

Clever Networks

As a precursor to answering the question contained in the DCITA discussion paper a set of 14 principles has been developed.

These principles attempt to set the framework for responding to the specific questions raised by DCITA.

1. Grants of public monies to commercial enterprises

All funding provided under Broadband Connect and Clever Networks must include the provision that spare infrastructure capacity installed and operated under the grant is available to other carriers, carriage service providers and ISPs through industry equivalent wholesale arrangements. Access to this capacity must be under non-exclusive supply agreements. To facilitate assessment of an applicant's capacity to construct excess capacity (and hence available for competitive supply) applicants for funding must provide detailed information on their immediate bandwidth needs, future bandwidth requirements, the physical points at which competitors can interconnect and the capacity available at each interconnection point and identify the bandwidth and type of excess capacity. By way of explanation this principle applies to backhaul, and "last mile" access.

2. The principle of maximising community benefit must apply to all grants.

That is, has leading industry and local community sectors (e.g. local government, education, peak industry bodies etc) had an opportunity to comment of the "value proposition" for the region/community prior to submission or grant approval. Funding submissions must contain a "*statement of support*" from these representative industry sectors. Suppliers would be encouraged to be innovative in the type, application, availability and conditions that might apply to the community benefit.

3. State outcomes – State Policy Direction

All applications must stipulate how the grant of public monies to their project adheres to the key policy objectives of the State. Each state will have, at a minimum an ICT policy statement which identifies strategic objectives. Applicants should address these policy areas describing how their project impacts on state initiatives by identifying matching priorities. Applications that do not meet state priority areas should be denied access to federal funding programs.

4. Internal efficiency to State benefits

Funding should support the development of business and community growth that matches development strategies of the Commonwealth, state and local governments. These strategies must be published and being actively pursued through separate initiatives by governments, the business community or industry

bodies. The principle to be adopted is that the region gains an economic advantage through job creation/retention and economic development by creating a better broadband infrastructure.

5. Strategic Infrastructure Plan

Projects should align with the state plans to develop a roadmap that brings telecommunications infrastructure to nominated region hubs. The principle is that telecommunications infrastructure (broadband) should be tactically aligned in the same way that a State roads system (freeways, highways, two-lane sealed roads, graded roads and tracks) is constructed and implemented over the longer term to provide a priority transport system. In this way the State is directing funds into building a long term telecommunications asset base as opposed to short term achievements.

Funding for broadband infrastructure projects would only apply to projects designed to meet future bandwidth requirements (5 - 10 year horizon) and not to projects designed on short term projections. Without this longer term focus, communities most likely to receive funded programs benefits to stimulate infrastructure development are unlikely to have recourse to new programs and hence be confined in a "digital void".

6. Aggregation.

(i) Implement a requirement for Clever Networks that encourages carrier aggregation and joint access to infrastructure under commercial arrangements. The principle is that construction of competitive backhaul infrastructure (either new broadband routes or duplicate competitive trunk routes) in regional areas is most likely to have a positive rate of return if multiple carriers commit to utilising the infrastructure as a shared resource. In Queensland there are a number of opportunities for carriers and carriage service providers to create dual broadband infrastructure. This has not occurred because of the existing carrier approach to adopt vertical integration strategies to the market.

(ii) Implement strategies that align broadband demand from all three levels of government to maximise demand for specific towns and regions. The present practice of separate and independent supply arrangements has a detrimental impact on establishing an aggregation demand base in areas of low broadband service provision. The practice has inadvertently encouraged single supplier and operated broadband infrastructure, effectively a monopoly environment. A focus of identification and facilitation between governments could lead to a more strategic approach.

(iii) In towns and regions without significant government presence the aggregation of broadband for mobile

infrastructure may assist commercial infrastructure development. Applications for funding under the Clever Networks, and Broadband Connect should also consider Mobile Blackspots issues.

