development and Mr Sandy Morrison, Central West Regional Development Board.

- Mr Bob Nash, Regional Manager, Cirrus Communications Pty Ltd. Mr Nash provided documentation relating to the services provided by Cirrus Communications (commercial-in-confidence).

- David Hoadley, Zone Manager, NSW Rural Fire Service Canobolas Zone
  Mr David Cullane, Group Officer
  Mr Bruce Noble, Group Officer

- Mr Geoff Knight, Regional Service Manager – Region 8, NSW Farmers Association. Mr Knight provided documentation relating to the broadband and mobile phone services in rural areas and an advance copy of the NSW Farmers Association Submission (No. 25).

The Committee adjourned at 3.15 pm until 8.30 am on Thursday 8 November 2007.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 6)
8.30 am Thursday 8 November 2007
Room 1254 Parliament House

Members Present

Mr Costa MP (Chair)	Mr Martin MP
Mr Harris MP	Mr Provest MP

Apologies
Apologies were received from Mr Constance MP, Mr Piper MP and Mr Whan MP.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Costa:
That the minutes of the meeting on 25 October 2007 and 31 October 2007 be confirmed and published.

Submissions
Resolved on the motion of Mr Provest, seconded by Mr Costa:
That submissions numbered 18 to 26 on the circulated list be published.

Deliberation
The Chair reported to the Committee on the visit of inspection to Orange on 31 October 2007. The Chair outlined possible approaches for the Committee to develop on issues raised in Orange. Key stakeholders such as members from the Chamber of Commerce, Department of Health and Department of Emergency Services were also identified.

It was proposed to undertake further visits to Southern and Northern regions of NSW in the first half of 2008.

General Business
The Chair advised the Committee on an establishment of the Chairs Liaison Group and that the first meeting had been held on Wednesday 7 November 2007.

The Committee adjourned at 8.55 am until 8.30 am on Thursday 15 November 2007.

Appendix Four

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 7)
8.30 am Thursday 15 November 2007
Jubilee Room, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Martin MP	Mr Whan MP
Mr Harris MP	Mr Provest MP	

Apologies
Apologies were received from Mr Constance MP and Mr Piper MP.

Minutes
Resolved, on the motion of Mr Provest, seconded by Mr Martin:
That the minutes of the meeting on 8 November 2007 be confirmed and published.

Submissions
Resolved on the motion of Mr Whan, seconded by Mr Martin:
That submissions numbered 27 to 29 on the circulated list be published.

Deliberation
The Chair discussed with the Committee possible regional visits of inspection in 2008 with suggested Wagga Wagga, Griffith and Moruya Council areas.

The Committee agreed to undertake the next visit of inspection to Griffith on 21 February 2008.

Briefing
The Committee admitted and were briefed by: Ms Fran Schonberg, Manager, Department of Lands, Office of Rural Affairs; Ms Lynda Summers, Chair, Regional Communities Consultative Council; Mr Joe Tokarczuk, Manager, Advanced Networks, Department of Commerce; and Ms Natasha Scully, Manager, Electronic Service Delivery, Department of Commerce.

The Committee adjourned at 10.05 am until 8.30 am on Thursday 29 November 2007.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 8)
8.30 am Thursday 29 November 2007
Room 1254, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Piper MP	Mr Whan MP
Mr Harris MP	Mr Provest MP	

Apologies
Apologies were received from Mr Constance MP and Mr Martin MP.

Minutes
Resolved, on the motion of Mr Whan, seconded by Mr Provest:
That the minutes of the meeting on 15 November 2007 be confirmed and published.

Submissions
Resolved on the motion of Mr Whan, seconded by Mr Provest:
That submissions numbered 30 to 33 on the circulated list be published.

Deliberation
Discussion Paper – It was agreed that a draft discussion paper, outlining the key issues arising from submissions and the visit to Orange, be available for consideration by the Committee on 28 February 2008.

Visit to Griffith – The proposed visit of inspection to Griffith on 21 February 2008 was discussed.

