



Cirrus Communications Pty Limited

**Response to the Broadband Connect and Clever
Networks Discussion Paper**

17th January 2006

Introduction

Cirrus Communications Pty Limited is a wireless broadband operator established to provide telecommunications services to regional Australia. Its main office is in Gosford NSW. The company has been operating over twelve months from the writing of this response. Cirrus Communications now successfully operates a wireless network in the Central Coast of NSW and is seeing a consistent growth in the number of business and residential premises using the service. Cirrus is also expanding its coverage by establishing new wireless networks elsewhere in NSW as well as in Queensland, Victoria and South Australia.

Cirrus Communications is keen to pro-actively participate in the current debate and discussion on how Australia best provides the benefits of broadband services to regional Australia. As a team we support the initiatives undertaken by the Federal government and we submit this response to the Broadband Connect and Clever Networks in good faith.

Cirrus Communications is happy to be involved in any necessary dialogue required to clarify the views contained in this response document.

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Detailed responses to Broadband Connect 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

CIRRUS RESPONSE:

The current design and delivery appears to be positioned well to meet the Government's objective of delivering broadband infrastructure into regional Australia. Its particular strengths are as follows:

- Providers are required to assess and mitigate the risk of investing the rollout of broadband infrastructure. The installation payment proposed by the Broadband Connect program is clear and allows providers to make a judgement on all associated costs and potential revenues from its investment
- The program is technology independent. Each prospective technology has strengths and weaknesses in delivering broadband services to the regional market. Technology judgements should be left to the participating providers

A significant challenge for the program will be managing the variations in the cost of connecting more remote communities. As these become more clear over time it may become beneficial to consider how incentives can be varied to retain the incentive for providers to connect these remote areas. By increasing the incentives for a particular territory it will become more attractive for Providers to make relatively greater network investments to connect these communities.

Consideration 1: At the appropriate time consider sliding scales for incentives for more remote areas

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?

CIRRUS RESPONSE:

The Broadband Connect program should regularly review the appropriateness of service levels. Participating providers should be required to demonstrate that they match these minimum service standards. It is our view that once the regional market is satisfactorily connected then the consumers will be in a better position to command service levels. One of the significant issues however is that of customer uptake. One of the greatest challenges for Broadband uptake is that prospective customers see the product as attracting significant incremental cost for a somewhat intangible benefit over dialup. By marketing the ability of Broadband to deliver applications (such as telephony) that may be able to reduce the overall household costs, significant benefits can be delivered into regional communities.

A further mechanism that could play an important role in assisting further investment is a much more definitive definition of current broadband coverage. The resources available to providers today regarding the existing market are very sketchy and result in increased business risk when investing in new infrastructure particularly in regional centres.

Consideration 2: consider how to keep providers updated on relevant changes to the Australian broadband marketplace

Q3 How can Broadband Connect funding be structured to provide the best incentives for investment?

CIRRUS RESPONSE:

Pricing should be regularly reviewed to ensure alignment with infrastructure and customer acquisition costs. However our view is that the current incentive approach should be retained with alterations to amounts and changes to the structure as required. It may be appropriate in time to incorporate some element of the customer acquisition cost as part of the allowable costs.

Q4 Is terrestrial or satellite the most appropriate means of delivering broadband in regional, rural and remote areas? Q5 Can satellite be delivered as competitively as terrestrial services?

CIRRUS RESPONSE:

The question of satellite coverage for Australia is most important and needs a separate study. The advantage is it would cover all regional Australia. As an alternative to terrestrial coverage it seems worthwhile. The justification of cost is something the providers would need to work out.

Q5 Can satellite be delivered as competitively as terrestrial services?

CIRRUS RESPONSE:

A separate study should give a detailed answer to this, but there's an argument it could be competitively priced and provide performance that is in many ways equivalent to that of terrestrial coverage. Geosynchronous satellite services may have challenges in delivering voice services of the quality that can be delivered by terrestrial means.

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

CIRRUS RESPONSE:

No: A key objective of the program is to increase the competitiveness of communications services in regional Australia. It does not give exclusivity to any party in any area – the registration process is essentially a test of whether the company and its business plan is viable. If a new registrant was suggesting that they were going to target an area where existing registrants existed, then they would need to put together a more compelling case as to how they were going to manage the competition. If a formal commitment to a service area is required, this is likely to result in a greater likelihood that unsustainable deployments will take place purely to obtain registration, but to the detriment of the program and the industry.

