

Submission by the

Murray Regional ICT Committee

CountryTell consortium

To

DCITA discussion papers

Broadband Connect

Clever Networks



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Introduction

The allocation of public funds to subsidise improved broadband connectivity in regional Australia is acknowledgment that the traditional telecommunication carrier market model has failed regional Australia and cannot achieve this critical pillar of regional development.

National and international experience confirms that access to fast high capacity interconnectivity is fundamental to productivity gain and economic growth in all facets of regional well being. This submission presumes this is a given and accepted fact.

Consequently, the Australian Government programs must move from a solely pricing focus to recognising the value of our new paradigm which enables the rejuvenation of regional Australia. Building the new networks indicated by the philosophy we will outline, has incredible potential to build community capacity, and enhance regional social and economic outcomes. Adopting the new paradigm has extraordinary significance to the nation.

Two key elements need to be closely examined in considering how to expend the funding now proposed. Success will require a paradigm shift in thinking.

1. The traditional telecommunication carrier business model (the carrier model) has failed regional Australia. Yet the nation is in danger of replicating the mistake of relying on the perspective of the Telecommunication Carriers in determining how regional Australia achieves sustainability in the communication space. This is the paradigm of the past and is wrong.
2. **Sustainability can only be achieved by adopting a model with a planned regional development focus.** By analysing and planning for economic development needs at a regional level, under a national framework approach, it is possible to implement cost effective solutions which are sustainable and address the discreet needs of regional development for every community. This solution does not rely on the carriers. This is the paradigm of the future and is right.

Why the traditional carrier model is past history for regional Australia.

- The traditional carrier model is based on population numbers which regional Australia does not have to the critical level required for ongoing sustainability – carriers continue to model on the basis of return per user, etc
- The traditional carrier model is based on 'one-to-one' customer relationships which do not satisfy industry, municipal or community networking needs.
- The traditional carrier model is based on a return measured on a profit basis – this is a focus on sustainability of a carrier entity – the focus should be on the sustainability of the regions – the new and correct paradigm.
- The traditional carrier model decrees the mode of delivery of service using technology decreed by the carrier based on the carrier profitability and comfort zone, financial and vested interest.
- The traditional carrier model does not deliver technology or services based on identified need for regional development, only to meet commercial goals. This is a distortion of the real market which should be measured in the context of the triple bottom line – it is our contention that the roll out of alternative infrastructure to meet identified need and enhance regional development is viable, sustainable, and economic regardless of the carrier perspective.

The New Paradigm

– Planned investment, developing and sustaining Regional Australia

A planned and holistic approach is essential to optimise the future of regional Australia. However this approach must be a 'real' community based approach, regional, but granular enough to enable constructive engagement of smaller communities. It is critical to understand that 'one-size' won't fit all, no matter how attractive that premise might be to funders and political decision makers.

Any investment by the Commonwealth should require programs to be structured, and planned to meet regional needs, **with needs identified by regional communities, and solutions *determined by regional communities***. Strict adherence to ***Open Standards*** and ***Open Access*** is required to ensure cost management and capacity for integration.

Who are we?

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This submission is made on behalf of the Murray Regional Development Board (MRDB) and the membership of the MRDB's Regional Information and Communications Technology (ICT) Committee, details of which are listed hereunder.

The NSW Regional Communities Consultative Council (RCCC) also supports this submission and the CountryTELL Regional Development model for telecommunications for regional NSW. The RCCC - 'A voice to government from country people' – provides advice to the Premier, the Minister for Rural Affairs and the Government on issues which impact on rural and regional NSW. Details of the RCCC are also provided hereunder.

Collaborators who have also expressed their desire to support his submission include NSW Rice Growers, Paige Institute, Geelong G21 Group, the NSW Forests Plantation group, Wangaratta City Council, NetC.

Assistance and collegiate exchange has also been rendered to, amongst others:

- **Hervey Bay Municipality,**
- **Palm Island,**
- **Wagga Wagga Council (CRU),**
- **GDI (Qld)**
- **Kalgoorlie Boulder LGA,**
- **Darling Downs,**

in anticipation of these entities making their own submission.

MRDB's Regional Information and Communications Technology (ICT) Committee members/partners include:

Murray Regional Development Board (includes 17 NSW and Vic Local Government Areas (Councils and Shires)

- Wodonga City Council
- Albury City Council
- Upper Murray Regional Library
- Albury Wodonga Development Corporation
- Greater Southern Area Health Service
- Wodonga Regional Health Service
- Health Albury Wodonga (cross-border Health service delivery partnership)
- Riverina TAFE (southern NSW)
- Wodonga TAFE (North East Vic)
- Towong Shire
- Indigo Shire
- Greater Hume Shire Council
- NetIntellect Pty Ltd
- Allcom Pty Ltd
- Multi Media Victoria - Representative: Manager, CAN Program, Department of Infrastructure
- NSW Office of Information Technology, NSW Dept Commerce - Manager, IP, Multimedia & Wireless Development
- Charles Sturt University (also representing AARNET)
- La Trobe University
- Albury Wodonga Business - representing all Chambers of Commerce
- Continuing Education Centre (Wodonga; Inc. "Learning Cities" Forum)
- Scots School, Albury
- Murray Regional Organisation of Councils
- Soul (formerly SPTel)

ICT Committee strategic alliances:

- Soul (formerly SPTelemedia)
- UT STARCOM
- Tropos
- Intel
- AAPT
- URSYS
- SERCK
- CEOS

Murray River Regional Telecommunications Company t/a CountryTELL (Not-For-Profit) Board members

- Chair: Lynda Summers FAICD, MBA, Deputy Chair, MRDB; Chair, MRDB Regional ICT Committee; Deputy Chair NSW Regional Communities Consultative Council (RCCC); Lecturer, Investigations Charles Sturt University
- Lynne Makin - Chief Executive Officer/Library Manager, Upper Murray Regional Library; President, Libraries Australia (peak body representing all State Librarians)
- Peter Crowe - Executive General Manager, NSW State Plantation forests
- Les Boyes - Former Mayor, City of Wodonga (retired)

ICT Project Officer

- Rob Connell, former Lecturer, School of Business, CSU; IT professional (18 years - specialist in Marketing Applications on new technology platforms); Consultant to State, Federal and Local Government and industry; Commonwealth Demand Aggregation Broker, Southern NSW and North East Victoria. Policy advisor to DCITA (Federal), MMV (Victoria).

New South Wales Regional Communities Consultative Council

In 1996, the New South Wales Government established the Regional Communities Consultative Council to make sure that the Government is informed on the issues and concerns facing country people in NSW.


The Council comprises representatives from 13 different rural and regional interest groups and provides advice to the Premier of NSW, the Minister for Rural Affairs and the Government.

The role of the RCCC is to:

- advise on the broader impact of specific government initiatives, policies and services on rural and regional communities;
- advise on opportunities for government initiatives which advance the social, economic and environmental development of rural and regional NSW;
- advise on regional communities' access to information on government initiatives, services and programs being delivered to rural and regional NSW; and
- advocate changes which improve the quality of life for rural and regional communities.

The overarching theme of the RCCC is the sustainability of rural communities. The Council pursues this theme through:

- Community consultations;
- Advice to Government as part of the policy development process
- Undertaking issues-specific projects; and
- Responding to contentious and emerging issues which are important to regional and rural people.



In this way, the RCCC helps the Government to work with country communities to respond to and resolve local issues.

Regional Communities Consultative Council members come from a diverse geographical range and represent the following interest groups:

- Diana Gibbs, Junee Reefs, Independent Chair
- Lynda Summers, Table Top, Independent Deputy Chair
- Iris White, Broulee, representing Aboriginal Community Interests
- Dr Jock Fletcher, Orange, representing Health Interests
- Lyall Wilkinson, West Wyalong, representing Education Interests
- Michael Schultz, Leeton, representing Environmental Interests
- Rashmere Bhatti, Woolgoola, representing Ethnic Community Interests
- John Ainsworth, Macksville, representing Farmers Interests
- Jenny Bonfield, Coffs Harbour, representing Local Government
- Father Tim Cahill, Wellington, representing Religious communities
- Michael Madden, Orange, representing Trade Unions
- Peter Quarmby, San Isidore, representing Social Services interests
- Ruth Shanks, Dubbo, representing Women’s Issues
- Simon Davies, Deniliquin, representing Youth
- Tim Sheed, Jerilderie, representing Business & Industry interests.

Historical Background to the CountryTELL project

Over the last eight years the Murray Regional Development Board has had auspice of the Murray Regional Information and Communication Technology (ICT) Committee and pursued activities with the aim of creating a 'region of broadband excellence' within a competitive telecommunications environment.

The activities have been based on thorough international and national research, and within the parameters of a regional Telecommunications Plan which has identified and prioritised the needs of the region from the perspective of Regional Development and Economic sustainability. This research and modelling produces a very different picture of achievable sustainability to that of the traditional carrier based models, which have proven their ineffectiveness in the Australian regional context.

In August 2002 the ICT Committee under the auspice of the Murray Regional Development Board formed the Murray River Regional Telecommunications Company (MRRTC) which trades as CountryTELL.

CountryTELL is a telecommunications service provider and carrier which is the implementation entity of the ICT Committee's endeavours. It is a not for profit company which represents a governance structure that:

- Removes risk from ICT Committee members including Local government
- Responds to strategic advice from the ICT Committee membership in determining implementation
- Reinvests surplus receipts in infrastructure rollout
- Complies with ASIC legislative requirements for appropriate governance
- Is eligible to receive public grants

The objectives of MRRTC are to:

- Assist in the creation, development and maintenance of a modern, competitive telecommunications environment across the region;
- Ensure through its activities that members and the region generally enjoy access to competitively priced voice and data services of a standard equal to or better than those generally available in Australia's metropolitan centres;
- Hold and manage spectrum and other telecommunications assets on behalf of members and the region;
- Provide financial and practical support to the regional ICT Committee of the MRDB in its pursuit of competition and 'broadband excellence' and in the implementation of its Strategic Plan;
- Support the growth and development of the Region's Information and Communications Technology sector;
- Carry out its activities in support of the economic, cultural, educational, access and equity goals of the region.

The Murray Regional Development Board

The Murray Regional Development Board provides a strategic framework for economic growth across the region, while at the same time developing local leadership and ensuring input is provided to government on local regional development issues. It also plays an important role in providing 'grass roots' advice to investors and governments about investment opportunities in the region.

The MRDB aims to promote regional economic development initiatives in the region:

- Through ensuring that communities work together to attain the necessary critical mass for the region to be a competitive investment location;
- Marketing local government areas and the regions as business locations;
- Hosting Commonwealth and State initiatives or programs which has as their aim the strengthening of the profile of non-metropolitan regions as business locations or the attraction of skilled labour; and
- Co-hosting initiatives of the NSW Government aimed at attracting investment.

