

*TASMANIAN ELECTRONIC COMMERCE CENTRE*

*Submission*

*to*

*DCITA*

*in relation to the*

*Discussion Paper on Broadband Connect & Clever  
Networks*

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## 2 Executive Summary

The Connect Australia Initiative, including the Broadband Connect and Clever Network programs, provides a watershed opportunity to see this nation make significant steps towards placing it at the forefront of digital infrastructure and information economy development. Such advances would help to place Australia amongst the leading nations in the new economy, and bring considerable assistance to regional Australians and their communities.

The TECC appreciates the opportunity to have input into the operations of these programs, and trust that the advice provided, along with the other contributors, assists in achieving and maximizing Connect Australia's potential.

In submitting a response we address two areas. The first being the opportunities that exist in Tasmania to leverage up the assistance already provided by the Government to develop projects of national significance and assistance. These include:

- Developing the reach of the Tasmanian Backbone Fibre Network too provide improved backhaul capacity to regional centres;
- Extending the TasCOLT trial to add trial footprint in Launceston, Burnie, and some regional centres – supported by the backbone network;
- Extend the deployment of wireless broadband (WiMAX) network; and other alternate last mile technologies to investigate next generation opportunities and foster competition
- Partner in the development of a Digital Content Centre; and
- Leveraging the experience of the TECC/AECC to assist in brokering, advocacy, and sharing of broadband development across industry and the community
- Possible Creation of an Advanced Research and Design "Virtual" Hub

The second part of the submission relates matters that would assist the Broadband Connection and Clever Networks programs to maximise its benefits to Australia as a whole. Key suggestions include:

- Provision of a Clear Objective/Vision for the related programs
- Accelerating Development of Regional Based Broadband Network Deployments
- Delivering Future Proof Broadband Infrastructure
- Strategic Projects versus contested funding
- Improving the Broader Community Impact of Broadband Connect
- Applications and Infrastructure Funding Balance
- Future Role of Demand Brokers
- Need for Sharing and Capturing Information and Learning
- Local Government Assistance

### 3 Introduction

The Tasmanian Electronic Commerce Centre (TECC) thanks the Australian Government, and DCITA, for the opportunity to have input in to the use of the Connect Australia package and the goal to provide a sustainable developing broadband infrastructure for this nation.

Over seven years of activity the TECC has gained considerable experience and intellectual property (IP) both in the management of various Federal Government funding programs, eg. National Broadband Strategy, Broadband Development Fund, for assisting national broadband initiative, and considerable knowledge in strategy and developments associated with electronic commerce adoption by businesses, demand aggregation, broadband developments, and digital content initiatives. This experience relates to industry groups, associations, etc., and well as to individuals and businesses. In addition through general business activities, and the management of the regional broadband forums across Australia, the TECC has a considerable knowledge of telecommunications issues and opportunities in regional Australia. As a partner in the tasCOLT consortium we have specific, practical understanding of the issues associated with developing ultra-broadband networks in this nation.

In submitting a response to the discussion paper, we would like to address two areas. The first being our view of the opportunities that exist in Tasmania to leverage up the assistance already provided by the Government, through Networking the Nations funds and the like, to build on the foundation these initiatives provided, and to provide learning for national goals and piloting of possible country wide developments. The second part seeks to provide a general response the items provided in the discussion paper both with regards to Broadband Connection and Clever Networks programs. This submission is based on our own experience and knowledge, as well as the result of consultations with government, industry, business and community stakeholders.

## 4 Tasmania – Broadband Opportunities of National Significance

In recent times, Tasmania has seen the developments of significant initiatives relating to the progress of broadband/digital infrastructure in the State, and associated flow on industry and application developments. Such initiatives include:

- Tasmania Government's Backbone Optical Fibre Network – supporting TasCOLT, TREN, Future Industry Entrants/Infrastructure Growth;
- Basslink - an undersea cable, which is to link TasGovNet to mainland Australia;
- TasCOLT – Fibre to the Home Commercial Trial and one with significant national impacts;
- Broadband over Power-line Commercial Trial - Aurora;
- Tasmanian Research and Education Network (TREN) – very high speed fibre network connecting research centres state-wide;
- Strategic Acquisition of Communications Services for Government (Network Tasmania Mk II)– assisting government service delivery and infrastructure development