7. Focus on terrestrial.

The focus of subsidies for the deployment of broadband infrastructure must be in building terrestrial infrastructure. This principle should be mandatory for Clever Networks funding and desired for Broadband Connect funding. Technology developments and the availability of new broadband services (e.g VOD, IPTV, health and education applications etc) are expected to require greater bandwidths which are more efficiently delivered in terms of scale and economics by terrestrial systems.

8. State Contributions.

To provide governments, the community and industry with the opportunity to participate in the Clever Networks and Broadband Connect programs the in-kind definitions must include the capability to enhance existing strategies and priorities as these programs may have short, medium and long term tactical plans.

- i. Consideration must be given to acknowledging leverage from supply arrangements that cause broadband units to be installed. Broadband units can be bandwidth, communications or IT equipment, project management services and purchase of broadband services surplus to identified immediate operational requirements but has been purchased to stimulate demand.
- (ii) State government should be encouraged to direct a percentage of Government Owned Corporations (GOC) dividend into targeted rural and remote areas for broadband infrastructure development where it is unlikely (or there is documented evidence) that there is no commercial case supporting terrestrial services.

9. Applications

Where there are criteria driving telecommunications needs (i.e electricity deregulation, enhanced education programs) these should be matched with broadband initiatives to deliver the best possible statewide impacts not disparate solutions.

10. Contractual Arrangements

Contracts must be written and managed to be unambiguous and to ensure full delivery of proposed services. For example, funding a proposal that includes references to “*supply of equipment that is ADSL 2 and ADSL 2+ capable*” must be avoided as there is no certainty or obligation on the suppliers to provide and support services to the market at the ADSL 2 (ADSL 2+) level of capability.

11. Health and Education

Support for funding projects that build upon applications that adopt or augment existing broadband applications in the health

and education arena should be a priority as this is one strategy to develop make available to the market broadband applications. For example, a proposal that adapts an existing training package (ASP application requiring broadband access) to include new regulatory requirements should be supported as this can be accessed nationwide and may be necessary for compliance with new regulations.

How can state governments stimulate the adoption of broadband applications that make productivity improvements, promote economic development or lead to better compliance? For the agricultural industry this might be awareness, identification, pilot and documentation of a supply chain application in a particular segment (e.g grains).

12. Remote (Indigenous and remote)

Where there is market failure an intervention policy of zone equity should be implemented. Where the non-commercial viability of broadband to a town or region is established, this should trigger a review of government intervention in the market. Existing practice including purchasing policy or grants should first examine the economic impact on the community of government service requirements. The impact may create (introduce) increased broadband capacity but damage the community's capacity to develop or support an ICT industry. Management of multiple supplier agreement has been identified as an inhibitor to the suggested direction as has the accreditation (GITC) with governments. However pilot schemes to test the viability of new approached may lead to better economic development in the regions.

13. Network Infrastructure

Stipulate that vendors provide information on the broadband infrastructure by requiring network maps when applicants seek Clever Network and Broadband Connect funding. Such maps are to be publicly available on the organisations website, DCITA or State government websites. A minimum of information should be defined. This information must include technology deployed, physical path, capacity (committed and spare), interconnection points should be included.

14. SmartState filter on government spending

Require State governments to develop and implement a policy that supports the principle that cabinet submissions must include a statement on the ICT impact of proposals/investment and the community benefits offered by the submission. The policy would be applicable to departments and government owned enterprises seeking funding under the Connect Australia programs.

Clever Networks

The role of the brokers' network

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?

It is highly unlikely that a single approach will produce the best outcomes across all states due to the geographic/population density of states, the periodicity of demand aggregation programs in individual states and the structures applied at the state level. A "one-size fits all" has the potential to under deliver on the policy objectives of the program. However there have been a number of learnings from the current round of funding that can be leveraged to maximiser future broker networks.

At present the demand aggregation program can be viewed as having three structures; the sectoral (education & Health), the state (state brokers and regions (community brokers). Whilst there has been effort directed at development of inter-functional liaison from education and health to the state brokers the general consensus by state brokers is that very limited cross fertilisation has occurred. The leverage that should have occurred has not happened.