What has “The MRDB/CountryTELL consortium” done?

Generally, regional broadband delivery has been limited by the fixed line infrastructure and current DSL technology and by the perceived high cost of satellite. A further limiting factor in expanding availability has been the absence of a competitive delivery marketplace and a lack of business incentive to build alternative infrastructure to the Telstra copper network, the 'last mile'. The global demand for broadband, however, is changing the business model for broadband deployment, and technology is providing alternatives to fixed line delivery.

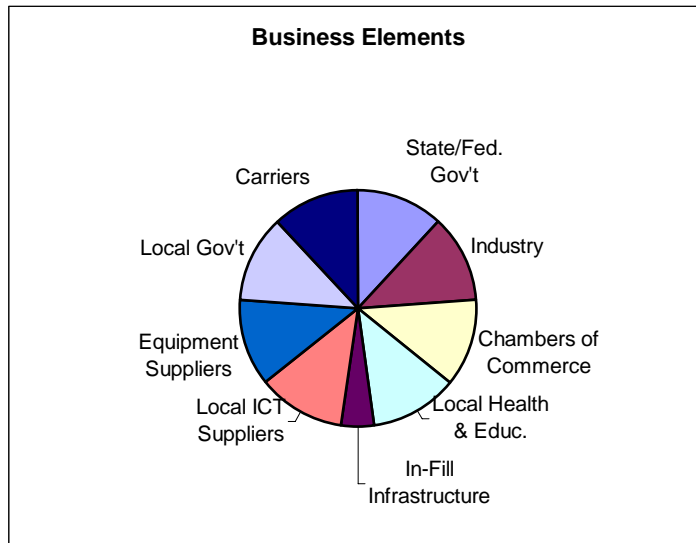
A range of technologies now offer greater range than DSL and lower operating costs than satellite, with significantly reduced infrastructure expenditure for both the provider and the customer.

The Murray Regional Development Board undertook to explore the business demands and technology alternatives to accelerate broadband deployment across the region. In trialling new access technologies it identified both opportunities and imperatives to explore a broader range of products and services for its communities of interest.

As a result, CountryTell – the implementation agent of the MDRB's vision – is evolving as a provider of a range of telephony and broadband services based on a single, hybrid, infrastructure and meshed networks.

Its structure as a community owned and managed operation gives it a mandate to provide a broad and flexible range of value added services. These services are delivered by independent service providers, under strict service level agreements, over CountryTell's owned or contracted infrastructure.

CountryTell is a not for profit company limited by guarantee which owns infrastructure and community assets on behalf of the communities which it serves.



The CountryTell business model is best represented as a collaborative organisation of stakeholders contributing grants, services, skills, supplies and in-kind contributions to the self-sustaining not for profit body. It negotiates and manages the tangible and non-tangible assets required to in-fill the group's missing requirements – including infrastructure, services, and intellectual property.

The on-going revenue stream to this entity comes from license fees from the commercial entities amongst those stakeholders, and other licensees, which on-sell the assets with value added services to end-users, amongst which are many of the collaborating partners. Government and industry body stakeholders may be direct users of the commercial services or indirect beneficiaries through the flow-on effects of regional and sectoral economic development. The services provided by CountryTell support a broad range of government policies, from natural resource management to regional economic development and from coordinated healthcare delivery to improved infrastructure security.

With no further operation roles in service sale, delivery or support, CountryTell's primary mandate is the development and promotion of the community self-sufficiency model, the optimisation of its assets and the acquisition of additional or replacement assets to support the regional collaborative's needs.

The primary infrastructure consists of programmable switching equipment (**Telos CDMA 2000 soft switch**) controlling the integration of various telecommunications delivery mechanisms at the IP layer.

Portable **local loop telephony** is CDMA based with dual mode phones having the capacity to roam onto national GSM or CDMA networks.

The 'last mile' **wireless (Wi-Max) broadband** delivery infrastructure is standards based in 802.16 public spectrum radio with software controlled service management.

A third tier ubiquitous **Wi-Fi municipal mesh** (Tropos – Jan 06). See annexure.

The hybrid infrastructure provides a robust, scalable, and adaptive architecture to future proof the investment.

Similarly, the business structure is equally adaptive to expanded service offerings from a range of independent service providers.

CountryTell is poised to become a full service provider of converged broadband services, facilitated by community owned infrastructure and delivered by a diverse group of local and regional service providers under strict service level agreements.

The robust business model anticipates extending the service area to contiguous and non-contiguous communities through the addition of distance extending infrastructure and, where necessary, additional base stations. The soft switch installed selected has the capacity to switch calls for the entirety of regional Australia, enabling communities to aspire to local loop telephony for the cost of a single base station, with all back end management provided from Albury-Wodonga.

Infrastructure will be acquired in direct response to solutions identified from the regional planning processes developed by CountryTell. This new infrastructure can be funded by a combination of those market segments seeking solutions to their specific business needs, as well as government assistance if required. It will, however, be fully utilised to extend the delivery of a full range of services to ever expanding groups of businesses and homes in region.

Markets, products and pricing

Subscribers can select from a menu of services including:

- Broadband access at a range of speeds with unlimited local campus download volumes and a range of limits on national and international download
- Low cost mobile phone calls within the local and regional coverage areas
- Negotiated CDMA/GSM/3G roaming rates on the same mobile phone
- Voice over IP phone service
- Favourable fixed line rates through the PSTN where required

Subscriber benefits include, for:

Corporate clients and larger organisations

- Competitive pricing and next generation products and services
- Ability to support executive and other staff remote connectivity and telecommuting
- A single mobile/portable phone for employees that works as a local phone in Albury-Wodonga (and eventually the expanded network) and a CDMA mobile phone outside the local call zone
- Access to next generation Voice over IP telephony (no STD calls; local termination of calls to all capitals and most regional centres)
- An estimated 40% (at least) reduction in total communication costs

SME clients – All the above where required, plus:

- Local calls from home, office, client premises and the worksite with a single handset
- Local mobility for voice and data
- Access to new business efficiency tools such as mobile EFTPOS and access to business systems and databases from customer premises
- Ability to share one broadband service between home and the office CDMA services at local call rates

- No more fixed to mobile costs for local staff leaving the shop/office for client or site visits
- 'Free' calls between subscribers (Annual/monthly modest Access fee)
- 'Free' on-network data transfers (Annual/monthly modest access fee)
- Carrier-grade services for voice and data – not available with ADSL
- No costs to move the service from one location to another

Residents - As above, plus:

- Low cost 'family and friends' mobile services for children
- 'Free' calls between home and work
- Subsidised and portable broadband access to school and campus networks for students
- Ability to share broadband services between locations
- Local call access to tradesmen who are 'on a job' but away from a fixed phone
- A local phone that is with you room-to-room, in the backyard, and can go shopping with you – no more wires; no more mobile phone bills for local calls from anywhere to anywhere across Albury-Wodonga
- A phone to give the kids when they are going out without huge mobile phone bills!

Other – This network will allow local service providers to offer an exciting range of new and innovative service including:-

- Local game servers
- Off-site backup and secure storage of data
- Low cost SMS, email and video services at 'local phone call' rates
- Limited function 'Community Portable' phones for accessing emergency services and a restricted range of telephone numbers (home, relatives), available free for short periods from libraries and council offices (for low income residents; children)
- 'Tourist phones' with direct access to tourist venues, restaurants, entertainment venues, emergency services and accommodation providers etc. (Issued free to tourists or convention delegates and paid for by participating businesses)
- ...and more

Community Benefits and some hints in moving forward!

The total economic benefits to broadband enabled communities is not yet measurable, but econometric modelling from overseas is reporting 20% gains in productivity for municipal entities with the utilisation of municipal mesh networks alone. The scale of the economic benefits to Albury Wodonga can, however, be anticipated by the range of services to be delivered to the local government, businesses, and consumers.

Local governments across the region have become early adopters of broadband advocacy for their communities, creating on-going competitiveness in attracting industry and commerce to the region.

The advocacy instigated by the MRDB/CountryTELL consortium has taken on practical aspects. We have no doubt that elements of our work will appear in submissions from other proponents – this is no accident, we have been active in spreading the word. Themes include the following:

Practical Outcomes Focus: Convincing Local Government to engage in telecommunications planning is initially daunting for local government authorities as it is an area where traditionally they have defaulted for all advice to the “local Telstra bloke”. The privatisation of Telstra and the absence of real competition are driving communities to seek independent advice.

Avoid the consultant default syndrome – do things, don’t just write about them! What we need to avoid is the temptation to default for advice to the ubiquitous “consultants” who produce lovely reports but which largely retain a carrier centric view of the world and produce carrier oriented advice. Nothing is more disheartening (but disappointingly frequent) than expending buckets of money on consultants advice, and have nothing tangible to show for it.

The CountryTELL consortium has developed an effective workshop program for community and regional strategic planning in the ICT space. This has taken some years time to refine but we are confident of the model created (testimonials available). It has been road tested and refined, and can produce a robust and valid strategic planning document within nine weeks.

The MRDB/CountryTELL consortium is willing to facilitate planning workshops if assistance could be made available to support this initiative. Because the planning workshop template is now so robust we can anticipate the capacity to do this on a State or National basis.

The MRDB/CountryTELL consortium is also well placed and willing to make accessible our experience in identifying the potential pitfalls and difficulties for communities who wish to venture into the infrastructure building mode.

Albury Wodonga is also available as a reference site for communities who want to see and experience for real what can be achieved by communities with a bit of get up and go and a ‘can do’ problem solving, outcome approach.

Whilst carriers will remain important partners, their partnering role is different under the CountryTELL regional development model. Communities can reduce their dependence on single carrier outcomes. They can build agnostic access infrastructure which any carrier can utilise to deliver their particular range of services and applications and, increasingly, content.

This will engender competition. A key facet is maintaining a focus on practical outcomes based on effective regional planning and adopting an open standards and open access regime.

Community owned pit’n’pipe: This includes promoting the deployment of council-owned ‘pit and pipe’ throughout new development sites to facilitate competitive fibre to the premise roll-out and tele-communications friendly policies to facilitate access to council infrastructure.

Leveraging NSW NCF27 Fibre town loops: Access to State owned assets such as the NSW Government NCF27 fibre town loops has also been brokered, and is a core backbone of the Albury Wodonga infrastructure being utilised by the CountryTell project via its partnership with Soul (formerly SP Telemedia).