Meeting dates for 2008 – The proposed meeting schedule for 2008 was discussed and it was agreed that the meeting time would be changed to 9.00 am.

The Committee adjourned at 8.45 am until Thursday 21 February 2008 in Griffith.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 9)
Thursday 21 February 2008
Griffith City Council Chambers

Members Present
Mr Costa MP (Chair)
Mr Harris MP
Mr Piper MP
Mr Provest MP
Mr Whan MP

Apologies
Apologies were received from Mr Constance MP and Mr Martin MP.

The meeting commenced at 10.15 am.

The Committee met with the following people:
1. Representatives of the Regional Organisation of Councils
   Cr Dino Zappacosta, Mayor of Griffith City Council
   Cr Russell Campbell, Deputy Mayor, Carrathool Shire.
   Mr Andrew Crackanthorp, Group Manager Governance and Compliance, Griffith City Council

2. Peter Dale, Executive Officer, Riverina Regional Development Board. Mr Dale tabled the following documents:
   "Linked: A Telecommunications Strategy for Riverina Communities", July 1999
   Brochure on Riverina First
   Brochure on EasyCommerce Riverina

3. Representatives of large local businesses:
   Mr David Alpen, Casella Wines,
   Mr Paul Foley, DeBortoli Wines,
   Mr Kingsley Massey and Mr Carl Bowman, Nugan Foods,
   Mr Tony Roach, A&G Engineering
   Mr Andrew Rogers and Mr Andrew Cremasco, Bartter Enterprises

4. Representatives of Griffith Chamber of Commerce and Industry
   Mr Craig Tilston, President
   Mr Domenic Fondacaro, Business Development Manager
   Ms Adele Dean, member
   Mr Peter Bonaventura, member

The Committee adjourned at 3.25 pm until 9.00 am on Thursday 28 February 2007.

Appendix Four

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 10)
9.10 am Thursday 28 February 2008
Room 1254 Parliament House

Members Present

Mr Costa MP (Chair)
Mr Constance MP
Mr Harris MP
Mr Martin MP
Mr Piper MP
Mr Provest MP
Mr Whan MP

Minutes

In the absence of Mr Costa, Mr Martin took the Chair.

Resolved, on the motion of Mr Harris, seconded by Mr Provest:
That the minutes of the meeting on 29th November 2007 be confirmed.

Resolved on the motion of Mr Piper, seconded by Mr Harris, that the minutes of 21 February 2008 be confirmed.

Mr Costa arrived and took the Chair.

Submissions

Resolved on the motion of Mr Whan, seconded by Mr Harris:
That submissions numbered 33 to 37and 39 to 41 on the circulated list be published.

Discussion Paper

The Committee agreed to the Chair tabling the draft discussion paper and that minor amendments would be made to the paper.
Resolved on the motion of Mr Provest, seconded by Mr Martin.

Deliberation

The Chair advised the Committee on the outcomes of the visit of inspection to Griffith. The Committee agreed to table the report of the visit of inspection to Griffith on the motion of Mr Piper, seconded by Mr Harris.

The Committee noted the summary of recent research on the motion of Mr Whan, seconded by Mr Martin.

General Business

The Committee deliberated about a possible briefing with Telstra on Wednesday 5 March 2008 and arrange a meeting with the Federal Minister for Broadband, Communications and the Digital Economy and relevant government authorities about current developments in broadband policy either in Sydney or Canberra whichever is more convenient.

The Committee adjourned at 9.25 am until 9.00 am on Wednesday 5 March 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 11)
9.00am Friday 7 March 2008
Jubilee Room, Parliament House

Members Present

Mr Costa MP (Chair)
Mr Harris MP
Mr Martin MP
Mr Provest MP

Apologies
Apologies were received from Mr Piper MP, Mr Constance MP, and Mr Whan MP.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the minutes of the meeting on 28 February be confirmed.

