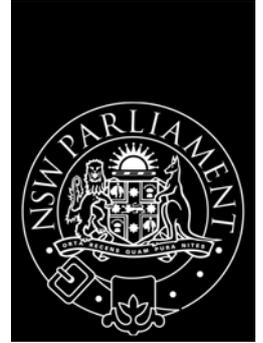LEGISLATIVE ASSEMBLY

Standing Committee on Broadband in Rural and Regional Communities

KEY ISSUES FOR FURTHER INVESTIGATION

Discussion Paper

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Membership & Staff

Chair	Mr Phillip Costa MP, Member for Wollondilly
Deputy Chair	Mr Gerard Martin MP, Member for Bathurst
Members	Mr Andrew Constance MP, Member for Bega
	Mr David Harris MP, Member for Wyong
	Mr Greg Piper MP, Member for Lake Macquarie
	Mr Geoff Provest MP, Member for Tweed
	Mr Steve Whan MP, Member for Monaro
Staff	Ms Vicki Buchbach, Committee Manager
	Mrs Cheryl Samuels, Research Officer
	Ms Lluwannee George, Graduate Research Officer
Contact Details	Standing Committee on Broadband in Rural and Regional Communities
	Parliament of New South Wales
	Macquarie Street
	Sydney NSW 2000
Telephone	02 9230 3438
Facsimile	02 9230 3309
E-mail	broadband@parliament.nsw.gov.au
URL	www.parliament.nsw.gov.au/broadband

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 release this discussion paper on behalf of the Standing Committee on Broadband in Rural and Regional Communities.

The Committee has been asked to examine the availability of broadband in rural and regional New South Wales, how this can be improved and what effects lack of services could have on the social and economic well-being of the community.

In 2007, the Committee called for public submissions and held a number of discussions with service providers, government agencies and members of rural and regional communities.

The purpose of this discussion paper is to highlight the key issues raised in those submissions and subsequent discussions as a way of guiding the Committee's future work and to provide assistance to those wishing to make further submissions to the Committee.

The Committee has formed no conclusions on any matters raised in this paper and makes no recommendations at this stage.

The Committee would welcome any submissions by 30 April 2008.

At the end of this further period for submissions, the Committee plans to take evidence at public hearings and then will prepare a report to Parliament on these matters.

I would like to thank all the groups and individuals who responded to the Committee's initial call for submissions in 2007 and hope that other groups are as willing to share their ideas with the Committee in this next round of consultation.

Phillip Costa MP
Chair

Executive Summary

High speed or "broadband internet" enables the transmission of large volumes of data in many modes quite quickly. There are huge economic benefits to such technology as a means of operating businesses and delivering government services efficiently.

The Committee does not doubt that large parts of rural and regional New South Wales do not have access to broadband at the same speeds and for the same price as people in the city.

The Committee has received much information about Commonwealth and State programs to improve access to broadband services and would welcome further information on this topic.

The Committee also received much information about the benefits and opportunities broadband could give regional and rural communities. It is particularly interested in further case studies of how broadband can help rural and regional communities and businesses. It would also appreciate suggestions on ways to avoid the consequences of inadequate broadband services in the future.

Other key issues that the Committee would like further information on are:

- Strategies for addressing the lack of availability of services in certain areas including the choice of technology;
- The appropriate role for State government in promoting and increasing the use of broadband;
- State and local government planning in 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.

Invitation to Comment

You are invited to submit your views on any of these issues in writing to the Committee by Wednesday 30 April 2008.

There are four ways to send your submission to the Committee:
1. Lodged at the Committee's website www.parliament.nsw.gov.au/broadband; or
2. Emailed to broadband@parliament.nsw.gov.au; or
3. Posted to:
    Standing Committee on Broadband in Rural and Regional Communities
    Parliament House
    Macquarie St
    Sydney NSW 2000
    or
4. Faxed to (02) 9230 3309

Chapter One - Background

Telecommunications and Broadband

In the past two decades, communications technology has developed rapidly to change the way people interact and how governments and businesses operate. Mobile phones, email and internet services now complement and, in some areas, have largely replaced older technologies such as fixed line phones and postal services.