Other regional cities and communities have been encouraged to pursue similar opportunities by leveraging the NSW NCF27 fibre assets to community purpose and

commercialisation. Encouraging the regional cities and communities to identify existing assets such as State owned fibre, NCF27 fibre loops and pursuing relationships with the instrumentalities to secure access has been a constant activity.

Flexibility – One size does not fit all: One of the salient lessons we have learnt in our endeavours is the need to embrace flexibility, and accept that one size does not fit all. It is important that ICT planning has the engagement and support of local government entities but keeps a focus on local outcomes within a regional context. It is tempting to embark on a ‘blanket approach’ – favoured by larger councils and consultants, but the effectiveness of the CountryTell model is the capacity to design solutions to tailor to individual community need, leverage existing assets, whilst maintaining interoperability via open standards and open access regimes.

The benefits to smaller communities is interconnectivity with larger neighbours which at the municipal level has the advantage of enabling joint use of high end applications, to which smaller entities might not ordinarily aspire.

The local councils of Albury Wodonga anticipate significant productivity gains of at least 20% in line with international evidence from similar municipal deployments. This is in addition to expected annual savings from reduced mobile communications amongst its mobile workforce alone. Businesses can anticipate similar or greater savings.

Local technology enterprises can offer services to the thousands of potential subscribers, creating local employment and retaining revenue within the local community. As early adopters of community based value-add service providers, these businesses will benefit from the market across Australia and around the globe.

The whole community in the region will benefit economically from improved communications and more robust competition in each of the telecommunications services provided by CountryTell. Equally important for the economics of the region are that the expertise and profit will stay within the region, providing for continued growth, increased functionality to the community and dividends to the owner members.

How it evolved

CountryTell evolved from a desire to see the Albury Wodonga region fully participate in the emerging innovation economy, driven by cost-effective telecommunications and ubiquitous broadband access to the Internet. But it tempered the passion of the visionary with sound business acumen. Was it technically possible to deliver broadband in regional Australia and did the businesses and communities in regional Australia understand the imperatives to join the movement?

*Ubiquitous broadband is not about technology.
It's about understanding community need.*

The first order of business was to establish the need and potential gain from broadband and telecommunication services

which was not being met. Next was the need to determine the acceptable cost for such a service. Education about the economic impact of broadband is a primary requirement to achieving effective engagement. The CountryTELL team has developed an efficient process of engagement with local government and

communities. This process results in regional ICT strategic plans under the aegis of which effective solutions can be identified, designed and implemented.

The rapid evolution of broadband has created some false perceptions of what broadband is, its cost versus its value and what can be done with broadband. In an environment evolving as rapidly as broadband, the educational and planning challenge is on-going and essential, with the value proposition changing almost monthly. The Broadband Connect program should support the ICT regional strategic planning activity and the CountryTell model of engagement is tried and tested and can be accomplished and completed with robust validity in a nine week timeframe. The MRDB and CountryTELL team are more than prepared to share their expertise in this endeavour.

CountryTell understood that broadband is more than just a means to faster Internet connections. It's about social interaction, business innovation and market expansion, new ways of delivery government services and new ways of communicating, within the region, across Australia and around the world. It's also about new ways of communicating, through video conferencing, on-line classrooms, and tele-healthcare delivery. Today, it is also increasingly about digital television, video on demand, and on-line gaming. Combined, these capabilities represent a new value proposition for prospective broadband customers.


Various technologies were investigated for their lifetime cost of ownership – once-off capital, on-going operational costs and maintenance and future replacement costs. Copper line-based systems for broadband delivery can capitalise on existing telephone line infrastructure, requiring only some telephone exchange upgrading, however, there are limitations imposed by older technologies in some exchanges. The DSL technology also suffers distance and bandwidth sharing limitations of the copper network. It also has access costs that cannot be remediated by virtue of the unconditioned local loop being monopoly owned.

While pursuing technology, CountryTell did not ignore its foundations in meeting community needs. As its vision grew, so did its Board. CountryTell worked with a range of stakeholders to ensure that infrastructure costs were minimised and made available to local businesses to provide value added services. The local government councils were engaged to identify their needs and their capacity to contribute to the strategy and infrastructure, by volunteering suitable sites for antenna towers and supporting logistics – power and equipment locations.

Partnerships were established with carriers to develop competitive backhaul capacity to the Internet and with equipment and technology suppliers to stay on the leading edge of evolving technologies.

Wireless broadband offered greater range with significantly reduced infrastructure expenditure. It also provides for greater scalability of bandwidth, compared with conventional linear networks, as demand increases.

The selected technology offered greater mobility, since there is no fixed line connection. Once that digital wireless infrastructure is in place, however, it provides the basis for mobile telephony too. CountryTell recognised the opportunity to offer both wireless broadband and mobile telephony within the range of their wireless coverage area, or *precinct*. It recognised, however, that effective mobile telephony requires the capability to operate outside of the wireless umbrella. The answer is a dual mode phone, with access to the CDMA spectrum, the local wireless network, and roaming capability on to the national GSM, 3G, and CDMA networks.



Mobile calls made under the CountryTell wireless umbrella are made at a flat rate – just as with local land-line calls. This new low rate opens up new uses and functionality for mobile phones but more importantly reduces the mobile telephony budget for regional Australians, the local governments, and regional commerce. Roaming arrangements with other CDMA mobile network operators create a seamless mobile phone network across Australia, wherever CDMA coverage is available.

The essential premise of the CountryTell business model is that it reduces revenue to traditional carriers, and reduces costs to business. This is anathema to the traditional carrier model and for this reason alone, the implementation of Wi-Fi mesh networks by traditional carriers will not happen.

Meanwhile, the community-based wireless broadband connection enables low-cost digital access across the local precinct and inexpensive connection to, and traffic costs on, the national and international broadband backbone.

What can we do?

The Future of CountryTell

Expansion of the vision and product line

CountryTell has evolved its vision to remain at the cusp of business and technological opportunity. It remains determined to overcome obstacles without recklessly investing in short-term answers – either of a business or technology nature.

The passion and enthusiasm of its management is matched by the business acumen of its Board. As was its beginnings, its future will be driven by demonstrated market demands. CountryTell will, however, be constantly on the lookout to deliver new value-add products and services through its current and evolving technology platform and its growing network of service provider partners.

Geographic expansion

CountryTell management has been unstinting in its collaboration with other community-led broadband demand initiatives. It has benefited from significant funding support from Victoria and Commonwealth and NSW funds, as well as from within its own communities.

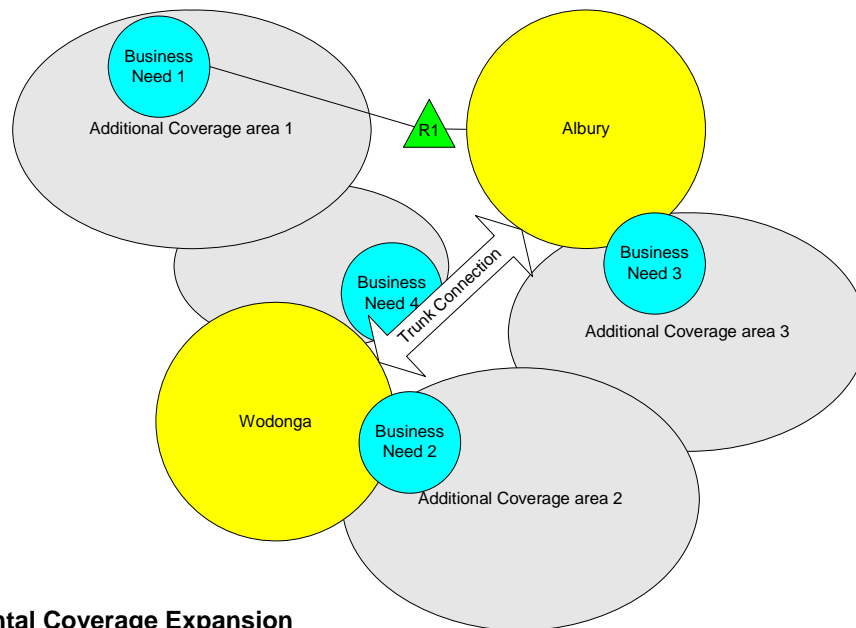
CountryTell values the ethos of sharing the wealth.

Where geographic expansion makes technical and economic sense, CountryTell will expand its infrastructure and support resources to meet the needs of regional Australia.

Organisational

The CountryTell business model is not capital intensive, nor does it require significant operational reserves.

The CountryTell Board and the ICT Committee represent the fundamental strength of the organisational structure – broad and diverse representation from across all sections of the civic, business and community interests of its subscribers and members. The board will continue to identify opportunities to address viable telecommunications issues in its areas of interest and foster collaboration amongst the stakeholders to achieve optimal solutions. The business model, like the infrastructure model is flexible and scalable to a State or Nation wide reach.



Incremental Coverage Expansion

Risk Assessment

CountryTell is a sustainable business entity with a promising future. Its business plan was developed by KPMG and independently validated by Gibson Quai.

While its delivery platform and infrastructure can be replicated, its community engagement will make it difficult to lure away its customer base and its loyal group of locally based service providers.

Major operating and service marketing costs are largely borne by the service providers using the network, leaving only the basic network management and development effort in the domain of CountryTell, along with governance of the operating arrangements between the network providers and the service delivery entities.

Major Challenges

In 2002 broadband was still a concept in its infancy. Large segments of the consumer, business, and government communities did not fully grasp its significance. Broadband and mobile telephony are, however, lucrative and highly fought-over markets. The dominant telecommunications provider, while reluctant to invest in new infrastructure to provide ubiquity of service, is tenacious in retaining its current customer base and opportunistic in extending it to easily serviced locations. It was quick to respond to the identified demand for broadband in larger communities and responded by providing and heavily promoting its ADSL service. This had the effect of diminishing the efficacy of the aggregated demand model for alternative provider solutions.

These traditional and predictable market strategies were not going to solve the broader regional communities' needs for ubiquity, however.

Significant **market education** – across local government, business, and consumers – was necessary to demonstrate the benefits and imperatives for broadband adoption, and most importantly the benefits of an alternative infrastructure model.

The model recognises that **profit is not the only, or even the major imperative**. Indeed, the model reduces the revenue for carriers, with the benefit of extracting cost for business, retaining otherwise exported cash in the local community.

The sustainability of regional communities depends on growing the community capacity – through skills upgrading and retention, improved performance in every aspect of business and commerce, in business growth and diversification and in building community confidence in its ability to adapt to a changing world.

State of the art telecommunications capability was identified and promoted as an essential element to achieve that goal, positioning it as the twenty first century equivalent of roads and bridges, water and sewerage and universal healthcare and education.

