Centroc submission to the House of Representatives Standing Committee on Infrastructure and Communications Inquiry into the National Broadband Network

CENTRAL NSW COUNCILS

House of Representatives
PO Box 6021
Parliament House
Canberra ACT

25 February 2011

To The House of Representatives Standing Committee on Infrastructure and
Communications

Re: Inquiry into the National Broadband Network

Thank you for this opportunity to provide advice regarding the need for NBN in Central NSW.

Centroc represents 16 local government areas and their communities in Central NSW. This
is an area the same size as Tasmania with about half the population and a bigger GDP.

Our members have identified broadband as an infrastructure priority for the region. Please
go to our website at centroc.com.au for up to date advice on policy and activity in this area. It
should be noted that our members have invested in an audit of the region that identifies the
telecommunications infrastructure upgrade requirements and this is available on request.
Further, a number of submissions have been made regarding NBN to both state and federal
inquiries and these are available upon request.

Centroc's policy with regard to the NBN is as follows

    a.   any upgrades be affordable and will scale into the future with the growth of
        broadband needs

    b.   there be wholesale access to infrastructure

    c.   there be price parity

    d.   there be no overbuild

    e.   the regulatory environment be amended to enable the above

    f.   that the Centroc region be considered early in the roll out as it is broadband ready
       and is an area of need

It should be noted that the policy of Centroc to date fits well with the direction taken by the
Federal Government.

Centroc seeks support from the State and Federal Governments to take advantage of
significant work undertaken in the region in auditing its broadband needs and capability and
prioritise Central NSW for the National Broadband Network roll out. Centroc seeks to ensure
that landline, mobile and data services are constantly improving and to assure that the
region is internationally competitive.

It should be noted that besides the work undertaken to date, our members are keen to work
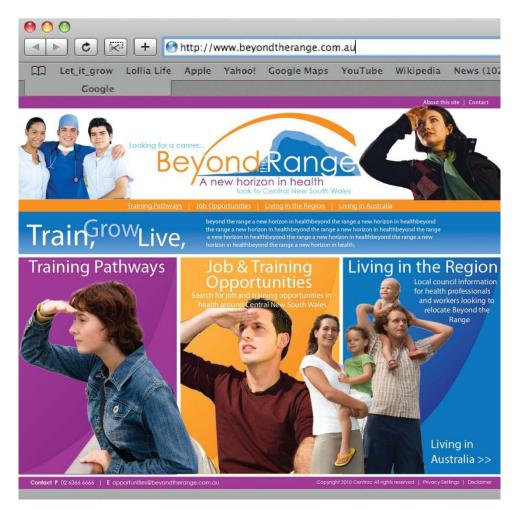with all levels of government on maximising the roll out in our region.

Specifically addressing the criteria requested please find the following.

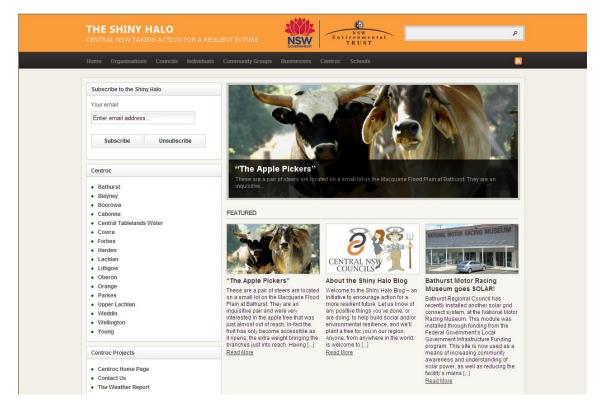**a) the delivery of government services and programs**

Over time the internet is being increasingly used by our members. Initiatives that Local Government has undertaken in this area that require broadband use include:

- Smartforms

- Online DAs

- Payments on line, for example through "Flycke"

- Meeting on line, for example using WebEx

- Websites including for promotion such as filmcentral nsw

- Social interaction and building better local governance such as 'Bang the Table'

- Disaster Recovery using web based products

- Collaborative arrangements between Councils offering considerable cost savings to members being developed using web based products, for example E21

In collaboration with key health agency stakeholders, our members have invested in the "Beyond the Range" program marketing the region using a web based portal to attract and retain health workforce. While still under development this is a cutting edge example of how the web is being used to tackle the priorities of the region. For more advice on this program please contact our staff.