As a result of this considerable activity, and foresight, we have already seen significant interest from private and government sectors entities wishing to leverage the benefits of such infrastructure. These include:

- Data Centres businesses to support overseas and local business continuity needs;
- Carrier to Establish a WiMAX-based wireless broadband network;
- Space research (CSIRO) – locate an array station as part of the Square Kilometre Array Radio Telescope should Australia be chosen as the future host country;
- Development of Digital Content Industries;
- CeNTIE 2 – CSIRO proposed development project in Tasmania to conduct a regional pilot of technology applications in the areas of health, media, and education, which require high speed data networks to operate over
- The recent announcement of the establishment of a CSIRO ICT Centre in Tasmania through the assistance of the Australian Governments Intelligent Island funds

## 4.1 Summary of Opportunities

As a result of the afore mentioned background, there are opportunities for partnerships between government and private sectors to build on this activity, and also ensure the infrastructure are developed to provide a considerable and sustainable benefits to all Tasmanians.

Some of the opportunities are:

- Develop the reach of the Tasmanian Backbone Fibre Network too provide improved backhaul capacity to regional centres;
- Extend the TasCOLT trial to add trial footprint in Launceston, Burnie, and some regional centres – supported by the backbone network;
- Extend the deployment of wireless broadband (WiMAX) network; and other alternate last mile technologies to investigate next generation opportunities and foster competition
- Partner in the development of a Digital Content Centre;
- Creation of a Research Centre (Virtual) Hub – ICT, Innovation, Digital Content, Space technologies, and Alternative Fuels
- Investigate alternative overseas backhaul arrangements to address bottleneck issues

In addition, further leverage can also be achieved by working with the TECC, Online Access Centres, and Service Tasmania shops to help reach the community. With the TECC and Online Access Centres potential providing roles to assist in coordinating community demand/interest, and the ability of the TECC to also work across Government, Business, and Community sectors to maximise existing knowledge and potential developments.

Due to the State dispersed population, difficulties associated with ensuring commercial investment in necessary infrastructure where businesses cases require equity investment to overcome initial start up hurdle, the support by the Australia Government's Connect Australia program, and similar initiatives, is fundamental to the benefits being extended to all in the state, and possible leveraging to others in regional Australia.

## 4.2 Extending Tasmanian Backbone Fibre Network for Community Benefit, Competition and Industry Development

An opportunity exists for Governments and private sector entities to partner in the development of the Tasmanian Government owned (with its strategic partners) backbone fibre network to extend the reach and benefits of this asset. Through use of Broadband Connect, Clever Network, and private sector funding (perhaps underwritten by demand aggregation/broker work by TECC) we could see the network extended to provide benefits to more Tasmanians. This would also provide increased competition in the backhaul market (where there is little) and enable new and development carrier to establish in the state. The development could include:

- Extend beyond development work to connect Hobart, Launceston, Devonport and Burnie;
- Look to reach regional centre along the route of the existing fibre route – making backhaul available to those communities; Possible sites: Brighton, Jericho, Isis, Longford, Carrick, Rosevale, Westbury, Deloraine, Railton, Spreyton, Gawler, Wynyard, Port Latta, Bell Bay, Oatlands, Georgetown
- Possible extension into North East Tasmania
- Extension in partnership with private sector entities, eg. Carriers, and Tasmanian Government;
- Could also include additional of Points-of-presence in Hobart and Launceston; and
- Installation of towers for WiMAX/WiFi/or other mobile data technology

#### **4.3 Further Develop Last-Mile Alternatives and Metro-ring Opportunities through Extension of TasCOLT and related activities**

Through existing initiatives such as tasCOLT, Tasmania's controllable size but socio and geographic complexity provides an opportunity to further explore alternative last mile access strategies in a controlled manner (alongside existing trials of Fibre-To-The-Premises (FTTP) and Power line Carrier (PLC)) to generate a greater level of understanding as to the commercial and sustainable viability of such deployments in regional Australia. Initiatives could include pilots of WiMAX wireless broadband (both fixed and mobile), ADSL 2+, Fibre-To-The-Node (FTTN) and other forms of ultra high-speed deployment technology.