At every level it was necessary to overcome the lack of understanding about what broadband is, and is not. Each sector of the communities of interest needed to understand the specific applications and opportunities which would be available through broadband. Equally, all stakeholders had to understand the consequences of not getting broadband capable in the emerging competitive marketplace.

MRDB pioneered new survey and statistical analysis practices to ensure that their business case was realistic and sustainable. Their governance and community ownership model helped to ensure that that demand would remain loyal, provided the services were well managed.

Wherever broadband aggregation takes place the dominant player quickly attempts to secure the core, easy to supply, potential customer pool through rapid deployment of ADSL.

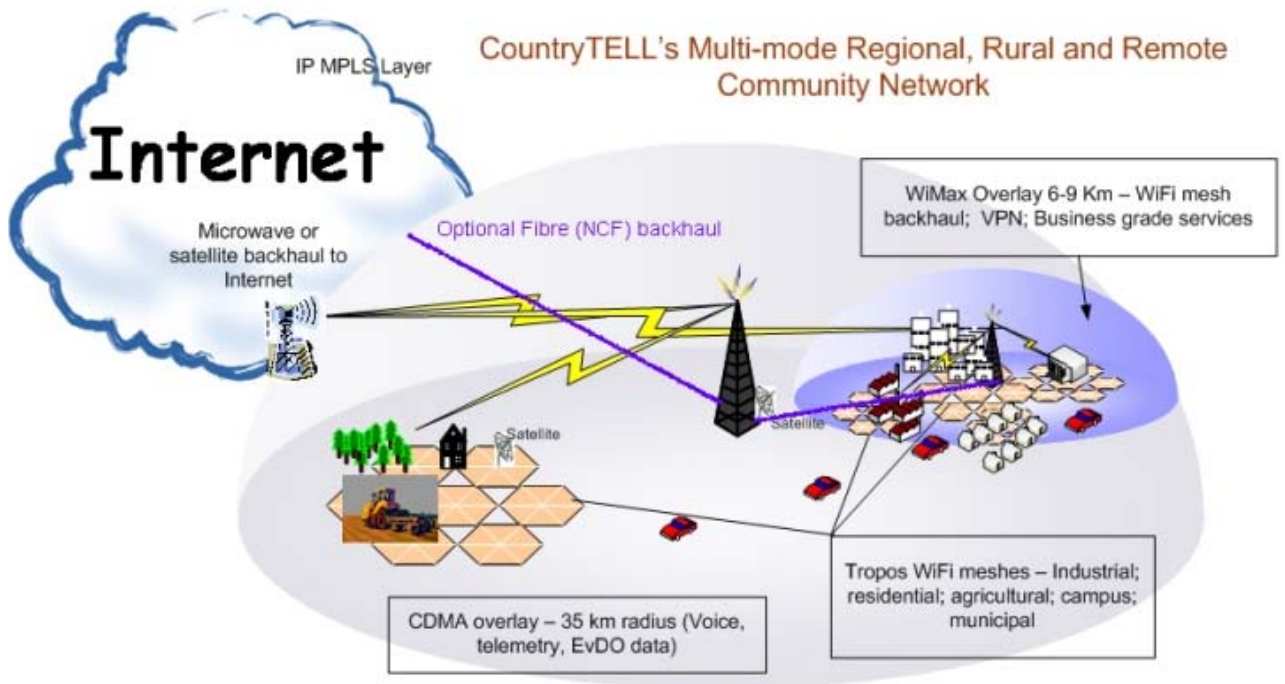
Education of the marketplace, is the best defence against core market predation, but will not retain anchor tenants without a more robust community-focused strategic plan, effectively communicated to the potential client base. The MRDB, through its Regional ICT Committee, ensured broad-based awareness of the strategy and the benefits to the community of seeing it through to execution.

In exploring alternatives for wider implementation of broadband, CountryTell recognised the need to find value-added functionality to their broadband infrastructure. Wireless promised those opportunities, but presented its own challenges.

Telecommunications spectrum is carefully and transparently managed and allocated by the Australian Communications Authority. Spectrum was allocated for the field trials in Albury Wodonga but different spectrum had to be acquired before commercialisation. Competitive action was mustered to prevent allocation to CountryTell. Broad based community and government agency support however, demonstrated the compelling case for spectrum allocation.

With no model to follow and breaking new ground across the spectrum of activities and jurisdictions in we have become engaged, time and attrition of focus were real risks. Persistence in pursuing the original vision, and flexibility into adjusting to the changing opportunities and threats, are essential contributors of success.

CountryTELL Infrastructure – Albury Wodonga Network



CDMA overlay provides voice and data.

WiMax in the towns provides Business Grade Virtual Private Networks (VPN) and business grade Voice and data services.

Tropos WiFi Mesh provides residential grade Internet and municipal services layer.

Telos soft switch (Albury-Wodonga) manages services across all three network layers and provides interconnection between subscribers on the Community network.

Concluding Comments

As a minimum, triple-bottom-line benefit (financial, social, and environmental) assessments should be considered in evaluating submissions for funding. Optimal submissions would demonstrate outcomes in the context of meeting regional, industrial and community needs on an integrated suite of infrastructure designed to enable applications and capabilities for all sectors.

This approach will require a commitment to regional strategic planning. The lack of effective regional planning in the past has been a severe shortcoming of previous attempts to bolster telecommunications competition by public subsidy.

The availability of advance capital funding for the backhaul layer 'bridging' infrastructure between larger communities and their smaller surrounding neighbours would enable more remote and/or larger regional deployments.

New evaluation and demand aggregation procedures will be required to adequately evaluate these more aggressive expansion initiatives. The engagement of a broader range of strategic partners will go some way to ensuring the viability of these larger investments.

New infrastructure created with Clever Network grants must be **open standard** technology with **open access** to competitors. The CountryTell governance model is one example of how this can be achieved. The CountryTell model represents an effective competitive play against the monopoly incumbent whilst enhancing the viability and reach of all carriers in the delivery of service and application based product to regional Australia.



**BROADBAND CONNECT:
MRDB/CountryTELL Consortium
response to specific questions**

- Q1** How can the design and delivery of Broadband Connect be optimised to achieve long term sustainable quality broadband solutions for regional, rural and remote Australians?
- Q2** What means can/should be used to encourage further capital investment in infrastructure that will support competitive networks and services under Broadband Connect and beyond?
- Q3** How can Broadband Connect funding be structured to provide the best incentives for investment?

RESPONSE SUMMARY

CHANGE THE PARADIGM OF THINKING BY:

- **Adopting a Regional Development Model *which is not carrier dependent***
“A new model for a new Century”
- **Discard reliance on the failed traditional Carrier business model**
- **Ensure that all proposals meet outcomes determined by an overarching regional PLANNING process**
- **Mandating adoption of OPEN STANDARDS technology regardless of type**
- **Mandating OPEN ACCESS to all infrastructure funded or co-funded by public subsidy**

Question 1 – 3 COMMENTS

The allocation of public funds to subsidise improved broadband connectivity in regional Australia is acknowledgment that the traditional telecommunication carrier market model has failed regional Australia and cannot achieve this critical pillar of regional development.

National and international experience confirms that access to fast high capacity interconnectivity is fundamental to productivity gain and economic growth in all facets of regional well being. This submission presumes this is a given and accepted fact. Consequently, the Australian Government programs must move from a solely pricing focus to recognising the value of our new paradigm which enables the rejuvenation of regional Australia. Building the new networks indicated by the philosophy we will outline, has incredible potential to build community capacity, and enhance regional social and economic outcomes. Adopting the new paradigm has extraordinary significance to the nation.

Two key elements need to be closely examined in considering how to expend the funding now proposed. Success will require a paradigm shift in thinking.

1. The **traditional telecommunication carrier business model** (the carrier model) **has failed regional Australia**. Yet the nation is in danger of replicating the

mistake of relying on the perspective of the Telecommunication Carriers in determining how regional Australia achieves sustainability in the communication space. This is the paradigm of the past and is wrong.

2. **Sustainability can only be achieved by adopting a model with a planned regional development focus.** By analysing and planning for economic development needs at a regional level, under a national framework approach, it is possible to implement cost effective solutions which are sustainable and address the discreet needs of regional development for every community. This solution does not rely on the carriers. This is the paradigm of the future and is right.

Why the traditional carrier model is past history for regional Australia.

- The traditional carrier model is based on population numbers which regional Australia does not have to the critical level required for ongoing sustainability – carriers continue to model on the basis of return per user, homes passed, number of premises, rather than value.
- The traditional carrier model is based on ‘one-to-one’ customer relationships which do not satisfy industry, municipal or community networking needs.
- The traditional carrier model is based on a return measured on a profit basis – this is a focus on sustainability of a carrier entity – the focus should be on the sustainability of the regions – the new and correct paradigm.
- The traditional carrier model decrees the mode of delivery of service using technology decreed by the carrier based on the carrier profitability and comfort zone, financial and vested interest.
- The traditional carrier model does not deliver technology or services based on identified need for regional development, only to meet commercial goals. This is a distortion of the real market. Real market outcomes measure in the context of the triple bottom line – it is our contention that the roll out of alternative infrastructure to meet identified need and enhance regional development is viable, sustainable, and economic regardless of the carrier perspective.

‘A NEW model for a NEW century’

The New Paradigm – PLANNED investment and implementation, sustaining the economic development of Regional Australia.

A planned and holistic approach is essential to optimise the future of regional Australia.

Any investment by the Commonwealth should require programs to be structured, and planned to meet regional needs, **with needs identified by regional communities, and solutions *determined* by regional communities – NOT by consultants, city based carriers or bureaucrats, no matter how well intended. Granular local knowledge and buy-in is essential for success.**

Strict adherence to **Open Standards** and **Open Access** is required to ensure cost management and capacity for integration.

Q4 Is terrestrial or satellite the most appropriate means of delivering broadband in regional, rural and remote area?

- **Terrestrial solutions are required for high capacity low latency applications**
- **Satellite will remain a last resort for some**

Q5 Can satellite be delivered as competitively as terrestrial service?

- **Satellite backhaul to a central POP has the potential to support broader scale deployments of last mile broadband (voice and data) services**
- **HiBIS subsidies applied to the initial satellite infrastructure (for backhaul) build for an entire community as opposed to the one by one customer process is a realistic sustainable and viable option, resolving many more regional development needs than the current arrangement.**

Question 4 – 5 COMMENT

Satellite is essential in some areas – eg CDMA covers 28% of landmass (Telstra figures). For remote industry, mining, grazing etc, the only current option is satellite. The issue and decision is less one of appropriateness than current availability of options.