Local Government is beginning to engage in more interactive forms of social media that rely on the web, for example the Centroc residence blog, Shiny Halo at centroc.com.au/shinyhalo This exciting project links communities across Central NSW through their libraries engaging them in more sustainable behaviours.

This will only grow over time. Therefore every member of our communities has a growing need for fast, reliable and affordable broadband so they can equitably interact with all levels of government.

Also of note is the increasing reliance by all levels of government on web based products for evaluation, funding and communication.

Critical to our region is the need for ubiquitously scalable and affordable broadband. This is currently far from the case and our members urge the Federal Government to maximise the land based roll out of fibre through the region as soon as possible.

It is arguable that through the web, the tyrannies of distance faced by all levels of government when working in rural and regional Australian are ameliorated. Of course this applies to health and all other sectors and does a great deal towards addressing the metropolitan/rural divide where our city cousins have so many more opportunities, better education, employment and health outcomes. Just from an equality of opportunity perspective, Central NSW members commend an early roll out in this region.

b) achieving health outcomes;

As advised above, our members are engaging in collaborative arrangements to attract and retain health.

Also of note are the efforts in the region to turn around are poorer health outcomes. One example of this activity is the recent application to the federal government from the region for state of the art cancer care services.

E-Health -Cancer Care Connectivity in Central NSW

Central NSW is growing in its capacity delivering a web of cancer care services, including e-health.

Information support and e-health services of the proposed Cancer Care Program for Central NSW

The implementation of the information support services will provide the connectivity and underpin the coordinated approach to cancer care through two major components:

a) **The Chronic Disease Management System** (CDMS) will provide shared cancer care plans developed by GPs and Nurse Cancer Care Coordinators which will provide a coordinated approach to cancer care planning; and

b) **The Medical Archive**, a purpose built, grid based health image storage and management solution.

Key features include:

- A **broadband-based** collaborative care management service, the CDMS facilitates collaboration and tracking of **best-practice care plans** and enables compliance with plans through the use of alerts and electronic reminders.

- The CDMS had been used in a number of trial regions, including in the Barwon region, near Geelong in Victoria, and in the Goldfields region in Western Australia. Benefits achieved from the trials to date have been an improvement in best-practice care, **a five-fold increase in follow-up**, an increase in GP productivity of 250%, and **collaboration** increased by 200%.

- The CDMS has the potential to significantly improve chronic disease management delivery in greater western NSW through expansion of collaborative care

neo-Pet truck

services, establishing telehealth, **e-referral** and **e-prescribing** in a primary care e-health solution.

- A significant benefit from the CDMS is making available **primary healthcare information** and data that has been previously unavailable.

- Strong alignment with both the **NeHTA** standards under development, the **National E-Health Strategy,** and the National E-Health Roadmap is a key feature of the CDMS, as well as compliance with e-health standards and requirements such as authentication services and healthcare provider directories.

- The **National E-Health Strategy** has identified a number of key High Priority Solutions and Infrastructure such as telehealth, e-prescriptions, chronic disease management, electronic information sharing and electronic consultation support, which are incorporated in the CDMS. Unique Healthcare Identification and a National Authentication Service for Health, key E-Health Foundations in the Roadmap, can also be used by the CDMS solution when they become generally available.

- **No duplication** will result as part of the implementation of the CDMS, as it provides the supporting infrastructure for chronic disease management models of care.

- **Secure access** is provided to all users through a web portal which receives demographic and clinical information from GP practices, using existing secure electronic referral mechanisms. Web interfaces are provided to e-referral and messaging services, electronic health records and hospitals (eg. hospital discharge plans).

- Sophisticated **decision support** is provided through rule-based technologies (patent pending).

- Thorough testing has been carried out and the CDMS is well established and operating in rural areas in Victoria and Western Australia.