By definition of their roles, the state and community brokers are active in the demand aggregation function in regions with limited broadband infrastructure or regions with lower probabilities for developing commercially sustainable business cases to attract broadband suppliers. The major influencers for broadband in these areas are the state agencies and local government. Both bodies tend to have independent (and mature) purchasing arrangements, suppliers agreements/panels, commitments to purchasing timeframes and purchasing objectives. Therefore national and state ICT policy directions will influence outcomes in demand aggregation activities with negative impacts on the whole of community benefits due to the limited coverage of the technology deployed. A learning from the current demand aggregation activity is that some regions have little understanding of national and state directions.

The most successful model will lie in a broker having a state focus but strongly driving to marry synergies from competing and complimentary demand drivers. By having a single focus to develop and reference all regional activity (at the state and community level) will facilitate better coordination through the health, education and local government levels. This does not infer that community brokers should not continue, because they should, but the role should compliment the state broker rather than as an independent role. The same should be applied in the national industry roles should they continue. Sectoral industry brokers may be providing value at the national level but this value not necessarily translating to state and region effort. Their activities must include a close relationship with the state broker.

There is also general consensus amongst state brokers that without broker representation on that body little if any consultation or advice is sought from state brokers by NBSIG members. The suggestion is that one state broker represents the "regional(state)/community" level of participation in the national government's broadband initiatives.

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?

It is apparent that whilst discussion continues on the benefits of broadband for government service delivery, education and health applications and new services (VoIP, VOD, IPTV) two broadband capabilities remain dominant – always on and speed. The "killer application" is yet to emerge. Brokers have been exposed to some applications (e.g. OH&S online training for labour accreditation in mining camps, GIS/GPS applications in the agricultural industry) but a portfolio of applications would assist in the general awareness of broadband as an economic

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

enabler, to act as incentives to connect to broadband and to assist business breakthrough the technology barrier.

Brokers can play a vital broadband awareness role. The aim of the awareness function is to work in and with communities as a focal reference point assisting local businesses, community groups and local government with the broadband transition. Resource materials such as leaflets, mailouts, databases, websites and roadshows competes with a multitude of priorities in regional towns due to a scarcity of resources and skill levels to address broadband applications promotion and adoption. Whilst the consensus is extremely positive towards broadband, competing priorities means resources are directed at crisis and visual issues.

If a suitable database of information was developed there are two roles for brokers. A central depository of broadband applications needs to be established. It is apparent that there is scant information on successful broadband applications. The database would need to be divided into various industry segments (i.e. agricultural, health, education, business, transport etc) fully describing the application in terms similar to a case study giving suitable reference sites and information about the problem addressed, the solution and the benefits derived. Without a list of contact persons prepared to act as mentors and information sources the data may be of limited value. A number of contact per reference site is required – a management referee, an IT referee and a user.

To supplement this applications database a second database is required to list the suppliers who provide the solution described. They must be endorsed by the organisation(s) that implemented the broadband solution to ensure the integrity of the information.

Brokers would be required to identify and submit broadband applications to the body responsible for the management of the national database. Guidelines for the applications should ensure that applications are replicable, cost effective, lead to better productivity, efficiency or revenue streams and have a regional economic or lifestyle impact.

Q3 What other resources or programs should the brokers be aware of in this role?

It is crucial that brokers are fully conversant with federal and state initiatives or directions in their roles. Because demand aggregation programs are active in areas where market failure has limited the availability of broadband or broadband penetration is considered low any program, initiative or development that can improve a business case for infrastructure rollout is essential.

For example, as it is recognised the world over that broadband is a critical economical enabler, if a sustainable regions program were initiated it should be imperative that the ICT/broadband impact statements were an essential part of a funding approval. The broker could be a central referral point for such comment.

The development of programs that require governmental purchasing programs to consider the community benefit (defined as the geographic reach of broadband, diversity of service, competitive choice, equivalent metropolitan pricing and scalability) and requiring broker assessment before committing expenditure would assist.