Briefing by Telstra CountryWide
The Committee admitted and were briefed by Mr Brett Riley, Executive Director, Telstra County Wide NSW and Ms Lucy Wicks, Corporate Affairs Manager NSW/ACT, Telstra on recent developments in broadband services delivery and telecommunications networks.

Submission from Northern Rivers Regional Organisation of Councils (NOROC)
Resolved on the motion of Mr Martin, seconded by Mr Harris:
That submission No 1 from NOROC be published.

Resolved on the motion of Mr Harris, seconded by Mr Martin:
That the Committee accept NOROC's invitation to visit Lismore to hold a public meeting on the suggested date of 1 August.

The Committee adjourned at 9.45 am until 9.00 am on Thursday 3 April 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 12)
9.00 am Thursday 3 April 2008
Room 1254, Parliament House

Members Present
Mr Costa MP (Chair)
Mr Harris MP
Mr Constance MP
Mr Martin MP
Mr Piper MP
Mr Provest MP
Mr Whan MP

Minutes
Resolved, on the motion of Mr Harris, seconded by Mr Provest:
That the minutes of the meeting on 7 March 2008 be confirmed.

Submissions
Resolved on the motion of Mr Piper, seconded by Mr Provest:
That submissions numbered 2 to 6 on the circulated list be published.

Deliberation
The Committee noted the article by Professor Geoff Bamberry on the motion of Mr Whan, seconded by Mr Harris.

The Chair reported on the recent Chairs' Liaison Group meeting which agreed to the continued resourcing of the secretariat and to some approval procedures for Committee travel with different arrangements for intrastate, interstate and international visits of inspection.

The Chair discussed with the Committee the following upcoming activities:

- Proposed visit to Canberra for a meeting with the Commonwealth Minister for Broadband, Communications and the Digital Economy and his department (proposed date week commencing 19 or 26 May 2008);
- Public hearing in Sydney (proposed date 16 June 2008); and
- Public hearing in Casino on 1 August 2008.

The Committee noted the summary of recent developments.

The Committee adjourned at 9.14 am until 9.00 am on Thursday 8 May 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 13)
9.10 am Thursday 8 May 2008
Room 1043, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Piper MP
Mr Martin MP	Mr Provest MP

Apologies
Apologies were received from Mr Constance MP, Mr Harris MP, and Mr Whan MP.

Minutes
Resolved, on the motion of Mr Piper, seconded by Mr Provest:
That the minutes of the meeting on 3 April 2008 be confirmed.

Submissions
Resolved on the motion of Mr Provest, seconded by Mr Piper:
That submissions numbered 7 to 15 and 17 to 23 on the circulated list be published and that submission number 16 be confidential.

Deliberation
The Chair reported on his meeting with the Telstra Regional Advisory Group on 21 April 2008 and agreed to provide his speaking notes to Mr Piper.

The Chair informed members that information had been provided to them on a confidential basis by the Department of State and Regional Development and was available for their examination. The Committee agreed to request a briefing from the Department of State and Regional Development on 5 June 2008 and invite the Department to appear at a subsequent public hearing.

The Chair discussed with the Committee the following upcoming activities:

- Meeting with the Regional Telecommunications Independent Review Committee on 8 May 2008;
- Public Hearing in Sydney on 23 June 2008;
- Public Hearing in Casino on 1 August 2008;

Resolved on the motion of Mr Provest, seconded by Mr Piper:
That the Committee visit Canberra on 7 August 2008

The Committee noted the summary of recent media on telecommunications.

The Committee noted correspondence from Mr Andrew Findlay, Managing Director, Vertel.

The Committee adjourned at 9.35 am until 5.15 pm on Thursday 8 May 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 14)
5:15 pm Thursday 8 May 2008
Waratah Room, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Harris MP
Mr Martin MP	Mr Piper MP
Mr Provest MP	Mr Whan MP

Apology
An apology was received from Mr Constance MP.