High speed or "broadband internet" enables the transmission of large volumes of data in many modes quite quickly. There are huge economic benefits to such technology as a means of operating businesses and delivering government services efficiently.

While broadband provides individuals with social and recreational opportunities, it is also becoming increasingly difficult for people to study or deal with governments and businesses without access to high quality communication technologies such as broadband services. Public policy commonly refers to the gap between those with and without access to communications as the "digital divide".[1]

Telecommunication Needs of Rural and Regional Australia

New South Wales is sparsely populated outside of metropolitan areas. Consequently, on a per capita basis, the cost of providing services is much higher in rural and regional areas than in the city.

In certain sectors of the economy such as health and education, governments intervene by direct service provision or subsidies so that people living in non-metropolitan areas have access to similar levels of services as people living in metropolitan areas at similar direct costs. However, as telecommunication infrastructure is technically complex, expensive and rapidly changing, and the industry has been privatised, government programs have not consistently provided adequate funding or commercial incentives for rural and regional communities to have the same level of service as in major cities. Consequently, there are gaps in service availability. Where services are available, limited competition between carriers means that prices may be higher and services may be of lesser quality.

This lack of service can increase the isolation of rural and regional communities and hamper their social and economic development, especially when there is a shift towards using broadband throughout the rest of the country.

Role of the Committee

The Standing Committee on Broadband in Rural and Regional Communities was established on 21 June 2007 with the powers to investigate and report to the New South Wales Parliament about the telecommunications needs of rural and regional communities with a particular focus on broadband services.

The Committee's terms of reference fall into two areas. Firstly it has been asked to inquire into the availability of broadband services. Allied to this is investigating the barriers and

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[1] OECD (2001) *Understanding the Digital Divide*, OECD, Paris, p.5

disincentives to delivering these services and options for encouraging telecommunications companies to increase their level of service delivery.

Secondly, the Committee is to assess the effects on the community of telecommunication services including broadband by examining the benefits and opportunities for social and economic development these services provide and by investigating the consequences for these communities if services are not adequate.

It is important to note that the Committee has no *direct* power to improve provision of broadband services in rural and regional New South Wales. Regulation of telecommunications is the responsibility of the Federal Government under the Australian Constitution and many decisions about the availability of particular technologies are the result of Commonwealth policy or commercial decisions by carriers.

However the Committee *can* make recommendations to the State Government within its area of investigation. The State Government is a major user of these broadband services and delivers an increasing number of its services online. It is anchor tenant of the Government Broadband Service (GBS), which also provides wholesale broadband services to other private sector carriers.

The Committee is able to recommend strategies to the State and local government and businesses for working with carriers and it can promote knowledge of funding available under Commonwealth programs.

Finally, the Committee can raise awareness of the opportunities available to the community by using broadband services such as by facilitating the increased use of broadband services for private and public sector to improve quality of life and improve regional and rural economic development.

Inquiry Process

The Committee called for submissions in September 2007 by advertising and by directly contacting interested groups and organisations. Forty-one submissions, of which 39 are publicly available from the Committee's website, were made in response. These come from a range of individuals, companies and local and state government bodies. These are listed in Appendix One.

The Committee has also travelled to Orange and Griffith in order to speak directly to business, government and individuals about the importance of telecommunications and broadband to social and economic development.

Key issues that the Committee would like further information on are:

- Strategies for addressing the lack of availability of services in certain areas including the choice of technology;
- The appropriate role for State government in promoting and increasing the use of broadband;
- State and local government planning in 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.

Next Steps

The Committee has prepared this paper in order to focus discussion in the next round of consultation. It is calling for further submissions, after which it will hold public hearings and prepare a report to State Parliament.