Specific initiatives include:

- An opportunity to double or triple the footprints at low marginal cost (as the Tasmanian Government and commercial sponsors have funded the expensive head-end infrastructure). Look to improve the services availability to connect all 4 major centre, as well as testing technology in smaller towns; Possible extension plan: Add 1000 premises in Launceston; 800 in Burnie, Increase Devonport to 800; add 100-200 premises in Oatlands, Deloraine, Westbury, Wynyard, and Longford; Such and extension improves commercial viability of trial and addresses current application developments (eg eHealth plans); This move would provide significant competitive pressure on other carriers to develop infrastructure appropriately;
- Opportunity to fund additional case studies, especially with the medical or education and training clusters.
- Opportunity to fund innovative local access roll-outs off the ends (eg connect some ends to eg WiFi, WiMAX cells or radio networks instead of to single sites receiving ultra-broadband services)
- Opportunity for broadband advocates/brokers to work with industry clusters to develop additional case studies etc.
- Opportunity to further develop the intra-city infrastructure and metro ring/points-of-presence to improve the commercial availability of ultra-broadband and broadband services across the state. This may include

developing a metro fibre ring on Launceston and Devonport, working on conjunction with tasCOLT, private sector entities and industry demand aggregation.

- Through partnering with the Tasmanian Government's Networking Tasmania II (major tender for data communications services, there is an opportunity to subsidise carrier-owned fibre rings to allow delivery of higher-bandwidth services in regional centres, anchored on use by education and health centres and other government service locations (such as local government, Service Tasmania, Online Access Centres and libraries, police and justice facilities), to extend the development of such high capacity networks within urban/built up areas, and large towns. This would be similar to the Broadband for Regional Tasmania model, although would provide much higher bandwidth, involve less remote areas, and contractually ensure that such infrastructure provides "declared services" or at least accessible and available to others in the community.
- Opportunity to network tasCOLT (Australia's only ultra broadband "brown-field" commercial trial) with a "green-fields" deployment of similar outcomes to test the complete picture of next generation solutions and commercial imperatives.

#### 4.4 TECC - Broker/Advocate

There is an opportunity to fund broker/advocate activity, especially in area of the digital media and content industries, building on and contributing to the TasCOLT project, TREN, and Connect Australia supported initiatives in Tasmania. TECC is well positioned to undertake this role, and has the experience and intellectual property necessary to fulfil such a responsibility.

An additional service could be to increase business and consumer awareness of the benefits and availability of Internet – apparently uptake in many parts of the state is lagging national average, as are other parts of regional Australia. There is an opportunity for the TECC to assist in providing a review role for DCITA in assessing the benefits of various Connect Australia funding requests and plans based on local knowledge, relationships with both commercial and government sectors, and not-for-profit operation/motive. In doing so we would be leveraging of regional broadband forum, demand aggregation and related IP and experience.

We also believe there is a renewed role for the TECC to continue the **Regional Broadband Forums** due to the increased activity that Connect Australia will create. Such a service would require funding. Through its role as the AECC, with partners, we have provided six regional forums, and predict a clear need to continue such forums, along with the provision of virtual forums/portal to assist in sharing IP, learning, knowledge etc.

The TECC also envisages expanding on existing activities, and thus (with assistance) developing a future role also to encourage investments and opportunities in new industries developing around the fibre and ultra-broadband infrastructure.

#### 4.5 Establishing a lead in Digital Content, while assisting community and small business demand for broadband infrastructure

Assistance to the developing digital content drive would contribute to the strategy of increasing the penetration of broadband services given the combined mass and specific market appeals, and technology neutrality of this development. There we would look to progress a focussed approach to Digital industries development around content management principles, which will support access to a broader level of digital content at the local (geographical) level thus reducing the impact of bottle necks in the network, while also stimulating content that would increase the appeal and take up of broadband services capable of delivery such services.