Briefing
The Committee admitted and were briefed by members of the Regional Telecommunications Independent Review Committee:

Dr Bill Glasson (Chair)
Mr Mark Needham
Ms Alexandra Gartmann
Mrs Josephine Stone
Councillor Bruce Scott

The Committee adjourned at 6.20 pm until 9.00 am on Thursday 5 June 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (No. 15)
9.00 am Thursday 5 June 2008
Room 1254, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Harris MP
Mr Martin MP	Mr Piper MP
Mr Provest MP	Mr Whan MP

Apologies
An apology was received from Mr Constance MP.

Minutes
Resolved, on the motion of Mr Piper, seconded by Mr Harris:
That the minutes of two meetings on 8 May 2008 be confirmed.

Submission
Resolved on the motion of Mr Piper, seconded by Mr Martin:
That submission number 24 from Telstra be published.

Deliberation
The Chair discussed with the Committee the following upcoming activities:

- Public Hearing in Sydney on 23 June 2008;
- Public Hearing in Casino on 1 August 2008;
- Visit to Canberra on 7 August 2008.

The Committee noted the summary of recent media on telecommunications.

Briefing
The Committee admitted and were briefed by Ms Fran Schonberg, Manager, Office of Rural Affairs, Department of Lands, and Ms Lynda Summers, Chair, Regional Communities Consultative Council.

The Committee adjourned at 9.30 am until 9.00 am on Thursday 19 June 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (No. 16)
9.15 am Monday 23 June 2008
Jubilee Room, Parliament House

Members Present

Mr Costa MP (Chair)	Mr Constance MP
Mr Harris MP	Mr Martin MP
Mr Provest MP	Mr Whan MP

Apology
An apology was received from Mr Piper MP.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Harris:
That the minutes of the meeting on 5 June 2008 be confirmed.

Deliberation
The Committee noted the summary of recent media on telecommunications.

Resolved, on the motion of Mr Martin, seconded by Mr Harris:
That the transcript of the public hearing be published, once corrected.

Public Hearing
The Chair opened the public hearing.

Mr Alan Brown, Vice President and Chair of the Rural Affairs Committee, NSW Farmers' Association was sworn and examined.

Ms Brianna Casey, Senior Policy Officer, NSW Farmers' Association and Mr Richard Widows, Policy Officer, NSW Farmers' Association were affirmed and examined.

Mr Brown undertook to provide the Committee with some further information in response to questions.

Evidence completed, the witnesses withdrew.

Mr Jim Breen, Director Infrastructure Services, Department of Education and Training, was sworn and examined.

Evidence completed, the witness withdrew.

Mr Colin Griffith, Director of Strategy, Government Chief Information Office, Department of Commerce, Mr Ben McCarthy, Acting Director of Telecommunications, Government Chief Information Office, Department of Commerce and Mr Todd Clewett, Director, Innovation Unit, Department of State and Regional Development were affirmed and examined.

Mr Griffith undertook to provide the Committee with some further information in response to questions.

Mr Craig Smith, Deputy Chief Information Officer, New South Wales Health, was sworn and examined.

Mr Smith undertook to provide the Committee with some further information in response to questions.

Evidence completed, the witness withdrew.

At 12.45 pm the Committee adjourned for lunch and the public hearing resumed at 1.30 pm.

***In Camera* Hearing**
Resolved, on the motion of Mr Harris, seconded by Mr Provest:
At the request of the witness, that evidence of Mr Dean Smith, General Manager, Government Relations, Optus, be taken *in camera*.

The public was excluded. Mr Dean Smith, General Manager, Government Relations, Optus, was affirmed and examined *in camera*.

Evidence completed, the witness withdrew and the public hearing resumed at 2.15 pm.

Public Hearing
Ms Lynda Summers, Chair, Regional Communities Consultative Council and Ms Fran Schonberg, Manager, Office of Rural Affairs, Department of Lands, were affirmed and examined.

Evidence completed, the witnesses withdrew.

Mr Brett Riley, Executive Director, Telstra CountryWide and Mr Paul Mitchell, Group Manager for New South Wales Government, Telstra Enterprise and Government was affirmed and examined.