Chapter Two - Issues raised – Service provision

Availability of Service

The Committee's terms of reference ask it to assess the availability of telecommunications (including broadband) and other technology services in rural and regional communities.

The Committee does not doubt that large parts of rural and regional New South Wales do not have access to broadband at the same speeds and for the same price as people in the city.

Many submissions from individuals and councils noted the lack of availability of broadband services in their area or else commented that the services were slow, unreliable or expensive.[2] For instance Mr Picard of Tyalgum has tried for four years to get broadband.[3] Mr Matthew Holden of Tunnel Hill has been disappointed by two postponements of infrastructure upgrades to enable terrestrial broadband services and found that wireless broadband was unaffordable at the level he needed to run a business.[4] Kempsey Shire Council stated that there are significant black spots within the areas that technically should have access to broadband.[5] The Central Regional Organisation of Councils found that a quarter of the premises in Orange did not have broadband access and estimated that $78 million was needed in the region to provide comparable broadband services to the city.[6]

The Department State and Regional Development's submission reported that a recent survey of Regional Development Boards on the subject of the availability of telecommunication services found that businesses and individuals in rural and regional NSW consider they have inadequate broadband coverage in terms of accessibility, speed, reliability and affordability. The submission also cited 2006 Australian Bureau of Statistics figures showing that less than a third of rural and regional households had broadband access compared to almost half of metropolitan households.[7]

Much commentary about service quality relates to the speed of downloads per second however as the use of broadband matures, users may require uploading speeds to perform interactive applications. This means that existing asynchronous services may not be suitable in the future.

2.1   Closure of the CDMA network

The Committee received a number of submissions specifically about lack of mobile phone coverage. This was of particular importance for the safe operations of the Rural Fire Service which relies on phones to contact volunteers.[8]

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[2] Eg Submission No. 22, Ms Elisabeth Webster, Submission No. 5, Mr Jason Marshall, Submission No. 6, Mr John Woo, Submission No. 7, Mr Mick Geros, Submission No. 9, Mr Toby Ekman, Submission No.12, Mr Steven Parker
[3] Submission No. 17
[4] Submission No. 27
[5] Submission No. 16
[6] Submission No. 18
[7] Submission No. 20
[8] Submission No. 1

Telstra's CDMA phone network was due to be closed in January 2008 and replaced with a "Next G network" that is capable of delivering mobile telephony, date and video broadband services. The deadline for closure was recently extended to April because of concerns that the Next G network did not provide the same coverage.[9]

Several submissions were concerned about this transition as they had found the coverage to be poorer and replacement equipment unsuitable or expensive.[10]

The Committee notes these concerns and trusts that they will be resolved before the Commonwealth allows the CDMA network to be removed.

2.2   Commonwealth and State Programs

The previous Federal government had two programs designed to provide almost universal access to broadband services. *Australia Connected* was to deliver high speed broadband at 12 Mbps to 99 per cent of the country by June 2009. One means of doing this was through a joint venture between Optus and Elders (OPEL) to develop a wholesale broadband network. Under the *Australian Broadband Guarantee,* funding was available to provide the remaining one per cent of the population with affordable metro-comparable service at 512/128 kilobits per second.[11]

The new Federal Government is proposing to build a National Broadband Network providing Fibre to the Node services to 98 per cent of the country at a minimum connection speed of 12 megabits per second.[12] This network is still at the planning stage.

The New South Wales Government has a more limited role in delivering broadband services. It has applied for funding from Commonwealth programs following the partial sale of Telstra and provided in kind support to a number of regional projects. It has also received funding for a project manager to encourage access to broadband in rural and regional communities.[13] In 2005, the New South Wales Government commissioned a company called Soul to develop the Government Broadband Service as a way of providing high speed connections between public facilities such as schools, hospitals, courts, police stations and government offices. It operates in twenty-four regional access points and has the capacity to reach 3000 locations. Importantly, the service is limited to government bodies and can also provide wholesale broadband major regional centres. It encourages carriers to extend the service to smaller communities by requiring the service to allow other carriers to have rapid backhaul access.[14]

> The Committee would welcome further information about the progress of these programs and any future programs in improving the accessibility of broadband services.