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

CIRRUS RESPONSE:

No. At this stage it is unclear what this criteria is. Under these conditions the criteria will potentially become a political debate and will be unlikely to satisfactorily reflect the real requirements.

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?

CIRRUS RESPONSE:

See Above. This would only be done if it becomes clear that either no provider has taken on a rollout in this area or that a provider has tried and not been successful – recognising that satellite is always an option. Alternatives are described in the below considerations.

Consideration 3: channel situations of greatest unmet need through the Clever Networks program to initiate innovative infrastructure proposals to draw out cost effective infrastructure solutions

Consideration 4: introduce a new tier in the Broadband Connect incentive structures to attract providers to the selected areas

Consideration 5: establish process for one-off infrastructure funding through the Broadband Connect program

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

CIRRUS RESPONSE:

Clever Networks funding should be sought by participating providers to build shared infrastructure close to the market. But only after Broadband Connect providers have been consulted on the lack of investment in that area [see above in consideration 2]. The greatest challenge in many cases will be operational rather than capital costs.

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?

CIRRUS RESPONSE:

This dilemma exists today across the broadband market. Providers will continue to balance ongoing investments into infrastructure and the future potential of new revenues into the current pricing. This will naturally maintain the balance between expectations and invest cost.

It is likely that the remoteness of some regional sites will mean that some of the highest end applications such as real-time video on demand may not be able to be provided at an economically sustainable price for a long time.

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)*
- *the viable geographic reach of broadband services from central transmission points for service delivery*
- *technical barriers limiting the application of providers' technology in regional communities*
- *the capacity of providers' technology to support varying types of broadband traffic and use*
- *the range of service speeds providers' technology would be able to support*
- *the capacity of providers' technology to provide services now and to accommodate new developments such as increased speed , usage and applications in the future*
- *the particular relevance of the technology to other communication services (for example, capacity to be used also for supporting mobile telephony services)*
- *a summary of the broad nature of technology they employ; and*
- *anticipated timing and target areas for their technology deployment in regional Australia.*

CIRRUS RESPONSE:

A qualified yes. An overarching requirement must be that whilst program participants are operating in accordance with the guidelines and are providing services to regional Australia, they must be able to make commercial decisions that are minimally impeded by administrative process. Providers should be expected to provide a strictly confidential strategy summary detailing their intentions and technology plan. Actual accurate broadband coverage should be provided by all participants, should be regularly updated and should be publicly available, permitting other providers to best target their future investments.

In detail:

- *intended future service areas (with approximate dates of commencement of supply)*

The provision of general timetables with targeted areas has some value. However providers need the flexibility to pursue markets that they can see are going to be economic. This is more than likely to deviate from the original timetable provided.

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

It is important that information regarding where broadband coverage is (and is not) is made available to all participants and any others that may be interested in providing services.

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

It is unlikely that providers would be highly forthcoming on the limitations of their platforms. Most technologies are able to manage most key applications today – and coverage limitations are dealt with elsewhere.

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

[See above]

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

[See above]

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

[See above]

- *the particular relevance of the technology to other communication services (for example, capacity to be used also for supporting mobile telephony services)*

Yes.

- *a summary of the broad nature of technology they employ; and*

A broad level of detail together with equipment specifications is appropriate.

- *anticipated timing and target areas for their technology deployment in regional Australia.*

[See above].

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?

CIRRUS RESPONSE:

Cost, saleability, lifecycle capacity, speed of rollout would be useful criteria.

Q13 How would you compare the effectiveness of these technologies to others in the market place?

CIRRUS RESPONSE:

Cost per install, fixed vs. variable operational costs, decommissioning costs, capacity to serve would be useful comparisons.

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?

CIRRUS RESPONSE:

The ability to scale capacity varies by technology, but most have a clear path to higher bandwidth (and in principle more advanced) applications. The question is when the investment needs to be made to accommodate higher bandwidth. Certain technologies will require upfront investment to cover long-term bandwidth requirements. The critical question is who should wear the risk of the initial investment vs. the longer term benefits of future applications. The Broadband Connect charter is to connect the rural sector to today's broadband expectations, in our view it is the commercial venture that should balance the investment of future benefits with the level of upfront investment in bandwidth.

Q15 Can complementary technologies provide better solutions for delivery of services in regional Australia?