Ms Lucy Wicks, Corporate Affairs Manager, New South Wales/Australian Capital Territory, Telstra Corporation was sworn and examined.

Evidence completed, the witnesses withdrew.

The Committee adjourned at 3.10 pm until Friday 1 August 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (No. 17)
11.45 am Friday 1 August 2008
Lismore City Council Corporate Centre, Lismore

Members Present
Mr Costa MP (Chair) Mr Harris MP
Mr Provest MP

Apologies
Apologies were received from Mr Constance MP, Mr Martin MP, Mr Piper MP, and Mr Whan MP.

Briefing from representatives of Northern Rivers Regional Organisation of Councils (NOROC)

The Committee had a private briefing with the following members and staff of NOROC Councils:

- Mr Paul Muldoon, General Manager, Rous Water
- Cr Ian Tiley, Mayor, Clarence Valley Council
- Ms Carol O'Neill, IT Department, Kyogle Shire Council
- Mr Paul Poussart, IT Department, Kyogle Shire Council
- Mr Robert Mustow, Chair, Rous Water
- Mr Russell Kelly, Executive Officer, NOROC
- Mr Troy Green, Director Technology and Corporate Services, Tweed Shire Council
- Mr Alvaro Lozano, IT Manager, Rous Water
- Mr Garth Hayhurst, IT Manager Lismore Council
- Ms Joy Barhan, Byron Shire
- Mr Graham Faulkner, General Manager, Byron Shire Council
- Mr Paul O'Sullivan, General Manager, Lismore Council

The Committee adjourned for a short lunch break.

Public Hearing
The Chair opened the public hearing at 1.00pm

Councillor Ian Tiley, Mayor, Clarence Valley Council was sworn and examined.

Evidence completed, the witness withdrew.

Ms Lynne de Weaver, Director, Northern Rivers Regional Development Board, was affirmed and examined.

Evidence completed, the witness withdrew.

Ms Maria Gillam, Director, Information Technology and Telecommunications Services, Southern Cross University, was affirmed and examined.

Ms Gillam undertook to provide the Committee with the results of a survey of student access to broadband services when it was available.

Evidence completed, the witness withdrew.

Mr Alfredo Bonnano was affirmed and examined.

In support of his evidence, Mr Bonnano tabled two maps and a document.

Evidence completed, the witness withdrew.

Mr Jean-Pierre Joly was sworn and examined.

Evidence completed, the witness withdrew.

The Chair closed the hearing at 3.20 pm and the Committee reconvened in a deliberative meeting.

Minutes
Resolved, on the motion of Mr Harris seconded by Mr Provest:
That the minutes of meeting and public hearing on 23 June 2008 be confirmed.

Deliberation
The Committee noted that comments were made about the performance of Soul Communication in the hearing of 23 June.

Resolved, on the motion of Mr Provest, seconded by Mr Harris:
That the Committee write to Soul Communications to ask them to respond to comments made in relation to the performance of the Government Broadband Service during the hearing on 23 June and subsequent correspondence from NSW Health.

The Committee discussed an invitation to visit Telstra's Experience Centre in Sydney and agreed to arrange a visit on a Friday afternoon in a sitting week and to check when members were available.

The Committee agreed to invite representatives of the Australian Communications and Media Authority to its meeting on 25 September 2008.

The Committee adjourned at 3.30 pm until Thursday 7 August 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 18)
9.30 am Thursday 7 August 2008
Parliament House, Canberra

Members Present
Mr Costa MP (Chair) Mr Harris MP
Mr Provest MP

Apologies
Apologies were received from Mr Constance MP, Mr Martin MP, Mr Piper MP, and Mr Whan MP.

The meeting commenced at 9.30 am.

Hearing on 1 August 2008
Resolved on the motion of Mr Harris, seconded by Mr Provest:
That members agree to publish the corrected transcript.

Correspondence from Fran Schonberg, Office of Rural Affairs
Mr Costa tabled correspondence from Ms Fran Schonberg, Manager, Office of Rural Affairs raising possible issues for discussion with the Department of Broadband, Communications and the Digital Economy.