A valuable resource that is not available is the status of telecommunications infrastructure throughout Australia. The generic response by carriers and ISPs when such information is requested is that the information is confidential and commercial. A mapping of current infrastructure showing technology, bandwidth, interconnection points, spare capacity and future plans would assist maximise the outcomes. It could be argued that governments should require suppliers to provide the information on the quality and type of infrastructure in particular areas before any taxpayer funded support can be provided to such carriers. For example, it should be a requirement for suppliers such as Telstra to provide the above information prior to being listed on the preferred supplier list for services such as HiBIS.

Q4 Should the broker role include an increased focus on 'effective use' outcomes and, if so, how can this best be achieved?

Queensland would urge caution in the wholesale adoption of a direction to incorporate too great a focus on "effective use" as it could be a difficult term to define. Some questions are:

- does it refer to increased economic growth and economic development outcomes for the region/community,
- over what period of time should this economic activity occur,
- is a short term or medium term outcome required
- what incentives/remedies/penalties can/should the broker apply to **control** the "effective use" and
- what measurement criteria is to be imposed (planned, actual, elements measured).

The balance between effective use and other beneficial aspects of broadband may be distorted if an inappropriate focus on "effective use" is adopted.

Whilst it is agreed that a greater focus on broadband being an economic enabler and a driver of economic indicators such as productivity improvements, expanded markets and skills development/retention, it is suggested that many communities that should be assisted with Clever Network funding will be those poor in technology infrastructure. It is in these areas that a build and they will come will be the dominate position. Broadband will be just part of the vital infrastructure for the region as is the community benefit through roads and water. The reverse is also being experienced in regions. That is, without broadband they are seeing business and population migration (or disincentives to move to a region) to areas better served.

In areas with greater economic activity and requiring Clever Networks funding to expand broadband infrastructure brokers might be required to provide an assessment of the business benefits. Measures suggested are:

- quantify and qualify the number of business that will gain broadband coverage;
- identify the applications not used or used under duress for lack of appropriate broadband services; and
- applications synergy with regional economic initiatives

Q5 Should uptake and effective use of broadband by specific groups be targeted and, if so, which ones?

Queensland has an 80% small business base so this must be this states target group. For instance, the hospitality industry appears slow at embracing broadband as a service option for their customers staying at regional and rural accommodation places. At this stage there is only anecdotal data on specific groups to target.

Please refer to Question 2 for more detailed information on the role of the broker in promoting broadband as a generic approach and Question 3 for broker's access to data sources.

Q6 How might the brokers play a role in facilitating/supporting community-wide connectivity and community-wide (cross-sectoral) networks?

It is the absence of cross-sectoral activity that has been identified by Brokers as one significant factor on demand aggregation. Broadband initiatives that are lead by major bandwidth users (e.g. health and education) have a primary objective designed to service that industry and the community benefit (small business and residents) gained is only a supplementary benefit (e.g. ADSL services to a town). Larger bandwidth user organisations

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

tend to be adopters of "accepted" technologies and usually have higher performance criteria than might otherwise be accepted by users with smaller requirements. For example, their choice of technology would include consideration of service quality, scalability and security to a greater degree than that required by a small business or residence.

However a broker lead demand aggregation takes a whole of region (consisting usually of a number of communities) focus with the aim of maximising the coverage of broadband in that region. Therefore the focus is not on delivering broadband services to a select few locations, such as the school or hospital/clinic (which is most probably in the centre of town) but rather to maximise the coverage area.

The broker activity is in areas where it is marginal or non-commercial for broadband coverage therefore the absence of cross-sectoral demand is a severe inhibiting factor. The program would achieve better outcomes if a cross-sectoral broker was engaged rather than sectoral specific demand aggregation approaches. The other advantage

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?

No. As funding approvals under CCIF, a program with similarities to Clever Networks, expired approximately 2 years ago there has been no equivalent program to access government funds for strategic broadband infrastructure development. Rather, it can be argued that the HiBIS approach had an individual service approach rather than a strategic broadband infrastructure development direction.