- Existing public broadband networks are utilised, as well as the future National Broadband Network

- Consistency with **privacy** legislation, such as the Health Records Act and Health Privacy Principles is a key feature of CDMS. Informed consent is obtained from patients prior to clinical data sharing, and there is an option to use de-identified data for research purposes. To date patients and providers have been satisfied with CDMS' privacy protection.

- Security requirements are met through user access via SSL connections, with username and password and rules for strict password management. For secure e-mail between GP practices and the CDMS, PKI encryption is utilised. The National

Authentication Service for Health will be used once it is available.

- The hosting of the CDMS is undertaken by a secure, high speed, broadband network, SWARH-Net, a "qualified provider" under DoHA's Broadband for Health scheme, connecting community services and hospitals across the South Western Victorian region of Barwon. Networking infrastructure and a highly redundant server is provided, and there is a continuous operation supported of 24/7/365, that protects against data loss.

As a web-based ("cloud") service **minimal maintenance** is required.

An open services-oriented architecture provides a range of benefits such as customisability, adaptability, reduced total cost of ownership, extensibility and "future proofing".

The Hewlett Packard (HP) Medical Archive Solution (MAS) will enable the Greater West Regional Cancer Centre to **archive, store and distribute diagnostic images** across the state's geographically dispersed clinical network.

The MAS satisfies the most demanding retrieval rates for radiology, retrieving as many as **35,000 large images per hour**, through low latency streaming transport and dynamic load balancing across a Storage Grid.

The solution also provides **integration** with **Care Plan Management**, Hospital and Community Health Information Systems as an important support data store of a patient's health record.

c) **improving the educational resources and training available for teachers and students;**

Broadband offers particular support to Central NSW Communities as they engage in learning. It is important that fast speed and scalable broadband outreach to students well outside our CBDs.

Please find following some advice on educational needs for broadband in our area.

Case Study – The Flannery Centre

Central West Group Apprentices (CWGA) and Skillset plans to construct a new single storey building of for Skillset and CWGA. It is intended to accommodate 180 students and 38 staff. The site is a greenfield site in Bathurst located adjacent to the existing TAFE site and within 500m of CSU, the Technology park and Mount Panorama.

The primary aims of this facility are to a) provide technical and "green skills" training for apprentices and trainees b) assist small and medium enterprises adopt low carbon business models c) be a learning centre for individuals and community to adopt a low carbon lifestyle.

The aim of the Flannery Centre's design is to create an energy efficient building that meets the immediate and long term teaching and training needs whilst providing the Central West region with a "live" example of sustainability in practice using conventional materials and construction methods.

Orange and Education – focus on health

CSU Orange campus has increased its enrolments in 2010 by 18% in Orange in its new courses of dentistry, physiotherapy, and pharmacy; the agricultural business management course is also increasing its numbers. There has been over $65m committed by the Federal government in the new courses, especially in the health sciences, and these are now heavily reliant on vfb as course lectures and provided live to other campuses (such as Dubbo, Bathurst, Wagga Wagga and Albury) via the internet. As additional students reside in Orange to study at the university there is increasing demand for vfb to access CSU sites, do research, download notes and resources, conduct interaction, etc

The numbers at CSU in Orange in Health Sciences and Agribusiness are expected to double over the period 2009 to 2014, from 451 students to 865 students.

The training sector is a vibrant industry offering a range of services and vocational opportunities, many of which require students to access the internet for resources and information.

a) management of Australia's built and natural resources and environmental sustainability;
b) impacting regional economic growth and employment opportunities;
c) impacting business efficiencies and revenues, particularly for small and medium business, and Australia's export market;

Bathurst – an education cluster

Bathurst has growing education cluster currently of 55 institutions in the area, catering to all levels and ages from Pre-School to Tertiary Education like University or TAFE. There are a variety of public and private primary schools with many being in close proximity to residential

areas with well established and reliable school transport. These features continue into High School with Bathurst being home to many private institutions striving for excellence with boarding available.

Over one-third of students attending Bathurst institutes are from outside the region with a significant proportion from overseas, and the educational sector employs directly over 2000 employees.