In particular we would seek assistance to develop a project called the **Digital Futures Forum Initiative**. This initiative already has significant interest from such global technologies companies as Intel, and many businesses and individuals involved in the Digital Content industry nationally. **As convenor the TECC will be hosting the second meeting of national focus group for the Digital Futures Forum Initiative in early April 2006.**

Such an initiative is consistent with the Australian Government's Digital Industry Action Agenda, and is a more specific example as to how the development of the nations broadband infrastructure is a vehicle for developing this industry.

##### 4.5.1 Digital Futures Forum Initiative Background

Background to Tasmania and Digital Futures:

- Tasmania has seen the visionary deployment of core broadband infrastructure, facilitated and directed by Government
- This infrastructure is essential to the development, trialling and deployment of advanced new end-to-end digital services that will create a plethora of exciting new local & national digital industry opportunities
- TasCOLT is providing FTTH/FTTP broadband connection for the consumer
- Beyond TasCOLT there is a range of other initiatives including:
  - The Aurora Energy Power Line Carrier (PLC) connection to the consumer trial, and
  - A series of WiMAX trials
  - Upon deploying these trials, Tasmania will have the most diverse advanced broadband infrastructure in Australia if not the entire APAC region

Such a background has been recognised by the industry as being the perfect foundation to develop broad range of next generation digital media services.

#### 4.5.2 Digital Futures Forum Initiative – the Market

- The ability to trial and provide digital TV and a range of content via broadband overcomes the current inefficient means of delivery
- IPTV is effectively Cable/Pay TV model over the internet; Today's internet does not have the capacity to support this model
- Convergent technologies emerging in second half of the decade will utilise standards-based Consumer Electronics (CE) devices
- 2006 will see the introduction of several new categories of digital media devices for consumers
- These and other similar technologies will allow consumers to “pull” desired content as opposed to broadcast pre-programmed “push” models evidenced by Pay TV/Free-To-Air TV
- Industry analysis forecasts that as cost effective high-speed broadband networks emerge, the demand for a broad range of innovative digital media services will increase exponentially
- Digital Services will include: Film/TV; Music; Gaming; Photo/Video; Healthcare; Education; e-Government; Smart Home; Telephony/Messaging and many others.

There is a significant window of opportunity to take world leadership in digital services.

#### 4.5.3 Digital Futures Forum Initiative - Vision

- Australia, and Tasmania in particular, has significant population of under utilised creative media professionals due to prevailing media distribution concentration & oligarchies
- The “Digital Futures” initiative will provide a world leading foundation for development, testing and deployment of a broad range of digital media services designed for delivery over next generation high speed broadband internet epitomised by TasCOLT
- Australia has world-class creative media professionals with specific expertise in: film; animation; music; gaming; education; healthcare; home services; e-government; software development and related disciplines
- The second half of the decade will provide a unique convergence of broadband network technology and consumer-oriented digital media devices. The “Digital Futures” initiative will provide the driver to capitalise the economic development of this opportunity
- “Digital Futures” would provide an end-to-end environment to empower creative media professionals around Australia to collaborate, develop, build, trial & market a broad range of next generation digital media products and services.
- Develop open framework then proceed to build using national IP assets
- National initiative based in Tasmania

#### 4.5.4 Digital Futures Forum Initiative – Policy Benefits

While there are many general benefits from assisting the development of Digital Content, including those to the community, the more specific policy benefits include:

- Promote & accelerate broadband take up (wired & wireless)
- Promote & accelerate Digital TV take-up through digital receiver bundling w/ ViiV devices & Digital TV content enabling
- Promote & accelerate digital content industry
  - Infrastructure
  - Software
  - Content
- Develop significant global export industry focussed upon end-to-end digital media infrastructure to meet robust global demand
- Enhanced economic efficiency and productivity as recognised in the Easton Report

#### 4.6 Possible Creation of an Advanced Research and Design “Virtual” Hub

There is an opportunity to leverage the current advanced technology and innovative initiatives occurring in Tasmania, to create a hub of research and design centres. Through funding and other resource assistance, coordination of TREN, tasCOLT, and Tasmanian Government Fibre Networks, CSIRO ICT Centre, Innovation Centre of Excellence, Digital Futures Initiative, Space technologies development, and Alternative Fuels/Environmentally friendly energy developments, an internationally significant facility could be developed.

