



ACC

Central New South Wales
AREA CONSULTATIVE COMMITTEE



Fibre to the Premises Linkage Paper

Executive Summary

The Central NSW Area Consultative Committee, Central West Regional Development Board and Central NSW Councils have pooled resources to develop a linkage paper that brings the audit of broadband in the region undertaken in 2006 into the context of the Federal Government's National Broadband Network.

Central NSW Councils led the initiative. This document outlines the ways in which the Centroc region is both an area of need and "fibre to the premises (FTTP) ready" and as such is positioned well as a target site for early roll out. We also identify ways in which we are prepared to support the Federal Government with the significant challenges it will have in this visionary nation building activity.

The Centroc Board represents sixteen local government areas (lgas) in the centre of New South Wales. These include Bathurst, Blayney, Boorowa, Cabonne, Cowra, Forbes, Harden, Lachlan, Lithgow, Oberon, Orange, Parkes, Upper Lachlan, Weddin, Wellington and Young. The population of these councils represents over 230,000 people. The Centroc organisation has consistently taken a pro-active role in ensuring that the people and businesses in our area are considered in any communications' advances.

Centroc has lodged a series of submissions to the Federal Government regarding its position. It is particularly heartening to note the degree to which the National Broadband Network (NBN) and the current call for ideas regarding reform to the regulatory environment fit with Centroc's call for affordable, wholesale accessible, scalable and internationally competitive broadband for our community.

Centroc had commissioned and presented to the previous Federal Government a comprehensive study of the needs of these communities. The view expressed by all member councils is that without city comparable communications infrastructure our region will decline rapidly in both social and commercial opportunities both now and into the future.

The proposed NBN is seen as a critical investment in our future and consequentially we welcome the opportunity to provide input to the process. Similarly we are keen to ensure that the best possible technical solution is provided. We are committed and support an investment which will provide fibre optic infrastructure to as many of our people as possible.

The NBN as a terrestrial solution offering metro comparability and scalability including international competitiveness is supported by the Centroc Board.

Consultation has been undertaken with the 16 member lgas of Centroc. This consultation has provided information regarding educational, health and business needs and is provided in an appendix. The document should be read as a linkage paper between current federal policy and the audit of broadband conducted in the region in 2006. This document forms an attachment to this paper.

Centroc notes that the Federal Government seeks advice regarding the regulatory environment to assure FTTP. Our members believe reform in this sector is critical to the success of this visionary national initiative.

Centroc seeks to work with stakeholders including the Federal and State Governments on progressing FTTP in this region.

Centroc, its efforts to secure metro comparable, scalable broadband and the National Broadband Network

It is the view of the Centroc Board that the NBN is critical to the future well being of every community and individual in Central NSW. The NBN will enable people to access services over the internet at the same rate as those in metropolitan areas. Without this facility being available the region will be less able to attract enterprises, staff and professional services.

High speed internet connection is no longer considered a luxury but more a basic requirement no different to the telephone of 40 years ago.

In 2006 Centroc commissioned an audit of broadband in the region This study highlighted that the core inter-exchange network was fibre optic based but that the restrictions to high speed access occurred in the copper network leaving the exchange.

The principal issues were network equipment and in particular “pair gain systems” which were very prevalent even in major regional cities such as Lithgow, Orange, Bathurst as well as our smaller towns and villages.

These issues obviously will be overcome by the NBN and its use of FTTP. A significant issue often overlooked by industry commentators is the service issues which surround these pair gain systems. These systems contribute significantly to service issues and outages particularly when electrical storms or rain are about. This is also a major contributor to the service costs of networks in regional Australia which would be substantially reduced by a FTTP typology.

The Centroc audit informed a submission to the then Federal Government’s Broadband Connect initiative and forms an attachment to this document.

Centroc was very pleased to see the change from FTTN to FTTP as this was always the preferred option for our region. We were very concerned with the previously proposed OPEL solution as we felt it was an interim step to this current FTTP proposal. Centroc was aware of the considerable amount of Telstra fibre optic network in our region and it seemed to make for a far better long term solution to extend that existing network.