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[9] Media release by Minister for Broadband, Communications and the Digital Economy 18 January 2008 http://www.minister.dbcde.gov.au/media/media_releases/2008/005

[10] Eg Submission No. 1, Submission No. 28, Dr Ron Hyne

[11] Submission No. 25, NSW Farmers Association

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

[13] Submission No. 30, Department of Commerce

[14] *ibid.* p.4, pp.7-8

Issues raised – Service provision

Barriers and Disincentives to Service Improvement

Barriers to service improvement can be technical or resource based. Solutions can be matters of government policy or commercial decisions by carriers.

2.3   Technical barriers

Effective broadband services depend on the availability of high quality infrastructure, either copper wire, fibre optic cable or where this is unavailable, wireless or satellite delivery.

Submissions indicated a preference for land based, or terrestrial, delivery, from telecommunications exchanges, however, where fibre optic cable has not been installed, existing copper wire using Asymmetric Digital Subscriber Line (ADSL) technology is used. Unfortunately, for technical reasons, these services are not available at more than three or four kilometres from exchanges or roadside multiplexors (DSLAMs or "rims") and exchanges need to be upgraded to provide access to ADSL technology. Telstra, the major carrier, is unlikely to invest in upgrading infrastructure unless this is commercially viable.[15] In many places the upgrade was performed but services were not initiated because of ongoing regulatory concerns.[16]

The Committee notes that broadband services can also be delivered over normal electrical powerlines (BPL). Country Energy recently trialled this technology but it has not yet been widely implemented in Australia.[17]

Terrestrial solutions are clearly more affordable for users than satellite-based delivery. Some submissions also expressed concern about the reliability of wireless based services. In this model, users sharing bandwidth have variable service levels and are not scaleable so that beyond a certain number of users they no longer provide high speed broadband.[18] However terrestrial solutions are also not automatically scaleable without additional infrastructure. One submission noted that roadside "rims" that provide extended service for ADSL have limited capacity so any potential new users may not able to connect to existing infrastructure.[19]

In relation to particular government programs, the Department of Commerce submission considered the OPEL model to be a "bandaid" solution because it only provides high speed broadband service to the local exchange. The "last mile" will still require delivery by existing copper wire, where possible, or new wireless technologies.[20]

Telstra's submission also considered that the OPEL solution would have less coverage than its Next G mobile telephony network, at slower speeds and would not provide a mobile solution.[21]

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[15] Submission No. 30, Department of Commerce, p.6

[16] Submission No 7, Mr Mick Geros, Submission No. 26, Northern Inland Development Board, Submission No. 35, NSW Department of State and Regional Development, Announcement of 6 February 2008 that Telstra would enable the technology in 900 more exchanges

[17] Submission No. 14, Country Energy

[18] Submission No. 18, Central Regional Organisation of Councils

[19] Submission No. 2, Clarence Valley Council

[20] Submission No. 30, pp.6-7

[21] Submission No. 24, p.9

The Committee acknowledges that this is a technically complex area and that no one solution will meet the needs of all users. It is also unlikely that existing technologies will continue to meet those needs into the future when the possible applications of broadband have matured further.

> The Committee would welcome further information about the best technological methods for improving the network availability to rural and regional communities.

2.4   Commercial imperatives
The Committee notes that, in the absence of government directives, Telstra and other carriers are free to choose technological solutions based on commercial imperatives. This means that the level of services can suffer.