For instance a single resident could apply for a satellite service and the service provider would receive HiBIS funding. The alternative approach, by creating awareness of broadband in the region, developing demand registers, marshalling business activity towards broadband as an economic enabler and seeking major broadband user support for the benefit of the region is a better approach as it creates terrestrial infrastructure that is more cost effective and can be upgraded to meet future needs. It is also recognised that in specific circumstances that satellite service is the only option. However it is unlikely that those receiving such services will receive affordable triple play services.

Terrestrial areas yet to receive broadband services under HiBIS could be priority areas provided that access to Broadband Connect and Clever Networks funding were mutually inclusive and that a strategic approach was the desired option as such an approach considers the broadband infrastructure for the region and its incorporation into a statewide strategic plan for effective broadband infrastructure.

Targeting the delivery of key services through broadband

Targeted services for Clever Networks initiatives

Q8 Are health, education, emergency services and local government the appropriate services for Clever Networks to target?

State and federal agencies such as health and education through their enormous buying power should have a significant positive impact on service delivery to regional Australia, particularly remote and rural areas. They should have sufficient purchasing power to influence suppliers. The test is, "did the community receive the maximum possible benefit from the taxpayer subsidised broadband infrastructure or was the primary benefit received by the agencies receiving funding"? For instance the state school gains broadband but did the catholic or independent school receive an equivalent benefit. Was the infrastructure (broadband backhaul and "last mile") upgraded to meet a whole industry benefit or directed primarily for the benefit of the host institutions? By examining the extent of the benefit the program will differentiate between the host agency driven benefit and primary benefits to the regional community.

Also assuming that no matching Clever Networks equivalent program is initiated for future telecommunications infrastructure projects, this program will be the only opportunity for communities to seek funding to construct infrastructure that meets two critical elements;

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

scalability to cater for future broadband applications and stimulating competition tension to bring the best metropolitan equivalent broadband service to the region. To achieve the best possible outcome for the community the program must fund on the principle of non-exclusive access and operation. That is, any funded infrastructure must have as core principles, wholesale of capacity and non-exclusive usage agreements.

The priorities of governments call for rationalisation and security with cost benefits (either reduced price or more bandwidth for no price increase) which can mean that emerging technologies are ignored as being higher risk or outside the scope of government vision. Wireless broadband is an excellent example of a broadband technology not widely considered by government as a desired platform for government service delivery but at the same time is being widely used by small and residential businesses.

There is also a propensity for governments to focus on large scale suppliers, excluding local suppliers from participating in infrastructure projects funded by Clever Networks.

Therefore the program should consider health and education as one driver but as outlined above require more extensive input from state/community brokers to maximise the program outcomes.

Q9 Should there be priorities within this group?

Please refer to the response provided to Question 8.

Q10 What other sectors, if any, should also be considered?

A sectorial approach is not the best option. To maximise taxpayer funded broadband infrastructure development requires a strategic approach to stimulate growth, not a structure centred on current demand. Developing a program based on short term demand has the potential to place areas that received funding in a "digital void" when triple play becomes the metro equivalent service norm. This is because the scalability, performance and bandwidth or networks developed under a sectorial Clever Networks program will be insufficient, hence requiring enhancement. Since new taxpayer subsidy programs of sufficient funds are unlikely to be available to upgrade network servicing marginal or non-commercial communities the strategic approach, assessing total demand is a better option than a focus on any sectorial approach.

Q11 Should there be a focus on particular applications/sectors which will require and drive network or industry capabilities?

The focus on particular applications/sectors need only occur to the extent that those applications/sectors support the development of broadband infrastructure to the region/community and distribution of broadband services within those regional communities (i.e. the last mile) desirous of attaining 9or upgrading) broadband services.

Awareness of the applications, their benefits and applicability to regional services/businesses is a key determinant of the uptake of applications, as is the support and servicing components to businesses adopting the applications. Implementing a program that simplifies regional business understanding of the benefits to their businesses and community of applications that utilise broadband service is one strategy that is likely to promote broadband uptake.