In the future, terrestrial solutions are the only realistic viable higher bandwidth delivery option.

Initiatives such as the Australian Government/NSW Government NCF27 Fibre town fibre loops and other existing fibre assets owned but underutilised by government instrumentalities should be made available for community use and commercialisation. CountryTELL has initiated and brokered access to the NSW NCF27 fibre loop as the core backhaul backbone.

Terrestrial backhaul via microwave is becoming increasingly cost effective. When considered as a part of a regional planning framework for communications development on a holistic regional development focus, the implementation of long shot high capacity microwave facility becomes a realistic and sustainable opportunity for the application of federal funds investment.

Satellite backhaul to a central POP has the potential to support broader scale deployments of last mile broadband (voice and data) services. The cost effectiveness of satellite versus terrestrial options (either currently available or by building terrestrial, microwave or fibre links) will change over time but must be considered at the planning stages against the requirements for sustainability.

For example a shire or local government entity may determine to deploy wireless local loop services in a remote township to satisfy municipal needs. It will have the choice of purchasing backhaul via terrestrial (Telstra) or satellite.

Our work demonstrates that satellite backhaul in this scenario is available at the same cost as terrestrial frame relay circuits and becomes more cost effective at higher bandwidth levels. It is our view that HiBIS subsidies applied to the initial satellite infrastructure build for an entire community as opposed to one by one customer is a realistic sustainable and viable option, resolving many more regional development needs than the current HiBIS single customer approach.

- Q6** Should participating providers be required to commit formally to service the areas they identify in registration applications?
- **Yes**
- Q7** Should annual renewal of funding agreements specify timeframes for commencement of services in areas of greatest need?
- **Yes. For timeframes, but No to 'areas of greatest need'.**
- Q8** Should a system of prioritised funding for services connected in areas of greatest need (beyond what has been provided under the HiBIS two-tiered incentive structure) be introduced?
- **No. Unrealistic. Regions identify need. They need to be confident of Federal funding support once that process has been undertaken.**
- Q9** What can be done further to overcome barriers to capital investment in sustainable technologies in less commercially viable regional areas?
- **Our work has demonstrated that there is unlikely to be unviable areas when capital investment planning is based on economic development modelling. Questionable viability is a legacy concept of the traditional carrier model which relies on population numbers and single customer relationships.**
 - **Changing the mind set of the decision makers and funding bodies which decrees a dependence on carriers would be a significant first step in understanding the new paradigm which has the potential to launch regional Australia without the hindrance of past legacy.**
- Q10** How can the high cost of some technologies be reconciled with increasing customer expectations for higher speeds and usage allowances especially in more remote areas?
- ***By engaging in the planning process, communities can readily identify current and future need and design solutions accordingly, managing and meeting expectations accordingly***
 - ***By mandating OPEN STANDARDS technology***
 - ***By mandating OPEN ACCESS***

Question 6 – 10 COMMENT

Q6 *Should participating providers be required to commit formally to service areas they identify in registration applications?*

Yes.

Q7 *Should annual renewal of funding agreements specify timeframes for commencement of services in areas of greatest need?*

Yes. For timeframes, but No to 'areas of greatest need'. For too long the determination of 'need' has been influenced by carriers within the framework of the traditional carrier model which has proven to be unsustainable and inaccurate. It is one of the few areas of service provision where the providers have scoped out need rather than customers. Need has been identified based on a one on one customer demand. Our work has demonstrated that a locally based planning framework produces entirely different demand profiles and needs.

Need should be determined by the regions on an economic development basis, with cross sectoral involvement at the planning stage.

Q8 *Should a system of prioritised funding for services connected in areas of greatest need be introduced?*

No. Unrealistic. Regions identify need. They need to be confident of Federal funding support once that process has been undertaken.

Q9 *What can be done further to overcome barriers to capital investment in sustainable technologies in less commercially viable regional areas?*

Our work has demonstrated that there is unlikely to be unviable areas when capital investment planning is based on economic development modelling. Questionable viability is a legacy concept of the traditional carrier model which relies on population numbers and single customer relationships.

Changing the mind set of the decision makers and funding bodies which decrees a dependence on carriers would be a significant first step in understanding the new paradigm which has the potential to launch regional Australia without the hindrance of past legacy. It is our contention that planned well, the development of open standard infrastructure under an open access regime can service 'less commercially viable regional areas' on a sustainable footing.

Recommendation: Provide specific incentives to build 'bridging infrastructure' over large distance between less viable (in the traditional sense) markets or over nominated or identified 'challenging' terrain. E.g. Long shot microwaves between community population centres that might have implemented local loop telephony, municipal mesh etc, to enable integration.

Recommendation: Support proposals to extend specific last mile or backhaul infrastructure to communities who have identified need, and designed sustainable solutions.

Recommendation: Ascribe value to proposals that identify long term economic development outcomes and enhance community capacity building.

More creatively, projects should look for valuable non-population based applications for the infrastructure, with the capacity to be utilised on an open access basis by all comers, including other carriers and competitors.

Publicly funded infrastructure should be accessible to all providers to enable the exploitation of applications and service hitherto restricted by inadequate capacity or speed or unrealistic and uncompetitive pricing.

Modern agribusiness requires the capacity to conduct real-time monitoring, and the capture and communication of a range of data. Mining, grazing, irrigation, forestry, cropping, aquaculture are all industries who hitherto have not been satisfied by the traditional carrier model, as evidenced by the billions of dollars they invest internally in communications systems that are becoming redundant.

SCADA technologies are embedded in many industries already but are yet to reach full optimal uptake due to restrictions and cost of current telecommunications options. The new model will enable this productivity gain.

The 'Broadband broker' role should change significantly and move from the market aggregation focus which serves largely to prop up unsustainable carrier models (or simply makes life easier for the incumbent) and engage in regional planning for the development of alternative infrastructure.

Our work has demonstrated that this is a viable and feasible proposition which has the desired benefit of building in competitiveness and leap frogging to new technologies. The new role would engage regional players and communities in leading and/or participating in regional planning initiatives.

Q10 *How can the high cost of some technologies be reconciled with increasing customer expectations for higher speeds and usage allowances especially in remote areas?*

It's about access anywhere, it's about defining appropriate solutions (speed, capacity, technology) within a planning framework which has identified the economic justification.

Cost is relative to reward.


For example local and international data support the contention that at least 20% of a local government field workers productive capacity is absorbed travelling to and from places where access can be gained to computer networks.

The provision of wireless access devices which enable access anywhere to local government networks has the potential to improve productivity reduce staffing costs or both. The farm worker who can manage their on farm networks from multiple locations is similarly more efficient.

These examples of mobile warriors/workers, a mobile tele-working model are doubly beneficial if the network across which they gain access do not carry high data charges typical of Australian carrier based solutions. World wide municipal mesh, wi-max and other systems to bring previously costly services within the reach of entire communities have emerged, and look remarkably similar to the work being done by the MRDB.

A municipal mesh and VOIP phone calls and other on net voice and data traffic reduces carrier revenues and has therefore not been supported by the traditional carriers – and is not likely to be. The regional development model is premised on a 'reduction' of overall total communication spend but a significant improvement in the applications and service layer.

In the Albury Wodonga market a fully operational system has the potential to retain at least \$10m within the local economy – monies which previously left the region as payments to national or international carriers.



The Community model proposed articulates at a planning stage both the speed and download characteristics desired and the economic justification for the construction of a suitable network to meet these aspirations over a defined time period. An effective planning process anticipates and responds to future expectations of speed, usage, and innovation.

Usage – this model already anticipates the need for uncapped data services – it is now possible to buy “all you can eat” access for backhaul from a number of carriers.

Typically the reserve of large corporate and ISP’s this access is available and viable on a community wide basis and could allow a community owned infrastructure to deliver unlimited broadband access to every business and residence within the network footprint.

In addition to potentially eliminating issues of download limits community networks enable the cost effective implementation of advanced applications and services, including virtual private networks, local applications servers (games, video on demand) and allow whole communities to be connected to each other all the time, for the more effective delivery of local government, health, and education services.

By engaging in the planning process, communities can readily identify current and future need and design solutions accordingly.

Q11 Should it be mandatory for program participants under Broadband Connect to provide additional information as listed below as a condition of registration?

- intended future service areas (with approximate dates of commencement of supply);
YES.
- the viable geographic reach of broadband services from central transmission points for service delivery;
YES – via a regional planning process which will enunciate need and identify best fit solutions, despite the high variability of differing technologies
- technical barriers limiting the application of providers' technology in regional communities;
YES – again an effective planning process will identify these barriers and limitations and design proposals to fit specific locations and required outcomes
- the capacity of providers' technology to support varying types of broadband traffic and use;
YES – Critical issue – a mandate to require open standards technology and open access to infrastructure is critical
- the range of service speeds providers' technology would be able to support;
YES – the regional planning process would demand that these parameters are identified as adequate to meet current and future requirements.
- the capacity of providers' technology to provide services now and to and to accommodate new developments such as increased speed, usage and applications in the future?
YES – requiring proponents to utilise open standards technology will ensure that development pathways are in built and robust.
- the particular relevance of the technology to other communication services (for example, capacity to be used also for supporting mobile telephony services);
YES – the capacity to integrate is important and an open standards, open access regime will enhance this.
- a summary of the broad nature of technology they employ; and
Not necessary if the technology has been selected on the basis of a robust planning process, the nature of the technology is less important than the fundamentals identified being open standards, open access and designed as a solution to specified need.
- anticipated timing and target areas for their technology deployment in regional Australia.
YES – the open standards framework provides clear timing and target capacity.

Question 11 COMMENT

Q11 *Should it be mandatory for program participants to provide?*

- **Intended future service areas and timetable for commencement?**

Yes. Proposals should be based on the identified needs enunciated in the regional planning process. Proposals should identify solutions which satisfy the planning objectives. They need to be based on open standard technology and open access to the infrastructure. Pathways to integration with neighbouring communities can also be a requirement.

- **The viable geographic reach of broadband services from the central transmission points for service delivery?**

Yes – Although the reach of certain technologies is highly variable a well facilitated planning process at the regional level can enunciate the best fit, identify specific technology, and account for geography, geology, topography etc.

Regional people know their region best and it is vital that the skills, local knowledge and local capacity of the regional population is utilised in developing plans and designing solutions.

For too long, city based gurus in both government and carrier headquarters have adopted a top down approach which discounts the capacity of regional communities to think for themselves.

It is clear that some communities will need assistance in the process but it is an irresponsible use of public funds to anticipate the expenditure of billions of dollars in the absence of any planning framework.