Telstra as the former monopoly communications company retains a national network and contends that it should not subsidise other companies for access to its investments.[22] Other companies such as Axia Real Broadband argue that the pricing models particularly for backhaul or upload are stifling competition and that Telstra is unwilling to invest in providing service in communities where there is not a clear return for their investment.[23]

For instance, until February 2008, Telstra was unwilling to enable ADSL2+, a technology able to deliver fast broadband services, in particular exchanges unless another carrier also wanted to use it there because it was concerned that the Australian Consumer and Competition Council (ACCC) might choose to regulate access to wholesale broadband in areas where Telstra was the only provider. On 6 February 2008, Telstra announced that the regulatory concerns about providing the technology were resolved so it was willing to implement the technology in 900 more exchanges with potential of improved services to 2.4 million households.[24]

In another example, two submissions commented on the lack of availability of a technology trialled by Telstra in 2005 called "Longline ADSL" but not implemented which they believe would extend the availability of ADSL up to 20 kilometres away from the nearest exchange.[25]

2.5   Impact of Commonwealth and State Policies
Recent Commonwealth policies contributed to the lack of services by not including a Universal Service Obligation in relation to broadband as there is for telephony.[26]   This means that broadband access is a matter of commercial negotiation in the absence government subsidies or programs.

The Department of Commerce considered that Commonwealth Government subsidies have delivered some local-specific solutions to rural and regional communities, but the programs lack a strategic and coherent regulatory framework. This means that a broader sustainable business model across all rural and regional communities has not developed.   The

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[22] *ibid.* p.7

[23] Submission No. 13

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

[25] Submission No. 21, Kerry and Carol Guerin, Submission No 2, Clarence Valley Council

[26] Briefing from Office of Rural and Regional Affairs, 15 November 2007

Issues raised – Service provision

Department considered that the *Australia Connected* program of the previous Government also risked causing a duplication of services in some areas such as with the Government Broadband Service while some areas may still miss out.[27]

This view was supported by the Committee's discussions in late 2007 in Orange when representatives of the Central Regional Organisation of Councils and other organisations expressed uncertainty in relation to the purpose and usefulness of subsidies.

Options for improvement of service delivery

The Committee has received a number of helpful suggestions for improving the availability of broadband services in regional and remote areas.

2.6   Regional communities establishing local services

Mr Alex Portnoy suggested that the Government provide funding to set up a regional broadband network in such places as Singleton and Musswellbrook. He provided the example of the Ballarat Community Enterprise, a community-owned telecommunications company.[28] 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. 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.[29] 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.[30]

2.7   Role of planning

The Committee is particularly interested in options for integrating of planning for broadband services in proposals for redevelopment. For instance the developers of the 970-lot Windmill Hill Estate near Tamworth agreed with Telstra to install a new fibre optic product called Telstra Velocity.[31] This meant that high speed broadband services were available to all potential residents, unlike in the Clarence Valley and other areas where current broadband technologies have limited capacity and may not be available to new residents.[32]

2.8   Role of State Government

A key question arising from these submissions is how to define the appropriate role for the State government in improving services, given that communications is the regulatory responsibility of the Commonwealth. For instance, should the State Government be providing services directly the public or should it provide subsidies to certain groups in the community to make broadband affordable? Should it be raising awareness of the opportunities from broadband services? What contribution should it make to improved national communications strategic policy?

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[27] Submission No.30, Department of Commerce, pp.7-8

[28] Submission No. 3

[29] Submission No. 19

[30] Submission No. 26

[31] Submission No 24, p.4, Telstra Countrywide

[32] Submission No. 2

The Department of State and Regional Development's submssion considered that it was a legitimate role for governments to act to reduce the threats to inequality of access and to ensure the benefits of broadband are shared. Government intervention could include:

- Improving availability of network coverage;

- Developing skills, especially in the area of digital literacy; and

- Investing in government services that will complement the efforts of the community.[33]

However Mr Zlatan Topojani had a broader interpretation of the Government's role and suggested that it fund a community focused ISP and fair internet plan at a reasonable price.[34] Mr Ron Coleman suggested there be discounted internet services for pensioners.[35]

The State Government funds access for broadband services such as schools and hospitals but should it also subsidise services for rural and regional residents? Should there be discounts for pensioners or school students? Would the best method to provide such services be to establish its own ISP open to the public or should it simply allow open access to companies to use the Government Broadband Service as it currently plans to do?