Such a “Hub” would improve the attraction for overseas and national investment, University and Post Graduate students, and raise the profile of the various centres outputs. In addition the sharing of resources and other matters (such as intellectual property) would be vastly improved. Tasmania’s size makes such a coordination effort achievable, and necessary given the difficulty individual efforts have in gaining the necessary economies of scale and national and international attention needed for long term success.

We recommend that such a development be initially funded for investigation of its possibility. Should commercial and government goals be assessed as being achievable, further assistance then be provided to assist in building the necessary people and technology infrastructures required to bring it to reality. Obviously other funding sources would also be sought. This initiative would be a demonstration of how Connect Australia can leverage the R&D activities of the nation, as well as assist in possible downstream technology related commercial outcomes, and assist in the development of industries associated with the new economy.

## 5 General Comments on Discussion Paper

The following comments are provided as a more general response to the items and questions raised in the Discussion Paper

### 5.1 Provision of a Clear Objective

It is important that funding should be supported where it is consistent with a national vision for a digital infrastructure, addresses general policy goals, and is in the context of various regulatory and commercial drivers. In other words we suggest enunciating a more specific vision (consistent with the National Broadband Strategy) of the future that carriers, private sector companies, Government and general consumers/users can work towards. For example:

#### 5.1.1 (Example) Vision for Broadband Australia – Ubiquitous Digital Infrastructure

*'The Government today announced a comprehensive communications package called Connect Australia to give Australians access to first-class telecommunications services with a \$1.1 billion roll-out of broadband, new regional clever networks, mobile services and Indigenous telecommunications. In addition, a \$2 billion dedicated Communications Fund will be established and earnings from the fund will be available to provide new communications services for rural Australia.'* Sen Helen Coonan 17 August 2005.

- Vision and strategy needs to be multi-level (national, state, local, industry) -> recognition of social and economic imperative;
- Framework consists of a number of levers to implement the vision;
- Combination of competitive, and open access infrastructures;
- Utilises a combination of Connect Australia, state based development funds, and private sector investments as direct capital injections or underwriting; and
- Ubiquitous Networking is the goal – connects everyone and everything at anytime.
- Provision of accessible ultra-broadband (20Mbps+) for 95% of Australians, within reasonable residential/SME pricing, by 2010; with remainder having access to at least 1.5 Mbps; By 2007 at least 90% have access to ultra broadband, and services available within metro areas should provide access to all residences and businesses. [Note: Would need to verify figures against current statistics for broadband availability, and measures such as availability of mobile telecommunications services]

### 5.1.2 Key drivers/levers

- Government assistance, including the Connect Australia and related programs
- Innovative technologies (FTTH, Wimax, BPL, RFID etc) and competition models;
- Regulatory changes (ULL, open access to ducting, infrastructure wholesale provision with differing carrier issues, interoperability standards);
- Community networks and tools to assist these;
- Focus on reducing duplication in the last mile;
- Blended solutions;
- Innovation in access to backhaul
- Innovation in extending deployment of fibre (eg wireless on edge of footprint to initially extend, once take-up improves - rollout fibre and redeploy base stations)
- Improve overseas backhaul.
- Local government assistance in deployment models, standards, network and infrastructure design and ducting
- Innovative applications and client groupings for demand aggregation and network plus (beyond the triple play)
- Incentives for local research and development efforts by the private sector

### 5.1.3 Tasmania is positioned to investigate key aspects of this vision:

- Tasmania can demonstrate the vision with all the complexities, only on a controllable size;
- Leading in many of these key elements;
- International support for Tasmania, eg through ThaiCOLT and NTT West, provides knowledge and learning for the nation; and
- Potential for strategic partnering with "green-fields" developments to complete the picture, e.g. linking tasCOLT with VicUrban's Aurora project (or preferably a development here in Tasmania for a new subdivision)

## 5.2 Accelerating Development of Regional Based Broadband Network Deployments

In respect of the Broadband Connect project it is recommended that consideration be given to some form of 'accelerator' model for the development of regional based broadband network deployments. This would be particularly relevant to small to medium sized service providers with some form of affinity to the location they are trying to establish the network at.

