



To: House Standing Committee on Infrastructure and Communications

From: Regional Development Australia – South West

Ref: **Inquiry into the role and potential of the National Broadband Network**

Deadline: 25.02.11

Inquiry into the role and potential of the National Broadband Network

“Science is supposedly the method by which we stand on the shoulders of those who came before us. In computer science, we all are standing on each others' feet.”

— **Gerald Popek**, Computer Scientist

The following submission will deal with each of the terms of reference sequentially, briefly examining the capacity of the National Broadband Network make a contribution to the listed focus areas.

This submission will particularly look at the benefits to regional Australia. Since the country's metropolitan areas largely take care of themselves in telecommunications infrastructure terms, it is the regions that generate national wealth but have smaller populations and so require the greatest level of government support.

We contend that government exists to provide equity of service access for all Australians and must act accordingly, even at the expense of economic rationalism.

Delivery of government services and programs

More than 78% of Australian households have access to a computer (ABS 2008-09) with five million households having internet access. Penetration is increasing and it is therefore more likely that residents will seek online information on government programs.

The irony is that many of the programs for outer regional, remote and very remote areas cannot be properly accessed by those people because existing services are sub-standard. Since Telstra is now a private operator and is responsible for the vast majority of telecommunications services, its focus is to service the needs of shareholders and not residents, thus investment is in areas of population mass.

It is important to note that the potential of NBN will only be fulfilled if it acts in the interest of all Australians, not just those who live in larger centres.

It is worth noting, however, that even blanket broadband coverage will never replace having people on the ground. The recent natural disasters that have befallen Queensland served to remind us that everyone, bar those affected, could track Cyclone Yasi on the BOM website.

Benefits summary

- Greater access to programs for all Australians
- Enabling the dissemination of information
- Transparent governance (tendering for example)

Achieving health outcomes

The potential to boost health services is tremendous. Conditional upon there being an unbreachable internet security system, health professionals can share patient records (for example, between a GP and information on a patient in hospital).

Databases and specialised programs could also be used for research purposes as greater data access allows greater accuracy of trials, trends etc.

High quality data links can also facilitate the transfer of images. For example, x-rays or scans can be sent from regional locations to specialists or GPs in real time. This would reduce delays and speed up medical intervention. There might also be an environmental saving of chemicals and film.

A regional project of which RDA is aware, is the sharing of a remote area online central booking point so patients needing to see specialists can aggregate demand and make a journey worthwhile. The flight costs could also be shared by being available to several medical practitioners travelling together.

Benefits summary

- Sharing records
- Enabling data collection for research
- Transfer of images
- Improved remote and very remote area patient services

Improving the educational resources and training available for teachers and students

RDA is aware of a SW eLearning project that will deliver outstanding educational outcomes and help close the gap between metropolitan and regional students. The project would see schools on the same timetables and linked classes through an advanced system combining ideas from video-conferencing and wiki sites. Far from delivering core subjects, this could be extended to create a critical mass of students who might choose accountancy or design and technology for example.

There is little doubt that high internet speeds in regional areas will add significantly to the educational experience and enable post graduate education too.

Those delivering online education tend to forget that some areas still endure dial-up speeds which impact on lecture quality and is a barrier to submitting larger coursework files.

- Benefits summary
- Equitable access for all students
 - Greater choice for all students
 - Solution to regional 'brain drain'
 - Keeping children in their communities
 - Retaining peer links and professional development for teachers
 - Greater access for post graduate online learning for regional people

The management of Australia's built and natural resources and environmental sustainability

First class connectivity enables smarter management of people movements – on foot or by vehicle.

Fast telecommunications infrastructure can mean that people remain connected without having to travel. Reducing travel is environmentally sound.

- Benefits summary
- Improved traffic management
 - Less traffic on the roads / less fossil fuels used
 - Easier data collection

Impacting regional economic growth and employment opportunities

Western Australia accounts for 43% of national exports through mining and agriculture – none of these economic assets are in cities. It is therefore vital that the mainstay of the national economic interest is supported by appropriate levels of telecommunications infrastructure.

The people who contribute to the national interest by living and working in the regions should also be supported. Only through good infrastructure will the regions attract and retain appropriate workforces.