Centroc has consistently opposed a scheme which suggested “overbuild” or parallel networks as this is obviously financially unsustainable in our region. This highlights the need for a negotiated outcome or legislative instrument to provide access to the existing Telstra network. The Centroc submission on the regulatory environment attached explores this further.

Centroc’s position and advice has a good fit with the current direction of the Federal Government. We have consistently called for affordable, wholesale accessible, scalable and internationally competitive broadband for our community. Further, we have provided advice that the planning framework needs to be amended to assure broadband is mandated into greenfield development sites.

Finally, we would like to propose to the Federal Government that we are prepared to develop a template for the draft policy structure on planning and development to ensure broadband into greenfield sites as outlined in the media release from Senator Stephen Conroy 7 April.

Centroc as an area of need

The Centroc region has a broad range of need for broadband. Education, tourism, the government and private sectors all report growing needs for reliable affordable broadband.

Many commercial enterprises in the Centroc region have a strong export focus. These enterprises vary between agriculture and mining with some manufacturing. These businesses are concerned that they are struggling with inefficiencies and higher costs as a result of poor data communications infrastructure. Many have complained that they find the Next G Mobile Network inadequate for “main stream” data use.

In regional Australia many businesses are not located in the “high street.” Mining is a major employer in our region and obviously these entities need significant broadband. They are located well out of the major centres. Similarly many industrial parks and commercial centres are often too far away from the telephone exchange to access broadband over copper infrastructure.

A recent example is Cadia mine, who plan upgrades to their mining activities to include international remote operations and require very significant upgrades to their broadband capability, reliability and speed.

Regional universities and airports, due to their large footprint are located well away from the CBD of regional cities and hence often struggle to achieve acceptable broadband services over the existing infrastructure.

These key industries, with a high percentage of professional staff, are keen to ensure that they and their families are not restricted in opportunities due to their locations. Hence a domestic broadband service is a basic requirement to encourage these people to our region.

Centroc understands that the Federal Government has committed to ensuring a roll out that includes a balance of regional and metropolitan infrastructure. We submit to you that regional Australia has a greater need with this region having particular issues.

- **Comparison with Sydney**

The majority of Centroc councils employ Business Development Managers whose principle role is to encourage businesses, often from metropolitan centres, to move to their particular towns. The business parks in many of the towns are unable to offer broadband to all sites. Business may not relocate to our regions without comparable speed, costs and uptime on broadband.

Many of the businesses in the Centroc region provide support and service industries for copper and gold mines. These industries are not as badly affected by the current economic downturn and hence need maximum support to maintain their momentum in these difficult times.

The amount of competition in regional areas is poor. This is not only in transmissions speeds and costs but also in the selection of ISPs with commercial grade capacity. This is evidenced by the variability of performance in our region.

Many local ISPs suffer from congestion which is a result of high cost of backhaul which would be overcome by the NBN wholesale development.

Ai Group CEO Heather Ridout found that over 93% of companies indicated that the internet has had a positive impact on their efficiency/productivity. 66% of businesses believe their business will benefit greatly from faster broadband. 69.7% of regional firms would see a great benefit from faster broadband.

These figures illustrate that regional businesses are aware they are behind and we seek to have this gap addressed.

- **Comparison with international**

The commitment of many of our international competitors to broadband availability applies pressure to our regional business. Our ability to compete against places such as Singapore, UK and the USA are seriously affected by the current network.

The USA has begun a similar process to the NBN, under the new president and this will also put pressure on our agri-business as the farm lobby in the United States is very powerful. The wine industry, mining and particularly the education industries will all suffer if our areas are left on “the back burner” with the FTTP roll out.

We have several universities who compete for international students and broadband is a basic delivery mechanism for these services. With a target market of Asia and the Middle East our universities are competing with other English speaking institutions (eg USA).

The UK, Singapore, Holland and the USA are all headed down a similar path to FTTP with some aggressive timetables. It is important to note that all regard this infrastructure as a basic item for regional sustainability and development.