Often in the past these groups have borne all the capital risk up front on the basis that this would be offset by redeemable HiBIS payments as they attracted subscribers. Larger carriers (reluctant to initiate developments yet concerned in losing customers) would wait for such stimulation to appear in these locations and then drop distance limited (ADSL) technology into the local exchange wiping out the business case of the initial provider (again subsidised by HiBIS).

Due to such scenarios there is now a level of reluctance for service providers to 'risk' attempting to enter these markets. In order to reinvigorate interest in these locations one option under the Broadband Connect program could be to:

- Establish a proportion of the Broadband Connect funds into a trust account managed by a State's Infrastructure Development Agency. Funds would then be allocated to a service provider in an up front lump sum on the basis of a satisfactory assessed development proposal, back by relevant market support (demand aggregation evidence or unique selling point).

Multiple service providers could submit proposals for the same location however it is recommended that only one provider would be approved funding subject to the sustainability of its business model and based on the following KPI's:

- % of population within the specified location that could be serviced reliably by the proposed network development;
- Range of services to be offered;
- Guaranteed speeds accessible across the network;

The maximum level of funding provided would be equal to the sum of 100 HiBIS subscriber payments, as defined for that location.

- The service provider would need to be registered under the HiBIS scheme and would then claim back in the normal manner a subscriber subsidy for each customer it signs up to use its network (based on existing guidelines). This payment would then transfer directly back to the State based trust account to offset the initial Grant.

Each service provider would have a defined period of time (eg. 36 months) to sign up a 100 customers. Failing to achieve this goal would make the provider liable to pay back the balance of the grant funded to it and not cleared by subsequent HiBiS claims.

Under this proposed model it is believed that medium sized wireless providers would be encouraged to look at developments in areas where their technology could reach the minimum of 100 subscribers (likely to need at least 3 times this number of prospective accessible customers to achieve this KPI). The incentive to 'jump in' may be the 'first in' only funding approach. The exception to this is where the provider could not reliably provide a service to a customer within the defined location boundaries and as such an alternative provider using different technology (such as satellite) could deliver a service.

The up front payment approach would help offset the capital cost needed to get the ball rolling. The use of State based industry development resources would assist DCITA to carry out the necessary business case assessments of each proposal that would create a greater chance of longer-term sustainability in each project.

In summary there is an opportunity for Broadband Connect to work with State Government to create a revolving fund to provide cash-flow support to carriers investing in advance of receipt of BC subsidies. Combined with a possible 3-6 month roll-out window before other registered providers may apply for subsidies in a defined special area (to facilitate the roll-out of eg wireless technologies where they could provide better coverage and outcomes than ADSL program which barely reaches outside the centre of a defined community

### **5.3 Delivering Future Proof Broadband Infrastructure**

We need to acknowledge current entry-level broadband will not be adequate for long, encourage/favour investment in technologies which can be sustainable scaled up, eg ADSL 2(+), Fibre-to-the home, potentially fibre-to-the-node (FTTN), and WiMAX over current low speed broadband offering. A particular emphasis on infrastructure that has a good long term prospective is a key to the successful use of funds and for achieving commercial return.

- Currently 256/64 is considered by many as less than broadband
- 512/128 generally considered minimum to support concurrent reasonable quality web, email and VOIP services
- VOIP excellent broadband service to break tyranny of distance issues re timed calls in regional and remote Australia.
- Generally 20-25Mbps required for emerging market of video on demand (triple play), higher speeds required to support multiple channels and/or high definition video
- Any investment should be able to cater for these future demands, either initially or via minimal investments. Clever Networks should at least be aiming to set the "triple play" needs (eg 20-25Mbps) as the standard they will be looking for infrastructure developments to achieve or support. The global demand for video, data/internet, and

voice over the one access technology is a clear determinant for this objective.