Research by the Regional Communities Consultative Council in NSW has identified that a feature of successful projects assisted by government, share common features. Notably, a planned ground-up approach (not top down) and critically, the engagement of local leadership with the buy-in of local government are essential predictors of success.

A planning framework which embraces these principles of community engagement and local knowledge is a proven methodology to identify viable central transmission points within a regional context.

Flexibility will be required, as in some locations it may require the installation of infrastructure in a nominally well serviced population centre (i.e. ADSL) as a hub to provide enhanced services to surrounding geographical areas. A shortcoming of the current HiBIS program is that it potentially excludes the hub and spoke approach, if the best hub is notionally ADSL enabled, under the current eligibility 'rules'

- **Technical barriers limiting the application of providers' technology in regional communities?**

Yes. Proponents should be required to demonstrate that the provider's technology meets the outcomes identified in the planning process. Public money should not be expended to prop up the bottom line of providers balance sheets in the absence of a demonstrated community outcome.

- The capacity of the providers' technology to support varying types of broadband traffic and use?

Yes. This is critical, and the providers must also be mandated to use open standard equipment (non-proprietary) and enable open access to all competitive carriers. The subsidising of the 'open standard information highway' will encourage the development and utilisation of applications provided by a myriad of suppliers and carriers alike. This is where the competitive market place can be encouraged to the benefit of regional communities.

NB Within the Open Standards framework different manufactures will provide technically unique offerings to differentiate their products and provide additional (superior?) functionality (e.g. Belkin vs. D-Link in 802.11g+). The important feature of open standards is the requirement for 'interoperability' and a guarantee of support for competing brands of conforming Customer Premises Equipment.

It can only be achieved with alternative infrastructure solutions, access to viable backhaul, and providing the competitive impetus to the monopoly incumbent.

- The range of service speeds the providers' technology would be able to support?

The proposals should identify the required speeds and capacities required in implementing community and region wide solutions, in accordance with the planning framework developed by the regions. One set of technology and/or one provider will not satisfy all needs.

- The capacity of the providers' technology to provide services now and to accommodate new developments such as increased speed, usage and applications in the future?

Yes. Requiring proponents to utilise open standards technology will ensure that development pathways are in built and robust. The lesson of Unwired is significant here. In order to develop a sustainable business strategy Unwired had to embrace open standards even in a metropolitan market.


Regional authorities are more comfortable with open standards regimes – they understand the need for open standards to drive competition. They have experienced the shortcomings in other areas of endeavour in being reliant on proprietary equipment. They are cognisant of the importance in removing vendor and carrier dependencies which have hindered growth and innovation.

The particular relevance of the technology to other communication services?

Yes, the capacity to integrate is important and again open standards and open access are bulwarks of this achievement.

A summary of the broad nature of the technology they employ?

If the technology has been selected on the basis of a robust planning and exploration process to suit the identified needs of particular regions then the nature of the



technology is less important than the fundamentals already identified, being open standards technology with an open access premise.

Anticipate timing and targets for their technology deployment in regional Australia?

Yes. The international open standards framework provides clear timing and target capacity, from which a basis of deployment timeframes can be realistically developed. Our work under the Victorian Multi Media CANDP program has identified for communities the raft of likely issues and barriers for deployment likely to be encountered during infrastructure build mode. We have made many mistakes and encountered a myriad of unforeseen barriers, but managed to overcome apparently unassailable impediments by perseverance and a ‘just do it’ approach. These lessons do not need to be re-learnt or re-experienced – the capacity for promulgation of successful models such as CountryTELL needs to be supported under the Broadband connect program.

- Q12** On what basis would you argue that certain specific technologies will have the most impact on the delivery of regional broadband services in the next three to five years?
- Q13** How would you compare the effectiveness of these technologies to others in the market place?
- Q14** To what extent will broadband technologies be able to augment capacity to meet rapidly expanding consumer expectations for higher bandwidth and more advanced applications?
- Q15** Can complementary technologies provide better solutions for delivery of services in regional Australia?
- Q16** What innovative approaches should Broadband Connect adopt in its program design to utilise these technologies most efficiently and effectively?
- Q17** What capacity do existing technologies have to accommodate the introduction of new developments, such as increased speeds, usage, and other applications?

Q12 *On what basis could it be argued the certain technologies will have the most impact on the delivery of regional broadband services in the next three to five years?*

The research that we have conducted over eight years has been prescient and every facet of our work has since been successfully embraced and replicated in other parts of the world. The lethargy and vested interest of the carrier incumbents has hindered uptake in regional Australia, whereas other parts of the world have adopted a regional development model which discounts the influence of the redundant carrier model.

As a result we see the implementation of municipal meshed networks, not only in the USA and Europe, but in third world countries enabling economic and skill poor populations to leap frog the copper age and move straight to a mobile data environment.

We would argue that converged networks based on hybrid solutions that resolve industry and business need are essential. The capacity for mobility will also be essential as evidenced by world trends and the impact on productivity that mobile data communication provides. Standards such as Wi-MAX and Wi-Fi meshes overlaying a fibre core will be the ideal hybrid, but the implementation and design will be tailored to individual community need and circumstance, including topography, distance existing assets etc.

Q13 *How can the relative effectiveness of technologies in the marketplace be compared?*

Through their range of speeds, breadth of application functionality and their ability to meet a significant majority of the community's identified need. Ubiquity and functionality!

Q14 *To what extent will broadband technologies be able to augment capacity to meet rapidly expanding consumer expectations for higher bandwidth and more advanced applications?*

- Fibre access will be virtually unlimited.

- Wireless solutions will be limited by spectrum availability.
- Satellite will be limited by latency.
- All will be limited by consumers' expectations of price versus value. Backhaul costs might play a larger role in determining scalability (i.e. cost increases) than any particular last mile solution.

Q15 Can complementary technologies provide a better solution to delivery of services in regional Australia?

Only Hybrid complementation works. Single modes cannot satisfy all needs.

Yes, hybrid solutions will have a place in many situations. We should avoid building duplicate and redundant last mile infrastructure, however, except so far as it is required for adequate service delivery and resiliency.

Q16 What innovative approaches should Broadband Connect adopt in its program design to utilise these technologies most effectively and efficiently?

Recommendation: Enable grant funding and incentives to integrate multiple last mile solutions, existing capacity and infrastructure, and innovative hybrid solutions which are designed to resolve cross sectoral “almost all” community need identified via a regional/community based planning process.

Q17 What capacity do existing technologies have to accommodate the introduction of new developments, such as increased speeds, usage and other applications?

Attached are annexures describing the technology selected by the CountryTELL consortium. This model provides for resale of ADSL but does not anticipate it will be viable in isolation for resolution of regional needs, as the shortcomings of the copper network, access costs, and the need for mobility and portability are increasingly identified by the business sector. Wireless solutions are limited at the moment by poor allocation of spectrum and a spectrum regime that is biased to metropolitan centric carriers. Access to appropriate spectrum needs to be made readily available on a community allocation basis to enable implementation of next generation wireless infrastructure on an open access framework, which will encourage provider investment in regional areas.

- Q18** Should the current system of incentive payments to providers for the supply of broadband services be retained?
- Q19** Would an up front method of payment be more effective?
- Q20** How else could the method of payments to providers be adjusted to achieve more satisfactory outcomes for providers and people living in regional, rural and remote Australia?
- Q21** Should funding be provided:
 - based on the number of customers connected?
 - the number potential premises with potential access?
 - a combination of both methods?
- Q22** If funding was based on the number of premises with potential access should it then only be provided for infrastructure?
- Q23** How can methods of payment under Broadband Connect be better structured to ensure that providers are not overcompensated for the supply of broadband services?
- Q24** Should the current HiBIS threshold model for speed and usage be maintained at existing levels under Broadband Connect?
- Q25** Should the model be retained with increased minimum speed and/or usage requirements?
- Q26** Should two separate minimum speeds with two subsidy levels be introduced?
- Q27** Do threshold requirements need to be expanded to accommodate other issues such as latency?
- Q28** Should the Broadband Connect Stage 1 price caps be retained under Stage 2?
- Q29** Should a greater range of price caps be introduced than the two currently available?

Responses to Q18 – 29 are not required as they are effectively redundant if the regional development model is accepted and applied.

Q30 Should the current funding cap level of 60 per cent continue under Broadband Connect?

No. The cap should be reviewed downwards and no one carrier should access a disproportionate amount unless it enters the market with alternative infrastructure to the incumbent and satisfies regional development outcomes as identified in the strategic planning framework.



CLEVER NETWORKS:

**MRDB/CountryTELL
Consortium response**

What form of broker network will provide the best outcome?

- Q1** Considering the current DAB program structure - involving State, community and sectoral brokers - is the current arrangement the best model for catalysing broadband developments in regional, rural and remote Australia or how should it evolve?
- Q2** What role can/should brokers play in promoting or facilitating the effective use of broadband applications in order to enable communities and businesses to capture the transformational benefits of broadband?
- Q3** What other resources or programs should the brokers be aware of in this role?
- Q4** Should the broker role include an increased focus on 'effective use' outcomes and, if so, how can this best be achieved?
- Q5** Should uptake and effective use of broadband by specific groups be targeted and, if so, which ones?
- Q6** How might the brokers play a role in facilitating/supporting community-wide connectivity and community-wide (cross-sectoral) networks?
- Q7** Should future demand aggregation activities be focussed in areas that have yet to receive terrestrial broadband services under HiBIS to support the delivery of the new Broadband Connect program?

The Role of the Demand Aggregation Broker

Model:

Demand Aggregation Brokers under the current structure and in their current role have done their time. They have valiantly pursued an anachronistic role which was basically sourcing new customers for carriers which have little or no interest in regional development outcomes, only their own traditional, albeit understandable, focus on profit and the bottom line.

This is the old fashioned carrier model which has failed regional Australia and is unviable for a sustainable future, as evidenced by the need for the Broadband Connect and Clever Network program funding under discussion.

The future is not about up and down, one to one communications – the future is about converged networks, local loops and making the technology add capacity and enable applications to regional industry, business, and municipalities.

Once this focus is adopted, the inappropriate focus on carrier profit margins is appropriately relegated to the dustbin of history. Our experience demonstrates that ALL carriers can benefit from the model proposed, as they increasingly move to the delivery of content and applications, via the new networks that our model can create.

Likewise, Regional ICT Planners should work with each other to encourage collaboration and ensure the capacity for integration by articulating infrastructure sets that embrace open standard and open access.

There is some benefit in having a State Regional ICT Planner, but only if the role is supported by the States. The State Regional ICT Planner, if implemented, should have a role which is about ensuring that State government instrumentalities support the regional planning context. It is our experience that the decision making mandarins of State government departments are very metro centric and have little understanding of the regional context.