CIRRUS RESPONSE:

Yes and this will happen naturally as providers design their own networks.

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

CIRRUS RESPONSE:

The only real mitigation is having alternative technology solutions available; this means they need to be built in parallel. In addition, the program should continue to educate the regional stakeholders to improve their understanding of the relevance and potential benefit of broadband technologies.

Consideration 6: provide additional incentives/grants to establish multiple infrastructure solutions at critical points of the network

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

CIRRUS RESPONSE:

As noted previously, each technology has a distinct development path – and most are likely to lead to increased speeds and support for next generation applications.

Q18 Should the current system of incentive payments to providers for the supply of broadband services be retained?

CIRRUS RESPONSE:

Yes, because:

- they are easily understood and administered;
- their focus is directly on providing services to those in regional Australia that may be unable otherwise to obtain them and avoids the difficult argument of creating infrastructure to meet future demands.

Q19 Would an up front method of payment be more effective?

CIRRUS RESPONSE:

No. Such a mechanism removes the element of risk from the infrastructure provider. These risks include:

- market risk of low uptake (in fact there maybe a disincentive to connect as this requires ongoing service level requirements); and
- the risk of judging the right level of investment now against changing broadband expectations.

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?

CIRRUS RESPONSE:

Cirrus' view is that the adoption of broadband in regional, rural and remote Australia will lead to increased economic growth in those areas. Broadband Connect's key focus is on providing payments to facilitate access for those who want to purchase a broadband service. A potential gap is in adoption rates which are significantly lower than metropolitan Australia. By providing allocations to education, or by facilitating the provision of trial services to potential customers this level of adoption could be increased. This will lead to higher adoption rates in residential areas as it will assist with initial pricing, raise broadband's regional profile and importantly give individuals the reason to connect.

Q21 Should funding be provided:

- based on the number of customers connected?
- the number potential premises with potential access?
- a combination of both methods?

CIRRUS RESPONSE:

Number of customers only [see above].

Q22 If funding was based on the number of premises with potential access should it then only be provided for infrastructure?

CIRRUS RESPONSE:

[See above in questions 20 and 21]

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?

CIRRUS RESPONSE:

At this stage it is difficult to see how adding complexity to the incentive structure can resolve overcompensation, as there are too many unknowns: market response and uptake, price changes, rollout costs, back haul pricing, strategic investment etc. Furthermore, there should be incentives to provide a quality solution at the lowest possible cost.

However, the Broadband Connect program should at times review the use of funds by all providers to determining how funds are being utilised. Providers should be given guidelines on the expectations of any surplus funds being generated. These expectations should be monitored against the development of the market.

Consideration 7: consider treating these opportunities similar to previous questions where the shared infrastructure is separated out from the connection of premises. This is potentially a valuable role for the Clever Networks program.

Q24 Should the current HiBIS threshold model for speed and usage be maintained at existing levels under Broadband Connect?

CIRRUS RESPONSE:

Yes. Broadband Connect should issue a five year plan with annual reviews.

Q25 Should the model be retained with increased minimum speed and/or usage requirements?

CIRRUS RESPONSE:

See above

Q26 Should two separate minimum speeds with two subsidy levels be introduced?

CIRRUS RESPONSE:

No. Such an approach adds greater complexity to the program and is in effect another form of upfront payment. Furthermore the cost of providing a service is typically close to the same irrespective of the data rates offered.

Q27 Do threshold requirements need to be expanded to accommodate other issues such as latency?

CIRRUS RESPONSE:

These should be identified and included in the 5-year plan. However it may become unmanageable to operate the program at this technical level. Providers need to be responsible for communicating the capacity of their network by informing customers of any applications that the network cannot support.

Q28 Should the Broadband Connect Stage 1 price caps be retained under Stage 2?

CIRRUS RESPONSE:

Yes unless the marketplace has been deemed mature enough to support competitive pricing. Note this would require a certain amount of infrastructure duplication to be effective.

Q29 Should a greater range of price caps be introduced than the two currently available?

CIRRUS RESPONSE:

No. The current structure is adequate.

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

CIRRUS RESPONSE:

Consideration 8: reduce funding cap levels unless an alternative argument can be made on specific geographical grounds.

Clever Networks Program

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?