These institutions not only provide excellent education, but also many of their students reinvest their skills into the local economy, providing our city with some of the best skills on offer.

The region has many innovative concepts in development including The Australian Centre for Science Technology and Emerging Industries and the Flannery Centre. These to name only two demonstrate that Bathurst has an established unique and solid technology base with a business community and Regional Council that is willing to grow and support new opportunities.

Case Study: Central NSW Growing our own health workforce though pathways in training from Primary School through the post graduate study

Central NSW are supporting the growing of our own health workforce through a variety of strategies where the following organisations are working in collaboration:

Charles Sturt University
The Department of Education and Training
including schools and Western TAFE
Central West Division of GPs
Aboriginal Medical Services
GP Logic
Rural Doctors Network

In its initial phase the program uses a web based marketing portal.

d) Interaction with research and development and related innovation investments;

Case Study: The Australian Centre for Science Technology and Emerging Technologies

Please find advice following regarding the new The Australian Centre for Science Technology and Emerging Technologies.

Also of note is the work being undertaken in the region on agricultural research and development for example by Central Western Farming systems who have an online database of over 400 members. Their programming uses web based tools to provide on ground research and advice on improving agricultural practice in the region

The Australian Centre for Science Technology and Emerging Industries was first proposed in 2000, with the concept of establishing a first class technology centre in Bathurst. The project has since progressed to feasibility and conceptual illustrations have been prepared.
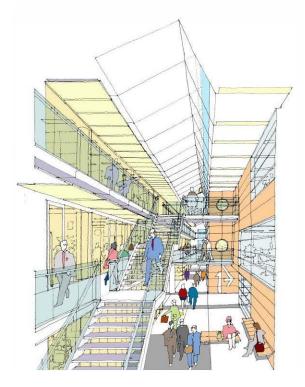
The Australian Centroc for Science Technology and Emerging Industries "will open the door for Australian inventiveness to steal a march on other countries in breaking into export markets with next generation goods and services.

WOODS BAGOT Australian Centre for Science Technology & Emerging Industries. Stage 1 - Concept Perspective View

The establishment of "The Australian Centre for Science Technology and Emerging Industries Bathurst" (ACSCEI) has also drawn wide support including Educational Institutions and both public and private sectors. *"The resulting designed synergistic environment will help promote the cross fertilization of technologies and the greater demand for shared facilitation"* (Forgan: 2003:79)

The Centre will have wide spread benefits for both the community and education and industry sectors. Through the creation of new employment opportunities and support of existing and emerging industries, the establishment of ACSTEI will achieve great economic and social benefits not only for Bathurst but the Central NSW region.

e) facilitating community and social benefits

Given the poorer health and educational outcomes of people in regional Australia including Central NSW, it is arguable that investment in technology in this region will offer equity in these critical areas of human need.

Also outlined above is the way in which local government is using the web to support a range of diverse activities in bettering life in Central NSW.

Better broadband is changing the capabilities of farmers in the region, Norm Mann a cattle producer in Bathurst has the following to say "Optic fibre runs past my place to Fremantle. We tried everything through trial and error. It took 2 years of trying and failing differing technologies and at last a 6ft antenna on the front of the roof gets a great wireless signal line of sight from Mt Panorama. I can't tell you the difference it has made to not just our business, but every day life for my whole family. It certainly gives as a competitive advantage."

Such improvements in business opportunity and importantly, flexibility in work offer added value rural Australia. Where rural people can work online they are able to provide a social benefit while being geographically isolated. This is very important given the parlous state of transport options in Central NSW.

Attraction and retention 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.

Culture is another sector which is delivering regional benefit through the web. Here the focus is on young people.

E-Arts programs in youth & creative industries

ArtsOutwest Young Consultants KickStart Project is all about giving responsibility and opportunities to Young People so that they can influence and shape a program of arts activities in their region. This project will get the network of Young Consultants started and inspired, help the Young Consultants to build their own framework for delivery, provide skills to make the network effective, and set up communication avenues for the group to be ongoing.