The Committee adjourned at 10.00 am until 9:00 am on Thursday 25 September 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 19)
9.30 am Thursday 25 September 2008
Room 1254, Parliament House

Members Present
Mr Constance MP Mr Harris MP
Mr Martin MP Mr Provest MP
Mr Whan MP

Apologies
Apologies were received from Mr Gibson MP and Mr Piper MP.

The meeting commenced at 9.30 am.

Minutes
Resolved, on the motion of Mr Provest, seconded by Mr Harris:
That the minutes of the meeting on 1 and 7 August 2008 be confirmed.

Submission
Resolved on the motion of Mr Whan, seconded by Mr Constance:
That submission number 25 from YLESS4U be published.

Reports
Resolved on the motion of Mr Provest, seconded by Mr Harris:
That the Committee note the report on the meeting with the Northern Rivers Regional Organisation of Councils.

Resolved on the motion of Mr Provest, seconded by Mr Harris:
That the Committee note the report on the site visit to Canberra.

Deliberation
The Chair discussed the Committee's upcoming visit to the Telstra Experience Centre on 24 October 2008.

The Committee noted the summary of recent media on telecommunications.

Former Chair
Resolved on the motion of Mr Harris, seconded by Mr Martin:
That the Committee thank the former Chair Mr Costa on his work on the Committee.

The Committee took a short adjournment at 9.42 am.

Briefing [10 am]
Ms Linda Caruso, Acting General Manager, Convergence and co-ordination Division and Ms Elizabeth Harding, Acting Manager Market Analysis Section, Australian Communications and Media Authority, provided a briefing to the Committee on the Authority's work and recent reports it has published.

The Committee adjourned at 11.00 am until 1.00 pm on Thursday 25 September 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 20)
1.00 pm Thursday 25 September 2008
Room 1136, Parliament House

Members Present
Mr Gibson MP
Mr Martin MP
Mr Whan MP

Apologies
Apologies were received from Mr Constance MP, Mr Harris MP, Mr Piper MP, and Mr Provest MP.

The meeting commenced at 9.30 am.

Election of Chair and Deputy Chair
Pursuant to Standing Order 282—
Resolved, on the motion of Mr Martin, seconded by Mr Whan:

That Mr Gibson be elected Chair of the Committee.

The Committee adjourned at 1.14 pm until 9.00 am on Thursday 13 November 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 21)
9.00 am, 13 November 2008
Room 1254, Parliament House

Members Present
Mr Gibson MP (Chair) Mr Constance MP
Mr Martin MP Mr Provest MP
Mr Whan MP

Apologies
Apologies were received from Mr Harris MP and Mr Piper MP.

The meeting commenced at 9.00 am.

Minutes
Resolved, on the motion of Mr Whan, seconded by Mr Provest:
That the minutes of the two meetings on 25 September 2008 be confirmed.

Questions on Notice
Resolved on the motion of Mr Whan, seconded by Mr Provest:
That response to questions taken on notice from the Australian Communications and Media Authority be noted by the Committee.

Report of Regional Telecommunications Independent Review Committee
Members received a copy of the Regional Telecommunications Independent Review Committee Report 2008 *Framework for the Future*.

Draft Committee Report outline
Resolved on the motion of Mr Martin, seconded by Mr Whan:
That the recommendations be approved *in globo* with agreed amendments to recommendation number 2.

Deliberation
The Chair discussed the rescheduling of the Committee's postponed visit to the Telstra Experience Centre to 28 November.

Correspondence
The Committee agreed that the Chair should write to the Minister for Rural Affairs and Minister for Regional Development to offer the Committee's assistance with the Community Broadband Development Program.

Resolved on the motion of Mr Provest, seconded by Mr Martin:
That the Committee Chair write to the Minister for Commerce for an update on the Government Broadband Service.