As previously stated adopting a direction that segregates applications or sectors destroys the business case for broadband infrastructure deployment in a region. Given that the areas of interest require funding support because they are near commercial broadband capable or are non-commercial broadband areas maximising the demand is the most singular key component for establishing the viability and demand for broadband services.

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

Consideration should also be given to any state development plans in terms of economic development (employment, skills development, infrastructure enhancement, industry development etc) rather than a pure ICT prospective.

Q12 What strategies could be incorporated into the program design to ensure that investment under Clever Networks provides the greatest holistic community benefit?

The answer to this question has been addressed in previous questions.

In summary the key strategies are:

- a strategic approach to stimulate growth not a structure around short term demand profiles;*
- a whole of region demand assessment that incorporates sectorial interests rather than an individual sector lead approach;*
- maximise the availability of broadband to the whole community not individual sectoral elements;*
- community support statements for any applications;*
- applications to state how their solution will meet the needs of the regional coverage needs. Criteria to address should included government, business and resident numbers, the percentage covered against regional totals and the economic impact of the solution;*
- applicants must have a industry acceptable wholesale capacity arrangement;*
- detail of the scalability for triple play; and*
- details on partnerships for local ICT industry development.*

Infrastructure versus applications

Infrastructure and application-focussed investment issues

Q13 Is there an ideal balance between infrastructure and applications streams and, if so, how can it be identified?

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?

Answers to Q13- Q15

The greater the choice in applications that requires broadband services the greater the driver for improved broadband infrastructure. Media attention focuses on future services (i.e. IPTV, VoD, distant education, remote health packages etc) but no populus application package has emerged. There are a number of applications such as, Citrix, ASP packages, and VPN that make effective use of broadband services.

Supporting the development of applications could create a critical mass of applications giving users choice of suppliers and applications. Otherwise it should be left to the market to develop such applications.

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

The policy objective for use of broadband should be supported as rural and regional organisations will benefit from alternative methods of exposure to broadband applications. One method is targeted training rather than generic skills development on the use of broadband should be the focus of this Clever Network policy objective.

It could be argued that with reference to health and education applications packages that there are a number of significant vendors developing software to improve health and education service delivery. Should it be the responsibility of government seeking cost effective delivery of these health and education services to source development of applications from existing revenue streams/options or should Connect Australia public funds supplement existing sources of funding. It is proposed that the greater portion of Connect Australia funds be applied in broadband infrastructure development and a small pool be directed to applications development.

Where funds are directed to applications development it should be in support of development of rural and regional industry specific applications packages. This is a better use of Connect Australia funds as public funds could assist rural specific applications such as community applications supporting volunteer rural fire brigades, community organisations (e.g. CWA) distant education..

Guidelines permitting proposals encompassing both infrastructure and application aspects should be drafted. Every effort must be made to ensure applications are replicable across multiple industry segments with minor modifications to the modular structure and content of the package (e.g. a distant education package that is usable by schoolchildren, volunteer community workers, remote workers {e.g. OH&S or professional training}).

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

See answer to Question 12.

Alternative contribution sources for proposals

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?

Telecommunications is an Australian Government responsibility and there has been a clear policy and regulatory failure to develop world class telecommunications strategies for Australia that recognise the population density and geographic spread of the Australian continent. Funds available under Connect Australia are insufficient to rectify this historical error of direction. Therefore the Government must be innovative in its recognition of contributions rather than seek punitive guidelines or contributions which the community is incapable of accessing in regions of poor broadband infrastructure.

It is suggested that one innovation is to recognise contributions to infrastructure by industries forced to develop telecommunications infrastructure to service their needs in rural and regional areas. For example, the energy and mining sectors providing rights of way, physical infrastructure or shared resources (e.g. trenches, peppercorn rents for tower access). Another source might be the commitment of a state roads authority to provide conduit or easement rights to a new infrastructure developer who commits to an open access (to competitors) regime.