- Funding only 256/64 capable services would lead to a repeat of the previous city/regional Australia equity issues.

A key issue is to ensure we remain competitive within the global economy, and subsequently our digital infrastructure capacity in relation to South East Asians countries, where customer accessible broadband is available at much higher rates residences and small businesses.

We may need to look at benchmarking the minimum standards for bandwidth provision against those of South Korea, Japan, Singapore, and others in order to position this country at a competitive level internationally. While elements those countries assist the speed of development of high-speed digital infrastructure against Australia, nevertheless they remain a competitor and we need to address that concern. In addition they also provide a good goal to work towards, and thus the comment that they may assist in establishing a benchmark for our future infrastructure developments.

#### **5.4 Strategic Projects versus contested funding**

We support the concept of “strategic initiatives” funded out of Broadband Connect or Clever Networks that are not contested but developed in conjunction with State Governments and Private Sector in order to stimulate new benchmarks for broadband services (in terms of speed and pricing). Such projects should provide significant (and not incremental) increases to current commercial delivery.

- Key projects should be to open access to backbone and metro fibre networks
- Other key initiatives may involve extension of backhaul and build of metro rings where normal commercial pressures have thus far not seen this occur, eg. Installation of fibre optic cable backhaul to regional areas and metro ring in large rural/regional town (outside of Telstra’s network).
- One objective of BC/CN could be to achieve strategic ultra-broadband deployments (of supportable size – eg 3000-5000 customers – in every jurisdiction, and provide or arrange a coordination role to leverage any learning and deliverable nationally, and provide a national focus that would assist in raising the profile and commercial impact of such activities.

#### **5.5 Improving the Broader Community Impact of Broadband Connect**

We need to ensure Broadband Connect looks to stimulate infrastructure and service improvements that assist whole communities and towns rather than an individual. There is an issue where previous funding from HiBiS provides a number of satellite services to individuals in a town, rather than funds going to an general improvement in infrastructure (eg enabling exchanges for ADSL(2) or other.

Therefore the program may need to look at a group funding model (eg funds paid to telecommunications companies on the basis it will provide infrastructure and services that will support at least 50-200 customers and will be available for future needs.

(Having said this, there will obviously be the need to also fund those very remote sites that will need satellite).

We should look at also using Broadband Connect funds to provide strategic/core infrastructure improvements where it can be established it will provide significant benefits to a large number of end-customers (such funding should be conditioned in relation to the level of monies that go to Telstra in order to stimulate some competition where possible)

## **5.6 Applications and Infrastructure Funding Balance**

In relation to Clever Network, it is difficult to support any model that prescribes a specific portion of funding for applications versus infrastructure. This would probably vary from region to region, and would suggest that in the main the largest need is still for true broadband infrastructure available at consumer rates. Within Tasmania considerable work and investment, including that from NTN, was focussed on applications (eg health, education, government services, etc), however the biggest need is still affordable bandwidth and true broadband speeds (1.5Mbps and beyond).

Where applications funding is sought, focus should be provided on that which would improve general take-up in the residential and SME markets in order to assist in the penetration of broadband services. In addition funding to assist the developing digital content drive would contribute to this strategy given the combined mass and specific market appeals, and technology neutrality, of this development.

## **5.7 Future Role of Demand Brokers**

In relation to demand brokers, the move to geographically based providers may work, however this needs to be balanced against skills sets, and the fact that those brokers capable of working across the metro and regional areas within a state/s can help leverage activities that may be missed by those simply focussed on rural needs. We suspect you may need to have a mix of both, and the number varying depending on the size of the geography in mind.

The demand aggregation need is still there, and you would anticipate that such providers can assist in awareness raising (although governments should play a direct role in this), and certainly a shift to effective use strategies is a positive move.

Provision of resources and tools to assist in community based demand aggregation activities and sharing of learning would also be a needed activity.

## 5.8 Need for Sharing and Capturing Information and Learning

There still appears to be a strong need for regional forums and portal to allow shared awareness and learning from broadband activities and plans, as well as to improve the impact of funded activities – particularly through increased usage or competition. Connect Australia, together with other industry led activity in broadband infrastructure developments, will see a large amount of knowledge and intellectual property generated, with considerable benefits to be achieved through sharing this information. See also Section 4.4 – TECC.