The most recent Organisation for Economic Co-operation and Development statistics indicate that Australia is:

- 16th in terms of broadband penetrationⁱ
- 20th in terms of the average monthly subscription price for broadband,ⁱⁱ and
- 3rd most expensive for fixed line services for small and medium-sized enterprises.ⁱⁱⁱ

The World Economic Forum ranks Australia:^{iv}

- 14th for network readiness^v
- 16th for the total number of broadband Internet subscribers per 100 population
- 20th for monthly high speed broadband subscription charges^{vi}
- 25th for accessibility of digital content
- 35th for the quality of competition in the Internet Service Provider sector, and
- 29th for the lowest cost of broadband.^{vii}

In addition, the World Economic Forum ranks Australia 22nd and 37th for residential and business monthly telephone subscription charges respectively^{viii}, 12th for both residential and business telephone connection charges respectively^{ix}, 41st for the availability of new telephone lines for business and 22nd for the cost of a mobile telephone call.^x

The situation in Central NSW is one of having lower service levels than our metropolitan brethren in a nation competing in a very competitive international environment. This reduces the competitive advantage of our industries and communities.

- **Issues for regional development**

This paper has been developed by agencies from three levels of government seeking to progress regional development. Regional development is a priority for the Centroc Board. It provides challenges particularly regarding ensuring adequate infrastructure over distance.

For example, an area like Hill End in the Bathurst lga may not appear to be commercially attractive to a carrier based in Sydney or Melbourne. Hill End is currently serviced by fibre optic and has an active gold mine which is currently crying out for broadband services both to run its operation and also to help retain staff.

Retention and attraction of staff is a key component of regional development and the perception of poor education opportunities is a key disincentive. Whilst the attraction of work and lifestyle is strong, the negative impacts of limited access to broadband is seen as critical to family education and development. This has a negative impact over locational preference into the region. These concerns are particularly strong in the mining, medical and professional services employment area.

There are also industrial parks, freight hubs and airports whose tenants are keen to have broadband as soon as possible.

Many vineyards in the Centroc region are suffering now with a lack of broadband facilities. This shortfall is impacting on their ability to promote product to both the domestic and international markets. Some are attempting to use the Next G Mobile Network for their data but this is proving expensive and inadequate for their needs. Many of these businesses are within short distances to telephone exchanges which are fed by fibre optic.

With broadband getting hungrier, students, be they general practitioners undergoing continuing education to ensure accreditation, or school children video streaming, need to be able to access bigger downloads and faster download speeds.

- **Timing –sooner rather than later and the impacts of later**

Centroc believes there are at least two distinct reasons why its region would suit both government and constituents to be early in the NBN roll out.

From a technical perspective almost all telephone exchanges in the Centroc region (Sofala being the only exception) are fed by fibre optic cable now. High speeds are available to members of our population 1.5kms from exchanges subject to carrier concurrence. This means that an extension of the reach of fibre to communities can be achieved quickly by using a connection directly from the local exchange to power poles and then reticulated to premises.

This approach will give the government a rapid rollout which will enable the process to be “fine tuned” in a controlled environment. This controlled environment would be a win from a technical perspective. The rollout would be a good news story and capable of being told by the end of 2010.

A significant consideration is teledensity, particularly of our major centres. Our larger regional centres offer commercial advantage and there is a strong commercial case for early roll out in them. Concurrent, our smaller communities are disadvantaged and early roll out for them will address an ongoing inequity that has cumulative impacts over years holding key rural activities behind international competitors.

The other major benefit is that due to the concentration of mining (hard rock, gold and copper), health and education industries there is an immediate commercial outcome for these critical industries.

This stimulation for these industries will translate into commercial and employment outcomes quickly. A quick outcome is assured with these industries as they are comparatively stable even with the economic downturn. These industries are established now and not speculative and are early adopters of the benefits derived from broadband.

Early adoptive reasoning

Recent discussions between Telstra and the Government on access to the Telstra fibre network strengthens the case for the Centroc region to be considered an ideal “early adoptive region” due to the proliferation of Telstra Network Fibre in this region.

As it is obvious that either by negotiation or legislation, access to the Telstra network is likely, our approach can be more defined. All exchanges bar one in the Centroc area are fed by Fibre Optic. As a result the extension of FTTP either by aerial or terrestrial roll out can be achieved quickly and comparatively economically. This will vary depending on the availability of power reticulation either by pole or underground. Obviously newer estates will be underground where some of these have service conduits available.