What sort of assistance should the Government provide to local communities to attract communications carriers to their areas? Is there a role for it in coordinating and planning such activities? Should it be providing information or training to communities?

Mr Pete Miller suggested that the Government could assist smaller IT providers by providing relief from the costs of accessing major wholesale broadband networks.[36] The Committee would be interested in learning about what incentives the Government could provide to attract carriers to rural and regional areas such as access to crown land for communications facilities at below commercial rates.

2.9   Institutional structures

The Department of Commerce noted that while the Commonwealth subsidies provide a piecemeal approach there should be better coordination between the levels of government.[37]

The Committee notes that there is an intergovernmental ministerial forum called the Online and Communications Council which meets regularly to consider and reach agreement on strategic approaches on information and communications issues of a national importance.[38] The Committee would be interested in learning about the effectiveness of this body and whether other national consultative and coordinating arrangements would be better.

In addition 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. He

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[33] Submission No. 35

[34] Submission No. 4

[35] Submission No. 8

[36] Submission No. 34

[37] Submission No. 30, p.2

[38] http://www.occ.gov.au/ accessed 8 February 2008

suggested that this be located within a central agency such as the Department of Premier and Cabinet.[39]

The Committee would welcome comments on these suggestions and any further ideas that would improve the availability of broadband services in rural and regional areas.

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[39] Submission No. 32, Dr Rodney Gray

Chapter Three - Issues Raised – Social and Economic

The Committee received much information about the benefits and opportunities broadband could give regional and rural communities. It is particularly interested in further case studies of how broadband can help rural and regional communities and businesses. It would also appreciate suggestions for how to avoid the consequences of inadequate broadband services in the future.

Benefits

3.1   Health

NSW Health reports that broadband can offer improved services to rural and regional communities, principally by speeding up transmission of patient information such as medical records and by allowing the transmission and storage of medical images.[40] Telehealth and teleconferencing services mean that patients anywhere in the State could be treated by the best available specialist. The Department of State and Regional Development submission describes how this has been used for connections between metropolitan Nepean Hospital and regional Katoomba Hospital. Another application called "healthspring" enables wireless access to a pathology database via a handheld PC so that rural medical practitioners can retrieve information wherever they are.[41]

The Royal Flying Doctor Service South Eastern Division described how it has centralised medical records which are available wherever there is broadband. The submission states "broadband in the bush provides health professionals with access to vital information in order to provide effective patient care."[42]

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists sees the development of electronic central records as of particular importance for indigenous women who may receive care from many different providers in many places.[43]

3.2   Education

There are many education applications of broadband services. Primary and secondary education services are now delivered through video streaming as an extension of the old school of the air. Students without access to particular subjects in their local school are able to attend classes at another school by video link. More routinely, study materials are distributed online and students use the internet to research projects. Lack of broadband services can limit the quality of education available to rural and regional children. The Namoi Regional Organisation of Councils notes that with adequate broadband locally, children would not need to be sent to boarding schools.[44]

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[40] Submission No. 36
[41] Submission No. 35, p.30
[42] Submission No. 31
[43] Submission No. 39
[44] Submission No. 43, p.5

Issues Raised – Social and economic

At a tertiary level, rural and regional residents may use broadband services for distance learning. At the University of New England, for instance, 600 courses are available on-line and 12,500 of its 17,000 students study this way at both undergraduate and post graduate level.[45] 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. [46] The Riverina Institute of TAFE delivers more than 30 courses online.[47]

Clearly, high quality communications can improve the level of educational opportunities for people in rural and regional communities.

3.3   Social impacts

Adequate broadband services could mean that people in rural and regional areas have the same opportunities for social and recreational activities as metropolitan residents. This can reduce any disadvantages from being in an isolated location. Furthermore, because much government and business information is available on-line, high speed broadband access can also improve the level and quality of services available to rural and regional communities.