In addition to reducing possible duplication of effort, many communities and regions (along with private sector entities) could gain considerable benefits and advances through learning and perhaps utilising the output and outcomes of other regional broadband initiatives. As mentioned in the previous item, such sharing could also include the provision of resources to assist in community based demand aggregation activities, extending to information that will assist in building relevant business cases. This would appear to be a role that the Australian Electronic Commerce Centre could assist with, and perhaps facilitate its development.

A key learning from the Networking the Nation (NTN) initiative is that unless a concerted effort is applied much of the intellectual property developed through such a large initiative could be lost or difficult to obtain/find. Thus the need to address such a requirement up front to ensure that as the program unfolds as much of the IP and information of initiative is shared in a way available to the broader regional community.

Another specific tool that could assist in ensure the overall improvement of the broadband infrastructure across the nation, and reducing where reasonable duplication, is a continuation of the geographical/mapping of broadband infrastructure developments across the nation. This service would provide all Australians (or at least all levels of Government and the industry) a graphical representation of the infrastructure available across the country. Such a tool would be more focussed on highlighting access infrastructure, but may also provide insight on backhaul (including overseas) capabilities.

## 5.9 Related Regulatory Comments

While much has been written with regards to regulatory developments that could or will impact the development of telecommunications services in the country, we would like to make particular note of the following:

- Operational separation regime could well provide to be more important than Connect Australia in achieving long term benefits and improved deployment of broadband services across Australia, it is therefore important to get it right
- Need to ensure ISPs have access wholesale services at equitable terms and rates; current areas of uncertainty include backhaul, ULL and wholesale services – all in terms of pricing and certainty

## 5.10 Sector Specific Funding

There are opportunities to fund additional services into rural and remote areas, especially centred on health care institutions. Additional opportunity for broker/advocate activity to bring together the potential of the multiple relevant Commonwealth funded IT programs for health, including the Health Connect project, which is being rolled out State-wide in Tasmania, the Broadband for Health project (previously Broadband for GPs), and the recently announced funding for IT for aged care places.

To avoid some concerns over sector centre developments, which can have limited benefit for the general community, we should ensure the condition applies that the broadband service is a "declared service" or at least accessible and available to others in the community.

## 5.11 Local Government Assistance

We may need to utilise some of the Connect Australia funding to provide resources to assist local governments to enable appropriate planning processes and infrastructure guidelines to help ensure new infrastructure development can occur, and sub-developments incorporate broadband technology infrastructure needs. It is apparent that to ensure a reasonable level of consistency in allowing the development of next generation networks across Australia, local governments need to be encouraged and educated in achieving this aim.

This assistance could include:

- Aligning planning regulations
- Providing guidelines on appropriate infrastructure developments in new sub-divisions to support such technologies
- Providing assistance in how to work with future carriers;
- Develop models for more effective utilisation of existing council assets;
- Revise planning restrictions currently placed on the use of utility assets that could otherwise stream line the process for rolling out next generation broadband infrastructure.
- Possible provision of demand brokerage services specifically tailored for assisting local authorities both for demand aggregation and effective usage assistance

## 5.12 Other Comments

Some final comments:

- We need to ensure some funding is available to address poor services still being experience in urban areas.
- Key is to create a value proposition, which connects demand and supply, not to fund one or the other (or both but with no connection between)

## 6 Conclusion

To conclude, the TECC believes that the Connect Australia program present an excellent opportunity to see significant advances be achieve for broadband (and in general digital) infrastructure across the nation, including considerable advances in Tasmania.

Tasmania provides the Australian Government, and in particular DCITA, an environment where they cannot only address specific issues within the state, but also trial various strategies that could benefit the nation as a whole.

We offer this submission to DCITA in the hope that it provides useful input to your on-going processes associated with managing the Connect Australia programs, and look forward to further liaison with regards to this initiative.

Should you require further information or clarification on this submission please do not hesitate to contact us utilising the details provided in section 1.