Centroc has a regional electricity contract with Country Energy. Country Energy has experience in rolling out overhead optic fibre and there may be some scope to use this existing regional relationship to fast track the roll out in this area.

Centroc appreciates that not all premises will be able to access fibre optic and therefore the 12mbs satellite service will be critical. This will apply to both business and consumer customers alike. There are current satellite services available from organisations such as IP Star but the NBN announcement has mentioned an additional two satellites to provide broadband. Our business customers are particularly keen to know when more information will be available on that service.

Centroc believes that there are many localities within this region which would provide an excellent opportunity for assessing the issues surrounding the roll out of this project in a contained environment. We are sure also that this would give the Government an opportunity to demonstrate “on the ground” action with rapid penetration of the new technology.

- **Centroc as “fibre to the premises” ready**

Please find attached an lga by lga survey of members outlining their needs for broadband. As previously covered, our region has substantial fibre optic services to exchanges and hence it is a short step to extending that reach.

Similarly the Centroc councils are committed to assisting NBN contractors in any way possible to facilitate an early impact in our region.

There are locations of significant commercial or industrial activity which would not appear on the radar of those just looking at population or premises. Most Centroc councils have

submitted their “hero” locations. Those include mining sites which are just coming on stream or planned to do so in the very near future.

Mapping and other information specific to each LGA forms an attachment to this document.

Commentary on the regulatory environment

Please find attached the Centroc submission to the regulatory environment addressing the heads of consideration. In this submission we commend the Federal Government on its actions to date, and seek

- to ensure that governance arrangements are set up such that regional Australia has both a voice and its needs met
- an end to the gaming telecommunications framework and the beginning of a period of retailer and consumer equivalence and certainty where service is customer focussed and presented in plain language
- metro-comparable and scalable broadband services into regional Australia
- to see the Federal Government retain the good sense and fortitude it has displayed to date to ensure that equivalence and equity are embedded in the framework and culture of telecommunications in Australia

Please note that as advised earlier, Centroc are very keen to engage regarding broadband into greenfield sites.

In areas where the Next G network is performing well still leaves the problem of future development in the broadband space which will challenge the mobile phone technology to keep up. An increase of either the number of users or the amount of bandwidth being consumed will reduce the performance of the Next G network considerably. This is a point well known and recognised by Telstra and all mobile phone suppliers.

As the objective of the NBN has always been parity of price and service to metropolitan areas the Next G mobile network is currently unable to comply in either criteria.

The shortcoming of the mobile phone network as a replacement of the ISDN network withdrawal is well known and is currently a focus of groups including the NSW Farmers Association.

Conclusion

Central West NSW is an excellent region to commence the roll out of the FTTP network. It has the advantages of rapid deployment, rapid take up and the opportunity to showcase a regional outcome of Federal Government policy.

The social and financial aspects of this deployment are significant and will provide good news stories consistently for some considerable time.

The Federal Government is assured of the help and support of the Centroc group which will ensure local and regional support of all aspects. These points all make the proposal very controllable.

i OECD, Broadband Portal, June 2008,
<http://www.oecd.org/dataoecd/21/35/39574709.xls>

ii OECD, Broadband Portal, June 2007,
<http://www.oecd.org/dataoecd/22/44/39575002.xls>

iii Organisation for Economic Co-operation and Development, *OECD Communications Outlook 2007*, 2007, p. 214

iv World Economic Forum, *The Global Information Technology Report 2008–2009*, 2009, pp. xvii, 305, 314, 330-334, 341-342, 356, 363

v Network Readiness is an economy's ability to leverage Information and Communications Technology for increased competitiveness and development.

vi Measurement used for ranking is high speed monthly broadband subscription charge (\$US) as a percentage of monthly GDP per capita.

vii Measurement used for ranking is lowest sampled cost (\$US) per 100 kbps as a percentage of monthly income (GNI).

viii Measurement used for ranking is monthly telephone subscription (\$US) as a percentage of monthly GDP per capita.

ix Measurement used for ranking is one-time telephone connection charge (\$US) as a percentage of GDP per capita.

x Measurement used for ranking is the cost of a 3-minute local call during peak hours (\$US) as a percentage of monthly GDP per capita.