CIRRUS RESPONSE:

There continues to be a need for a broker role in the development of regional telecommunications infrastructure. This role will need to be continual refreshed and enhanced as investment increases and the market develops. The requirements for catalysing broadband developments are changing are starting to require greater integration with sectors that need to drive change in the regional marketplace.

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?

CIRRUS RESPONSE:

Leading real change programs across the communities, state and federal government bodies and commercial partners.

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

CIRRUS RESPONSE:

Greater awareness and coordination with federal and state governments, regional councils.

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

CIRRUS RESPONSE:

Yes but the role currently requires more impetus.

Consideration 9: providing the DAB role with access to funding to initiate programs.

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

CIRRUS RESPONSE:

Where possible these initiatives should be led by the specific groups. These groups should be increasingly aware of the Broadband Connect program and be encouraged to develop innovative propositions for consideration. There is also need for larger regional enterprises such as local councils to assist in providing "anchor tenancy" to support the introduction of broadband services into less commercially attractive areas.

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

CIRRUS RESPONSE:

By actively bring together the groups to pursue and propose innovative solutions.

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?

CIRRUS RESPONSE:

Not necessarily. It is preferable that future regional initiatives are not constrained by the current status of the infrastructure.

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

CIRRUS RESPONSE:

Consideration 10: also consider agriculture and mining as possible candidates.

Q9 Should there be priorities within this group?

CIRRUS RESPONSE:

It would be preferable to prioritise by size of benefit and ease of implementation.

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

CIRRUS RESPONSE:

[See above]

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

CIRRUS RESPONSE:

These should be generated by the sector participant rather than by the network providers.

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

CIRRUS RESPONSE:

Consideration 11: issue standard definitions for benefit statements and key business case components to create greater consistency across proposals.

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

CIRRUS RESPONSE:

Ultimately application streams will provide all of the benefit therefore the dominant criteria should be applications and their outcomes. The benefits may experience several phases over time with long term benefits may be qualitative rather than quantitative. This will at least push the partners presenting the proposal to clearly articulate benefits.

Q14 What is the best balance between competitively determined and strategic investment funding?

CIRRUS RESPONSE:

Again it would be determined on how realisable (or compelling) the associated benefits are. All investments described as strategic should also have to articulate benefits from future outcomes.

Q15 Would potential proposals be improved if the guidelines permit proposals which encompass both infrastructure and applications aspects?

CIRRUS RESPONSE:

Clear definitions and expectations should be given on how the targeted benefits in the proposal should be presented and supported.

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

CIRRUS RESPONSE:

Those that are clearly linked to tangible benefits. For infrastructure, this may be in areas such as shared long haul infrastructure.

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

CIRRUS RESPONSE:

The program should promote the use of cross state and federal government and commercial funding when putting together Clever Networks proposals. All non Clever Networks funding should be accounted for prior to accepting the proposal.

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?

CIRRUS RESPONSE:

These should be consistent with the Broadband Connect program unless the proposal contains an application that clearly requires service levels above these.

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?

CIRRUS RESPONSE:

Each response should be required to respond to the need for progressive bandwidth transition.

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?

CIRRUS RESPONSE:

This requirement should be a part of the overall Clever Networks communication program.

Consideration 12: where it makes sense funded pilots could be used to share results on how infrastructure can be shared across communities.

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?

CIRRUS RESPONSE:

Proposals should be required to demonstrate how ongoing revenues/funds from the proposal would cover the ongoing operational costs of the infrastructure, or which parties would support the activities.

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? Q23 How realistic is such a requirement, and how tangible are the likely benefits of the approach? Q24 How can an appropriate charging regime for such access be determined?

CIRRUS RESPONSE:

This should be included as a consideration for the proposal writers. Guidelines can be given to the extent that the proposal should rely on these benefits for acceptance. Charges should be based on current market prices and supported by potential users.

Consideration 13: introduce business case and proposal guidelines for potential participants to assist with consistency.

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

CIRRUS RESPONSE:

Greater awareness of existing programs should be given to proposal writers so that they can evaluate the potential of including them in the proposal process. Awareness can take a number of forms and range from the introduction of parties to supporting the idea generation process.

Consideration 14: introduce ways of generating more effective proposals.

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

CIRRUS RESPONSE:

Effective project management reporting and benefit measurement should be a component of the proposal. The Clever Network program should allot some resource to monitoring and track benefit capture.

Consideration 15: insist that all proposals with associated benefits include a monitoring and tracking a benefit monitoring and tracking approach.

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