Another in-kind contribution to be considered is where equipment is installed and open community access (i.e. free community bandwidth) is provided. The Government should consider as in-kind the provision of bandwidth and the equipment costs. A multiplier factor should be applied if community access is provided. This is in contrast with equipment costs servicing a single customer or a related customer group.

Utilising new and emerging technologies

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?

Yes there should be but more important there must be reviewed and adjusted over the life of the program to keep pace with technology and public demand for higher speeds. The determination of the specification could be direct tied to the average of broadband service in non-qualifying Connect Australia areas.

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?

Funds must be applied to project that are consistent with a strategic development of infrastructure – for example if a State telecommunications roadmap created a hub and spoke network infrastructure throughout a State and that project was complementary to that strategic direction. In this way as technology is improved better statewide distribution of broadband services would be possible.

It must be recognised that the available funds are minor relative to the estimated cost to providing world class broadband infrastructure therefore a step approach maybe necessary. For example the creation of a wireless infrastructure to give a community broadband access would meet an immediate need. Advances in technology might allow parts of that infrastructure (equipment racks, towers, accommodation etc) to be use for improved broadband service in the future.

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?

A number of strategies are possible including making funding available for pilot projects to assess the effectiveness of the technologies, approach vendors to conduct pre-release trials in defined areas and apply an incentive factor to projects that seeks to utilise new and emerging technologies.

An observation is that regions that have been neglected by the “major” broadband service providers appear more financially attractive and flexible to adoption of cutting edge technologies.

Sustainability of new infrastructure or applications

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 should be at a minimum the technology life of the equipment being deployed.

Submission by Aston House Consultancy Services

to

Department of Communications Information Technology and the Arts

Connect Australia Discussion Paper

Anecdotal evidence suggests that in areas of near or non-commercial business cases for broadband, smaller operators tend to develop solutions to bring broadband services to the community. However such communities can not sustain more than a single supplier. Whilst this is not an optimal solution it may be the most appropriate solution. The required supporting information in the Clever Network application should include an analysis of the customer profiles, capital reserves and access to capital by the proponent, technical support mechanisms, vendor relationship/partnerships, research methodology, unit cost against industry averages and profit analysis.

New infrastructure access arrangements

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?

Yes. Priority should be given to an open access broadband backhaul regime. These arrangements could be consistent or independent of industry regulatory requirements under the TPA or ancillary telecommunications legislation.

The program should develop criteria that give preference to vendors operating in a wholesale only mode. That is, the vendor has no interest either direct or indirectly (i.e. part ownership or partnership arrangements) of a retail broadband services vendor.

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

The requirement is very realistic given the number of vendors accredited under HiBIS and the emergence of new technologies offering lower capital costs. The likely benefits include stimulation of the telecommunications industry, support for innovation, cross impacts for mobile services delivery (i.e. part of the infrastructure sold to mobile operators) and lower entry costs for new entrants.

Q24 How can an appropriate charging regime for such access be determined?

The industry should propose charging regimes that are below industry negotiated arrangements as the infrastructure has been subsidised by public funds. DCITA or a panel of experts could evaluate the proposed wholesale arrangements. Disputes could be referred to the ACCC. The process would be supplementary and independent to established arbitration or regulation processes.

Linkages to other initiatives

Links to other initiatives

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

Some linkages that should be considered are:

- compliance or enhancement to priority state policy areas;*
- degree of impact on economic development in the region;*
- synergy with commonwealth programs (i.e. DOTARS Regional Transaction Centres);*
- development of a national roadmap on broadband infrastructure (i.e. backhaul) and services coverage map; and*

- *ability to leverage ehealth and educational (i.e. AARNET) initiatives.*

Program evaluation

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 should consider:

- *direct impact and effect on broadband applications development and penetration in the Clever network sponsored regions;*
- *development of a cost per service by bandwidth to assess the real cost of broadband deployment to areas requiring funding support;*
- *stimulus to economic development provided by broadband availability;*
- *change in telecommunications costs to business and residents; and*
- *the level and type of broadband service(s) availability.*