Quality regional telecoms infrastructure additionally supports regional opportunity for such services as call centres or administrative headquarters. Regional locations have more stable workforces, lower rents and with quality data links there are good reasons for business to choose non-metro sites.

- Benefits summary
- Infrastructure support for high value business
 - Opportunities to reduce FIFO and boost regional towns
 - Underpinning opportunities for metro relocation to regions
 - NBN rollout itself (and maintenance) will create jobs
 - Australia must remain internationally competitive

Impacting business efficiencies and revenues, particularly for small and medium business, and Australia's export market

Ten years ago a handful of businesses operated with computers. Now every business has a computer and if the net is down, it is difficult to operate. This revolutionary shift has come in a decade and shows a divide between those who move forward and those who do not. Without equitable connectivity speeds, there will be another growing divide between the haves and have-nots. To deprive business of fair access to good line speeds is to disadvantage the disadvantaged. Many businesses are also home businesses who provide online services.

New technologies drive efficiency and will enable regionally-based businesses to better promote themselves – it would not be possible to build a website on dial up for example.

Consider that modern day businesses receive and process payments online. They perform banking on the internet and communicate with staff on the internet.

Internet speed will generate businesses not yet conceived. Rather than hiring a DVD, we will browse the virtual movie store, pay online and download our choice; we will have eMags; and, crucially, there will be no more business frontiers.

- Benefits summary
- Equitable business base across all areas
 - Availability of business banking
 - Access to cloud computing and offsite data storage facilities
 - Boost to home business
 - Marketing opportunities in online business
 - In a global economy, the internet is a fundamental resource
 - Raft of future business that hasn't been 'invented' yet

Interaction with research and development and related innovation investments

This area has largely been covered by other comments. Suffice it to say that a national network would facilitate data gathering and sharing of knowledge across disciplines. The essential point is that NBN would remove barriers and frontiers.

Another fundamental line of reasoning is that regardless of any debate over population density and cost, an Australia that is left behind other OECD nations will be an Australia that will inevitably suffer economic decline. Mineral resources will not last forever and some diversification to a hi-tech economy will pay back over time.

A South West example is in computer-generated graphics where a local business creates digital images around the clock by employing people in different countries so the sun never sets on a project which is delivered faster. This kind of innovation would be impossible without high speed data links.

In many ways innovation is a risk because if Australia does not respond then it risks exporting consumer choice (and thus money) overseas. IBM found itself struggling and it took a great deal of time and money to catch up. Chairman Thomas Watson said: I think there is a world market for maybe five computers.”

- Benefits summary
- Keeping up with other OECD nations
 - Combining a primary industry sector with a hi-tech sector
 - Economic diversification
 - Investment in onshore apps development

Facilitating community and social benefits

The social networking phenomenon is proof that connectivity is important to the next generation. It is widely recognised that we bleed the region's brightest to the cities. It must also be remembered that the decision-making on NBN is being made by GenX and Baby Boomers, not the Y and iGeneration that has grown up with the technology. Having social offsets and having quality social networking facilities goes some way to mitigate issues of networking.

For the broader community, the benefits in health, education, business and environment have been outlined.

- Benefits summary
- Social networking
 - Internet banking (especially for regional people)
 - Education and health
 - Business
 - Removing the sense of remoteness

The optimal capacity and technological requirements of a network to deliver these outcomes

The risk of technology is that there is always tomorrow's new idea. However, fibre uses light and nothing is faster than light. Therefore the technology is unlikely to change – perhaps the packaging/construction of the fibre may get better, but the principle of transferring data via light will not.

To provide cost savings, there could be overhead delivery using similar principles to traditional telephone lines.

Regional Australians do not judge satellite or mobile towers as a satisfactory delivery model. These methods are slow and as both websites and document transfers are demanding ever more data speeds, nothing less than fibre would be helpful.

If there are to be real outcomes for the whole of Australia, NBN cannot miss the opportunity to set an example by putting regional Australia on the same footing as metropolitan Australia.

As regards optimal data capacity, we cannot continue to plan for today but must think about the distant future. Today's hare is tomorrow's tortoise. NBN roll-out will be so costly that there must be as much future-proofing as possible.

Even if there is no fibre to the door, it must at least be to the node. Additionally, any subdivision should have mandatory clauses on telecommunications provision where practicable.

“640K ought to be enough for anybody.”

— Bill Gates, 1981