Metropolitan boffins also tend to assume that they know best despite rarely travelling inland and dictate terms to the “regional yokels” with scant respect for grass roots knowledge, energy, and application. If State ICT Planners are appointed, the Australian Government needs to be skilful in securing State mandates at both the political and departmental level to support their endeavours.

Role:

The broker role must change, both in name and purpose. The role must be honest, impartial and must be focussed on customer need within a regional planning context. The aim must be to achieve outcomes which provide for these needs, rather than shoe horn individual customers into pre existing ‘deals’ which suit the carriers profit motives, but do not resolve regional and economic development imperatives. The limited successes of the Demand Aggregators in their current role have been predictably gazumped by the monopolistic incumbent, as it simply offers the same or similar, cheaper.

The Demand Aggregator role should change to that of a Regional ICT Planner, identifying real need (not assumed need). The role should be collaborative, identifying best fit solutions and facilitating the implementation of Converged networks or related infrastructure which enhances regional development. Solutions can then be tailored to suit individual communities within a regional planning framework, with open standards networks which can integrate with adjoining regions.

Regional ICT Planners should be appointed to support regions in their planning approach. The requirement for local government to have a plan in place should be a precursor to accessing Clever Network funding. If Clever Network funding is allocated to infrastructure then a planning framework is critical to success. In any other sector, capital infrastructure investment requires a significant planning effort.

A hospital would never be built for example, without reference to a wide range of stakeholders and the regional impact, access, and integration issues would be assessed. Likewise the building of a road is planned in the context of integration with local, regional, and national road and transport planning frameworks.

A shortcoming of previous rounds of infrastructure planning has been ineffective planning modes which decree “I can get x numbers of customers therefore I build a network’. This is not a strategic planning approach nor is it sustainable.

The infrastructure model we propose however, will enable those small providers who are already in the market place to benefit from agnostic access and grow their business and enhance their sustainability rather than be put at risk by the provision of alternative infrastructure. Agnostic access and open standards will facilitate this.

Program and resource awareness:

The ICT Planners need to understand the reach of ICT infrastructure as a key plank of regional development, into almost every imaginable facet of business and community living. All programs on offer for regional development, industry efficiency, export incentives, health and education, have a requirement for effective telecommunications and data capacity. The planner needs to keep abreast and informed of community initiatives and integrate their efforts at the regional and local level.

Effective Use Outcomes:

The regional development potential of high capacity, high speed broadband and innovative telecommunication products such as local loop telephony is not understood by political decision makers, senior city based government bureaucrats and to an extent by the prospective users, although the latter cohort is rapidly exploring uptake to remain competitive.

Industry is certainly abreast of the need for communications infrastructure. Local government authorities are increasingly asked by prospective industry seeking to locate to the regions, what the capacity for telecommunications and broadband is. The prospect of being held hostage to expensive, inadequate ageing infrastructure by a monopoly incumbent, is not an incentive for many industries to relocate to the regional areas, which in every other aspect can offer enhanced business environments such as a stable skilled workforce, cheaper living and better lifestyle. This is particularly the case for business and industry that have experienced improved services from alternative metropolitan based providers.

To date, the debate has been too focussed on price comparability to metropolitan markets with no emphasis, and generally no understanding of the value proposition to business productivity and regional economic development outcomes. Unfortunately the price focus presents a quick and easy sound bite response at the political level, but the need is rapidly becoming understood, and the trite response on price comparability will become an increasingly inadequate political response.

Effective Use Outcomes

- Community Benefits and some hints in moving forward!

The total economic benefits to broadband enabled communities is not yet measurable, but econometric modelling from overseas is reporting 20% gains in productivity for municipal entities with the utilisation of municipal mesh networks alone. The scale of the economic benefits to Albury Wodonga can, however, be anticipated by the range of services to be delivered to the local government, businesses, and consumers.

Local governments across the region have become early adopters of broadband advocacy for their communities, creating on-going competitiveness in attracting industry and commerce to the region.

The advocacy instigated by the MRDB/CountryTELL consortium has taken on practical aspects. We have no doubt that elements of our work will appear in submissions from other proponents – this is no accident, we have been active in spreading the word. Themes include the following:

Practical Outcomes Focus: Convincing Local Government to engage in telecommunications planning is daunting for local government authorities as it is an area where traditionally they have defaulted for all advice to the “local Telstra bloke”. The privatisation of Telstra and the absence of competition are driving communities to seek independent or alternative advice.

Avoid the consultant default syndrome – do things, don’t just write about them! What we need to avoid is the temptation to default for advice to the ubiquitous “consultants” who produce lovely reports but which largely retain a carrier centric view of the world and produce carrier oriented advice. Nothing is more disheartening (but disappointingly frequent) than expending buckets of money on consultants advice, and have nothing to show for it.

The CountryTELL consortium has developed an effective workshop program for community and regional strategic planning in the ICT space. This has taken some years to refine but we are confident of the model created (testimonials available) and having been road tested and refined, can produce a robust and valid strategic planning document within nine weeks. The MRDB/CountryTELL consortium is well placed and willing to facilitate these planning workshops if assistance could be made available to support this initiative. Because the planning workshop template is now so robust we can anticipate the capacity to do this on a state or national basis.

The MRDB/CountryTELL consortium is also well placed and willing to make accessible all our experience in identifying the potential pitfalls and difficulties for communities who wish to venture into the infrastructure building mode. Albury Wodonga is also available as a reference site for communities who want to see and experience for real what can be achieved by communities with a bit of get up and go and a ‘can do’ problem solving, outcome approach.

Whilst carriers will remain important partners their role is different under the CountryTELL regional development model, and it is possible communities can reduce their dependence on single carrier outcomes, build agnostic access infrastructure which any carrier can utilise to deliver their particular range of services and applications and increasingly content. This will engender competition. A key facet is maintaining a focus on practical outcomes based on effective regional planning and adopting an open standards and open access regime.

Community owned pit’n’pipe: These include promoting the deployment of council-owned ‘pit and pipe’ throughout new development sites to facilitate competitive fibre to the premise roll-out and tele-communications friendly policies to facilitate access to council infrastructure. (See annexure for photos)

Leveraging NSW NCF27 Fibre town loops: Access to State owned assets such as the NSW Government NCF27 fibre town loops has also been brokered, and is a core backbone of the Albury Wodonga infrastructure being utilised by the CountryTell project via its partnership with Soul (formerly SP Telemedia) and NSW Dept Commerce and the Chief Information Officer.

Other regional cities and communities have been encouraged to pursue similar opportunities by leveraging the NSW NCF27 fibre assets to community purpose and commercialisation.

Encouraging the regional cities and communities to identify already installed assets such as State owned fibre, NCF27 fibre loops and pursuing relationships with the instrumentalities to secure access has been a constant activity.

Area of Focus:

Clever Networks can enable communities to implement the solutions provide the core competitive infrastructure which will make reality of community attempts to achieve broadband availability and participation in the innovation society.

The whole community in the region will benefit economically from improved communications and more robust competition in each of the telecommunications services provided by CountryTell. Equally important for the economics of the region are that the expertise and profit will stay within the region, providing for continued growth, increased functionality to the community and dividends to the owner members.

For this reason the activities of any new proposed roles should not be restricted to specific areas. It is likely that the planning process will identify better potential outcomes utilising a holistic integrated regional approach which might require strategic involvement of larger populations and neighbouring service providers. However, in assessing proposal a weighting could be accorded to those proposals which support or include improved delivery in areas that are yet to receive terrestrial broadband services under HiBIS.

Targeting specific groups.

Similarly to targeting specific areas, restriction is not supported, although the planning process should acknowledge and resolve issues such as the digital divide as well as addressing specifically identified industry and sectoral needs. Similarly in assessing proposal a weighting could be accorded to those proposals which target specific user groups, particularly those socio economic groups whose members, particularly children have limited access to broadband services. The planning process will also identify other target groups and local and regional sector and industry groups which can benefit from improved infrastructure and delivery of services.

Skill Set:

An effective planning role will require strategic skills and the capacity to act in a collaborative mode. ICT Planners will require a good understanding of how to identify needs and opportunities across the community – some of these needs may not have been realised by communities themselves, as many are not aware of the opportunities high speed broadband and will not have stakeholder spectrum, at both a micro and macro economic level and within specific sectors and industries. They will need to be individuals with a proven track record, preferably in community development or outcome focussed roles.

Good contacts in the business and industry sector will be essential. An understanding of the remit and capacity to work with social and economic development officers, regional development entities, and area consultative committees would ensure that a wide range of stakeholder input is valued and utilised in a strategic and productive way.

A broad understanding of the existence and capacity of all the technologies, world trends, and current research is essential. An understanding of how technology can be integrated and combined to leverage outcomes and deliver higher value service is required.

Facilitating /Supporting community wide connectivity - Planning Flexibility – *One size does not fit all:*

One of the salient lessons we have learnt in our endeavours is the need to embrace flexibility, and accept that one size does not fit all. It is important that ICT planning has the engagement and support of local government entities but keeps a focus on local outcomes within a regional context.

It is tempting to embark on a 'blanket approach' – favoured by larger councils and consultants, but the effectiveness of the CountryTell model is the capacity to design solutions to tailor to individual community need, leverage existing assets, whilst maintain interoperability via open standards and open access regimes. The benefits to smaller communities is interconnectivity with larger neighbours which at the municipal level has the advantage of enabling joint use of high end applications, to which smaller entities might not ordinarily aspire.

The local councils of Albury Wodonga anticipate significant productivity gains of at least 20% in line with international evidence from similar municipal deployments. This is in addition to expected annual savings from reduced mobile communications amongst its mobile workforce alone. Businesses can anticipate similar or greater savings.

Local technology enterprises can offer services to the thousands of potential subscribers, creating local employment and retaining revenue within the local community. As early adopters of community based value-add service providers, these businesses will benefit from the market across Australia and around the globe.

Attached is a discussion document collated in collaboration with the Towong Shire economic development officer demonstrating how these aspirations can be articulated.

Focus on Health, education, emergency services and local government?

Yes, but not exclusively, and only in the context of a planning framework.

The integration of all these services as arbiters of enhanced community capacity and well being is already proven. Enabling connectivity of students to their school portals, patients to their community health centres, enabling emergency responses enhanced by real time technology responses etc all add to economic and social development and well being. All should require integration into the strategic planning framework.

Priorities will emerge in an effective planning process.

Likewise methods to integrate existing assets are required. For example there is a roll out of broadband for doctors and schools , many of this infrastructure is underutilised and publicly funded and should be accessible on a community wide basis, Duplication and under utilisation should be avoided.