The Committee agreed that the Chair should write to the Minister for Planning for advice on the feasibility of imposing a state requirement that optical fibre be installed as part of new business or residential developments.

The Committee noted the summary of recent media on telecommunications.

The Committee agreed that in 2009 it would meet once a month with additional meetings called if required.

The Committee adjourned at 9.21 am until 9.00 am on Thursday 4 December 2008.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 22)
9.00 am Thursday 4 December 2008
Room 1254, Parliament House

Members Present
Mr Gibson MP (Chair) Mr Besseling MP
Mr Constance MP Mr Martin MP
Mr Whan MP

Apologies
Apologies were received from Mr Harris MP and Mr Provest MP.

The meeting commenced at 9.00 am.

Change in Committee Membership
The Chair welcomed the new member to the Committee, Mr Besseling, replacing Mr Piper who has been discharged.

Minutes
Resolved, on the motion of Mr Whan, seconded by Mr Besseling:
That the minutes of the meeting on 13 November 2008 be confirmed.

Correspondence
The Committee noted correspondence from the Chair requested at the meeting on 13 November to:

- Minister for Rural Affairs and Regional Development
- Minister for Commerce
- Minister for Planning

Submissions
Resolved on the motion of Mr Whan, seconded by Mr Besselling:
That submission number 41 from the Regional Development Advisory Council be published.

Answers to questions on notice from Hearing
The Committee noted correspondence from Mr David Callahan, Acting Director-General of the Department of Commerce dated 1 December 2008 containing answers to questions taken on notice by witnesses from the Department at a hearing on 23 June.

Deliberation
The Chair discussed the rescheduling of the Committee's postponed visit to the Telstra Experience Centre. Resolved on the motion of Mr Whan, seconded by Mr Martin:
That the visit be rescheduled to the morning of Friday 13 March 2009.

The Committee agreed to a list of meeting dates for 2009.

The Committee noted a transcript of a presentation by Dr Bill Glasson, Chair of the Regional Telecommunications Independent Review Committee to Commonwealth Parliamentary Association Conference of Members of Parliament 6 November 2008.

Briefing
Briefing by Ms Fran Schonberg, Manager, Office of Rural Affairs and Ms Lynda Summers, Chair, Regional Communities Consultative Council (RCCC).

The Committee agreed to write to Senator Conroy, Minister for Broadband, Communications and the Digital Economy, in relation the RCCC's request that spectrum in the 3.6 GHz band be allocated for community purposes.

The Committee adjourned at 9.33 am until 9.00 am on Friday 13 March 2009.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 1 of 2009)
9.30 am, 13 March 2009
Room 1254, Parliament House

Members Present
Mr Besseling, Mr Gibson, Mr Harris and Mr Martin

Apologies
Mr Whan, Mr Provest and Mr Constance

The meeting commenced at 9.35 am.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Besseling:
That the minutes of the meeting on 4 December 2008 be confirmed.

Draft Report of the Committee
The Committee considered the Chair's Draft Committee report entitled "Beyond the Bush Telegraph: Meeting the Growing Communications Needs of Rural and Regional Communities.

Mr Besseling proposed that Recommendation 6 be amended by the addition of the words "taking into account the existing development controls relevant to those agencies" at the end. The Committee agreed with the amendment.

Resolved on the motion of Mr Besseling seconded by Mr Harris:
That the report be adopted as amended.

Correspondence
Resolved on the motion of Mr Martin, seconded by Mr Harris:
That the Committee note the following correspondence:

- Letters between the Chair and the Minister for Broadband, Communications and the Digital Economy regarding the reservation of 3.6 GHz spectrum band for rural and regional areas.
- Letters between the Chair and the Premier regarding ReConnect.nsw and the recycling of redundant Government agency computers.
- Letter from the Minister for Commerce regarding the performance of SOUL and the Government Broadband Service.

Appendix Four

- Letter from the Minister for Planning regarding the installation of optical fibre as part of new residential and business developments.

The Committee adjourned at 9.50 am until 9.00 am on Thursday 2 April 2009.