The above project relies heavily on broadband, both on young people having access to it, and on having the quality of connection to share a range of media, such as the films they make, the music they record or the photos they share. The geographical size of our region, the lack of transport options for young people, and the time constraints on young people mean that the only way that we can run an effective network of young people across the Central West is by creating an online presence. We are doing this by having a wiki, developing content for ABC ArtPost, recruiting the network using Facebook, as well as creating a Young People's Arts OutWest webpage. There are young people in the region who live in areas not serviced by broadband, making it hard for them to participate in this project and making them feel further isolated.

Creative Industries

The research carried out in the *Central West Creative Industries Survey 2008* showed that the Creative Industries accounted for $62.3 million in gross regional product for the region. At that point 38% of respondents were promoting their goods and/or services online.

A growth area for employment in the Creative Industries in the Central West between 2001 and 2006 was in film and television services.

"you cannot upload your fabulous fife-fifty megabyte film if you haven't got bandwidth … if there is good broadband service and good telecommunications services in regional New South Wales that is a great driver for creative people to move to regional areas. If you can't get the services it prohibits you doing business around the world, internationally. Because you can do business around the world, it doesn't matter where you are located if you have good telecommunications".
Elizabeth Rogers, CEO of Regional Arts New South Wales at the launch of the *Central West Creative Industries Survey 2008,* Canowindra, April 2009.
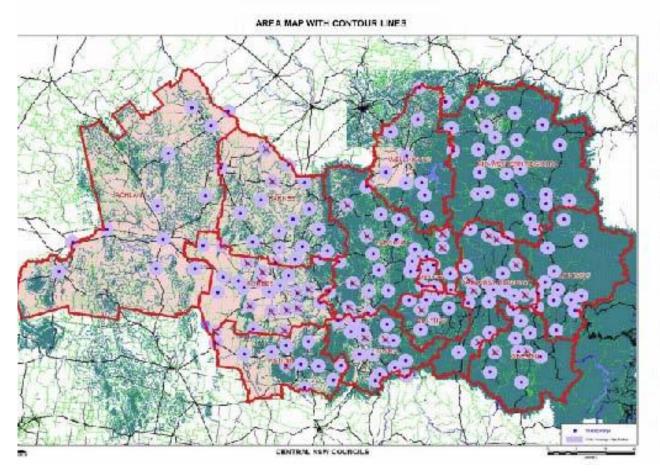
In the 2008 survey 15% of Creative Industries in the Central West were selling overseas. This has the potential to grow if broadband services improve.

Jewellery maker Nathan Thomas was Sydney based. Having successfully established himself both nationally and internationally, he realised that he could have a better quality of life as well as minimise his overheads by moving to a regional centre. Nathan now works from Bathurst where he sells directly around the world via his website *http://www.darkcloudsilver.com/* s well as taking commissions.

Nathan is able to do this because he is based in Bathurst where broadband is available, and the technical requirements can be met. However many people in the Central West do not have access to broadband, while other Creative Industries need to be able to use large files and need high speed connection.

f)   the optimal capacity and technological requirements of a network to deliver these outcomes.

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.

Map showing the region's enabled exchanges with 5km radius. Those marked with an X have less than 20 services operating from them.

It is Centroc's position that there should be as much terrestrial outlay as possible. Given the topography of this region and the experience reported back from the community on the difficulties with satellite and wireless technologies, our members are keen to ensure that the maximum amount of fibre is rolled out.

Of note is the amount of fibre already in the region, the teledensity of some of our larger communities and the proximity of the region to Sydney.

Conclusion

Central NSW Councils suggest that our communities are keen to embrace broadband sooner rather than later. Our Councils have already invested in auditing the region and are keen to work with all levels of government on facilitating the roll out of the National Broadband Network in this area.

Once again, thank you for this opportunity to provide feedback to the Federal Government on this critical nation building infrastructure and its implications for our region.

For more information on Centroc please go to our website at centroc.com.au

For more information on Centroc and broadband including copies of past submissions regarding broadband please contact our Executive Officer on   .

Yours sincerely

Cr Phyllis Miller OAM
CHAIR
Central NSW Councils (Centroc)