Other sectors requiring attention include the whole gamut of regional enterprise and these sectors will include groups which will drive network and industry application and capacity. Again they need to be part of a broad strategic planning framework and may provide the fulcrum to leverage community outcomes.

- Community services generally

- Agribusiness sectors of all types such as forestry, dairy, irrigation, grazing, aquaculture
- Primary industries such as mining
- Transport industries and supply chain and logistics enterprises

SCADA technology is not utilised to its optimal extent by primary industries due to cost and infrastructure limitations. The CountryTELL project specifically addresses the potential of SCADA and related technology to increase productivity. Wireless broadband and local loop telephony and data transmission (EVDO) will enhance the uptake and utility of these technologies, bringing improved infrastructure and realistic price points for broad scale utilisation in a range of primary and agribusiness endeavours including natural resources, tourism and remote area monitoring.

Q12 What strategies should be incorporated into the design to ensure that investment provides the greatest holistic community benefit?

The Forestry Program being developed under the CountryTell model is an example of a strategic response which is driven by industry need, but will result in enhanced service delivery for local government and the communities within the forestry industry footprint. Attached is a presentation outlining this strategy (Annexure 2). This type of strategic approach is a good example of how an holistic outcome can be achieved.

Infrastructure and application-focussed investment issues

- Q13** How might the brokers play a role in facilitating/supporting community-wide connectivity and community-wide (cross-sectoral) networks?
- Q14** What is the best balance between competitively determined and strategic investment funding?
- Q15** Would potential proposals be improved if the guidelines permit proposals which encompass both infrastructure and applications aspects?
- Q16** What key strategic investments in broadband infrastructure have the potential to provide the best outcomes?

The 'balance' between infrastructure and applications

It is our contention that the focus should be on infrastructure and particularly the backhaul layer between larger regional centres and the smaller dispersed satellite communities around and dependent on them. Interconnecting and viable backhaul between regions will provide strong incentive to private investment in the communities. This regional interconnectivity will allow for local government and industry application sharing, across and between regions. The backhaul infrastructure must be open standards and open access based.

After backhaul is remedied a focus on infrastructure within a collaborative planning framework can be implemented, designed to support high end and shared applications.

It is no good funding or supporting applications that generally have a private economic justification, without appropriate infrastructure to support their deployment.


Balance between competitively determined and strategic investment funding

A planning framework should articulate the best balance and fit. In some cases strategic investment may provide incentive for private sector competition. Some communities may pursue a staged approach which will blend the two. Proposals will need to be assessed on merit in all cases and a best fit approach adopted. Flexibility will be the key.

Would proposals be improved by encompassing both infrastructure and applications?

All proposals should focus on *outcomes* and the capacity to meet identified needs. Each segment by itself may not deliver outcomes, combinations may or may not. Again a clearly enunciated regional strategic plan is required to underpin any proposal.

- Q16** *What key strategic investments in broadband infrastructure have the potential to provide the best outcomes?*



We would contend that a national roll-out of the CountryTELL model has the capacity to leapfrog regional Australia into the new generation environment, with the added benefit of real infrastructure based competition to the incumbent monopoly and removing the need for community service obligation subsidies of all kinds.

The next most critical strategic investment is in the backhaul layer between larger communities and regions, for reasons previously advised. This open standard Long-haul architecture/infrastructure must be mandated as open access.

Funding for Clever Networks initiatives

Q17 Are there complementary sources of funding/contributions which should be considered in developing the guidelines for the Clever Networks program?

Complementary sources of funding / contributions which should be included in the guidelines?

The funds available under the Mobile Connect, Broadband Connect, Clever Networks, and Indigenous Australia programs should all be able to be accessed together to implement integrated solutions on a holistic basis.

Proponents and the planning process should identify and consider the many and varied private and government sources of support. Funding programs are available which are currently specific to development within industry sectors and are the domain of particular government departments. For example there is industry funding for programs which increase efficiencies which improved broadband delivery clearly achieves in many circumstances. Environmental and water management funds would be well invested in communications strategies for better management of rivers and water storage – if combined within a strategic planning framework, this same infrastructure could have benefit for the communities businesses and residences within the same footprint, leveraging outcomes and avoiding duplication. Again, the forestry example described in the annexure demonstrates this approach. Regional Solutions Funding is another source.

Utilising new and emerging technologies

- Q18** Should there be specified minimum broadband specifications (eg. bandwidth, latency etc) for Clever Networks and, if so, what should they be and how should they be determined?
- Q19** What steps / mechanisms can or should be incorporated, if any, into Clever Networks to enable regional, rural and remote communities progressively to transition to high / higher bandwidth networks?
- Q20** New technologies are showing considerable promise in providing broadband access to users well outside the current DSL limitations. What strategies should be adopted to encourage and support deployment of these new technologies, and to ensure newly emerged technologies are not precluded during the lifecycle of the program?

Minimum broadband specification?

All specifications of speed, capacity and quality of service should they be determined in accordance with the planning process. Proprietary technology/hardware should be avoided and open access mandated.

Mechanisms for transition to higher bandwidth networks?

Will be incorporated in an effective planning process which mandates open standards and open access.

Strategies to support deployment of new technologies

The CountryTell model provides for resale of ADSL where customers require or request it. It is increasingly yesterday's solution although will continue to be an option for many.

New technologies can involve risk but innovation can be catered for by strategic partnerships with industry and providers. Pilot projects can demonstrate feasibility and sustainability of new technologies, and centres of excellence and best practice can engage in research and development. Many new technologies often are 'test run'; overseas, such is the lethargy of the traditional carriers to embrace technologies which have the potential to be disruptive to the status quo.

Sustainability of Clever Networks initiatives

Q21 What supporting information should be required in Clever Networks proposals in order for their sustainability beyond the life of the program to be evaluated effectively, and what factors should be considered in determining sustainability?

Sustainability

Key Factors for consideration:

1. A Planning Framework that encompasses at least a three year to five year planning horizon, and in some cases a longer timeframe
2. Evidence of commitment by regional stakeholders (such as local government) for long term tenancies. Note: Under our model, the stakeholders are the drivers and chief beneficiaries of the network infrastructure and design. As much as is possible, this strategy ensures sustainability.
3. Complementary programs (Hospitals, Health GP's) should be enabled to access and use local network infrastructure, rather than compelled to complete subservience to State wide and nationwide purchasing contracts. Under our model the local networks will be cheaper and more efficient. Whilst aggregated purchase in a metropolitan context offers efficiencies and can be justified because competition exists, it can be at the expense in some cases of the regional capacity for sustainability. Ironically metropolitan contracts are often structured to subsidise the regional parts of the entity. Utilisation of regional networks could bring metropolitan contract prices down.

New infrastructure access arrangements

- Q22** For any new infrastructure created or made available, should there be specified minimum infrastructure access arrangements for parties other than infrastructure owners, such as a wholesale-rate for backhaul? **Absolutely!!**
- Q23** How realistic is such a requirement, and how tangible are the likely benefits of the approach? **Demonstrably realistic and tangible benefits accrue.**
- Q24** How can an appropriate charging regime for such access be determined?

By the normal ACC mechanisms if necessary, with the network owner/manager having no advantage over competitors – eg toll road model.

New infrastructure access arrangements

Access must be open to competitors to provide any legal content or service.

Q23 *How realistic is such a requirement, and how tangible are the likely benefits of the approach?*

We are sure the incumbent monopoly will howl to the roof tops! Open access will encourage all service providers, content managers, carriers and ISP's to compete on a true level playing field – only this playing field is a network rather than a toll road. The end customers will gain in productivity and profitability by having competition and choice and not being held hostage by the owner/controller of the infrastructure. Even Telstra could access these networks - and made welcome!

Realistic and can tangible benefits be demonstrated?

CountryTELL model embraces such a regime and philosophy. Realistic benefits are realised and secured when a differentiation is made between the network management regime and the retail service delivery. This will enhance competition and provide a potentially wider range of service delivery options including content providers. Such a provision is necessary for community capacity building to grow and encourage their own skill set and application layer. Local businesses could realistically develop to provide a huge range of services such as:

- Local gaming servers
- Local network managers
- Local VPN managers
- Local media providers
- Municipal service provision
- Local TV & radio – IP radio and TV broadcast.
- Local news distribution

Appropriate charging regime for such access?

By the normal ACC mechanisms if necessary, with the network owner/manager having no advantage over competitors – eg toll road model.

Links to other initiatives

Q25 What other program activities should be taken into consideration in determining Clever Network program eligibility and entitlement?

Other programs to consider?

The ICT Regional Planner should identify all available programs and programs should allow integration of resources to a holistic solution to a range of needs.

Program managers must assess how realistic is the proponents plan, and how robust has been the process of planning and stakeholder involvement? For example the proposal to implement telemedicine should be incorporated into the regional and community planning framework to enable leverages of assets and sharing and commercialisation at the local level. Each plan needs contained within it the identified sectoral needs, and identify outcomes to be achieved. Funding proposals for the development of any capital project of key infrastructure requires planning in any other government supported sector. The ICT field is no different.

Spectrum is a key component to infrastructure development and the Australian government must assiduously support programs to effect availability of appropriate spectrum across regional Australia. Use it or lose it provisions should be implemented to preclude squatting and speculation.

Embedding and undertaking program evaluation

Q26 Having regard to the possible diversity of the activities under Clever Networks, what strategies can/should be considered?

Evaluation strategies of the program

By adopting a comprehensive strategic planning based approach, outcomes can be in built, clearly articulated and reported against. This is precisely the purpose of a plan. It's a bit of a no brainer.

A further requirement must be to mandate open standards technology and open access infrastructure.

List of Appendices & References

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Toward a Communications Strategy for the Towong Shire

A discussion paper by Rob Connell, ICT Project Officer, Murray Regional Development Board, with Aaron Vanegmond, Towong Shire Manager-Economic Development

Appendix Two *(Please note this is a commercial in confidence article)*

CountryTELL's Regional, Rural & Remote Integrated Services Network.

An Industry, Community, Government, Partnerships for a Next Generation Network.

Reference One

Jerilderie Telemetry and Water Management and Monitoring Systems Demonstration Site - Old Corree

Reference Two

SENZA FILI CONSULTING ON BEHALF OF WIMAX FORUM
November 2005, Fixed, nomadic, portable and mobile applications for 802.16-2004 and 802.16e WiMAX networks

Reference Three

TROPOS NETWORKS, October 2004.
"Open Standards for Broadband Wireless Networks: Wi-Fi and WiMAX- A Technology Whitepaper". California, USA.

Reference Four

IT WIRE and BEER FILES, November, 2005.
Wireless Technology for Farming.
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