3.4   Businesses impacts

The Department of Commerce submission cited a US study comparing rural and regional communities with and without access to broadband. Communities with broadband access showed greater growth in employment.[48]

The Department of State and Regional Development cited a number of examples where access to broadband has attracted businesses to particular areas and enabled them to serve clients within Australia and around the world. For instance, ADSL based broadband commenced in Uralla in 2004 and the community encouraged several IT businesses to move there. These firms have contributed to the local economy and benefited the existing local businesses by advising them on the possibilities of broadband technology. Broadband services in Parkes have enhanced its competitive advantages as a centre for logistics management. The Eastmon Group in Glen Innes is able to service 5,000 digital printing centres in Australia and New Zealand because of the accessibility to high speed broadband. The Department believes availability of broadband is a significant factor for firms in determining their location.[49]

Consequences of lack of adequate broadband

The Committee heard particular cases where the lack of broadband services was hampering business or health service development. There are also broader social and regional development consequences of the uneven distribution of broadband services.

3.5   Business

The Department of State and Regional Development submission noted that lack of cost effective broadband services could constrain business growth. For instance, the Hermes

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[45] *ibid.* p.5

[46] Submission No 40, Royal Australasian College of Dental Surgeons

[47] Submission No 35, p.29

[48] *ibid.* p.17

[49] *ibid.* p.26

Poll Dorset Sheep Stud in Cowra has difficulty sending data to customers about its animals using existing internet connections. ADSL was unavailable and it considered satellite technology too costly. Outback Bed Inc., an on-line accommodation business risked losing bookings because of inadequate phone and internet coverage.[50] The Northern Inland Regional Development Board noted that businesses needed high quality communications to maintain effective business relations and compete internationally. Specifically, some suppliers in metropolitan areas now only accept orders via internet or email which is difficult for regional businesses using slow dial-up connections.[51]

One company based in Uralla found lack of expected levels of broadband service severely hampered their operations and certain projects needed to be done in a Community Technology Centre or even in metropolitan areas.[52]

3.6   Health
The Committee notes that one consequence of a lack of adequate broadband in certain areas could be lower quality health care.

NSW Health's submission considered that lack of high speed broadband hampered the recruitment and retention of specialists in rural areas because they would not be able to use the medical information systems available in metropolitan areas. Hospitals are increasingly reliant on the rapid transmission of medical records and medical imaging for diagnostic purposes. These depend on high speed internet access to work well.[53]

In addition these health systems need to be accessible to all practitioners. The Royal College of Pathologists warns that broadband can either unite or permanently divide the hospitals and general practitioners in rural and regional Australia because the NSW Electronic Medical Records has excessively complex security and is not welcoming. This limits the ability of practitioners to use the system and provide patient information.[54]

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists notes that the infrastructure to support the potential health applications of broadband has not yet been realised.[55]

3.7   Social and economic consequences of the Digital Divide
There are potentially grave consequences for communities without adequate broadband services. Not only are they missing out on the immediate economic and social benefits, existing populations and businesses may move to locations with better services. These smaller poorer communities can then be left behind as victims of the digital divide.

In 2001, Curtin concluded that, in Australia, there remains a regional dimension to the digital divide:

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[50] Submission No. 35, pp.28-29

[51] Submission No. 26, pp.3-4

[52] Submission No. 35, p.27

[53] Submission No. 36

[54] Submission No. 41

[55] Submission No. 39

Issues Raised – Social and economic

> Information technology has been heralded as the medium which will lead to the 'death of distance', whereby, individual citizens and businesses irrespective of where they are located, will be able to participate effectively in the new knowledge-based economy and society. In other words, the tyranny of distance, felt so acutely by many of those living in rural and remote Australia, has the potential to be undermined if not extinguished by the Internet.
>
> However, the removal of government service offices from country areas, the closure of banks, the introduction of national competition policy and the part-privatisation of Telstra, have ignited some concerns amongst those in rural and regional Australia about being left behind in the new globalised and Internet-connected world. With this has come an anxiety that uneven distribution in access to the Internet may further separate the country from the city.[56]

In a more recent study, the Australian Institute for Social Research noted that:
> As information and communication technologies (ICTs) gain in capacity and usage as part of a shift to an 'information economy', their importance to individual life chances intensifies.[57]

The Institute noted that it is important to locate the digital divide in its wider social context, but that it is essential that the connectivity related barriers sustaining the divide in rural and remote locations are understood and addressed. Studies cited in the report found that the greatest deterrents to high quality on-line learning involved problems with technology and access to the internet, including bandwidth, fast and affordable internet access, speed of software , access to up-to-date equipment and infrastructure.[58]

3.8   Population drift

In its submission, the NSW Department of Commerce states that without broadband, regional and rural communities will continue to see a declining population. It says the urgent need for a new generation of voice, data, video, telemetry and telematics has been identified in every industry and without these services, rural and regional NSW will miss out on the productivity gains and enhanced service delivery available in metropolitan areas.[59]

The Namoi Regional Organisation of Councils cited a study showing that there were lower levels of people in the area in the 20 to 44 age group which suggested these young people had moved to metropolitan areas in search of employment or education and were likely to stay there. The submission cited another study which recommended rolling out broadband as quickly as possible to retain young people in rural and regional communities as:

> Modern communications is a "must have". Young people simply cannot function well at work or at home without broadband internet access.[60]

The Regional Organisation of Councils also saw lack of broadband as a major disincentive to new industries and families (the "tree change" group, who expect a higher service level as

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[56] Dr. J Curtin, Parliament of Australia, Parliamentary Library, Current Issues Brief 1 2001-02, 'A Digital Divide in Rural and Regional Australia?', pp 2-3

[57]   The Australian Institute for Social Research (2006) *The Digital Divide – Barriers to e-learning'* The University of Adelaide, p 4

[58] *ibid* p.13

[59] Submission No. 30

[60] Brown JG (2006) Submission to the Rural and Regional Services Committee Inquiry into Retaining Young People in Towns and Communities. Submission No. 29, p.5

the business norm and will question a move to a rural and regional environment if they do not have the same level of access as they are used to.[61]

> The Committee would be interested in learning more about potential consequences for rural and regional communities if communications services are not adequate in the future.

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[61] Submission No. 29, p.9

Appendix - List of Submissions

1. NSW Rural Fire Service Canobolas Zone

2. Clarence Valley Council

3. Mr Alex Portnoy

4. Mr Zlatan Topojani

5. Mr Jason Marshall

6. Mr John Woo

7. Mr Mick Geros

8. Mr Ron Coleman

9. Mr Toby Ekman

10. Wollondilly Shire Council

11. Soul Communications Australia

12. Mr Stephen Parker

13. Axia Real Broadband Pty

14. CountryEnergy Australia

15. Confidential

16. Kempsey Shire Council

17. Mr Yves Picard

18. Central Regional Organisation of Councils

19. Wagga Wagga City Council

20. Riverina Regional Development Board

21. Mr Kerry Guerin

22. Mrs Elisabeth Webster

23. Australian Computer Society

24. Telstra CountryWide New South Wales

25. NSW Farmers Association

26. Northern Inland Regional Development Board

27. Mr Matthew Holden

28. Dr Ron Hyne

29. Namoi Regional Organisation of Councils

30. Department of Commerce

31. Royal Flying Doctor Service (South Eastern Section)

32. Rolyngra Telecommunications Services

33. Macarthur Regional Organisation of Councils (MACROC)

34. MillersIT

35. NSW Department of State and Regional Development

36. Department of Health

37. Department of Education and Training

38. Confidential

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

40. Royal Australasian College of Dental Surgeons

41. Royal College of Pathologists of Australia