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Inquiry into the role and potential of the National Broadband Network

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Opening remarks

Working with the Committee's terms of reference I would like to address some specific areas where Internode specific experience and direct knowledge.

Internode is a long-standing supporter of the NBN and the concepts and values behind it. We are particularly supportive of the TERRiA principles of genuine open and equitable access to all access seekers, a strong ACCC mandate and structural separation of the National Broadband Network. Internode has built and operates several licensed spectrum WiMax wireless networks and are quite intimately aware of the advantages and limitations of wireless technology so naturally we are very supportive of a Fibre to the Premises Network.

We have also invested well over twenty million dollars in building DSLAMs so that we can provide price and performance competitive ADSL services in over 170 exchange sites that can address over 50% of the Australian population. Indeed in South Australia, Tasmania and the ACT our coverage is much closer to 90%. This network has as a key characteristic: an essentially fixed cost of operation regardless of the number of active users. Certainly there is the key variable cost of renting Telstra's copper to reach our subscriber's premise but that is low and fixed per subscriber.

We now face a period where the NBN is to be built, where for the next ten years we will have to operate most of our existing ADSL network side by side while using the NBN.

Regional economic growth and employment

The first DSLAM Agile and Internode deployed in 2004 was in Meningie on the shores of Lake Albert. This was the extension of a long standing commitment to regional South Australia that has seen us recently extend our private network to Renmark which is 250KM from Meningie.

Internode has received numerous testimonials over the years thanking us and the Coorong District Council, The State Government and Federal Government for funding and building the network in the Coorong and subsequently on Yorke Peninsula and now in the Riverland. Some authors spoke of reluctant plans of moving to the city because their profession had become so dependent on telecommunication that dialup or a low speed satellite service just wasn't competitive and their pleasure in cancelling those plans. Others spoke of the difficulties of ordering stock from suppliers who had moved to all-online systems. These are urgent issues for real people. They have been urgent for years and they remain urgent now. Internode fears rural users will be left behind by the practical challenge of servicing ten million premises over a build that will take at least 120 months.

Internode discussion points for the Committee

The delivery of government services and programs, including health

For the government to realise the benefits of the NBN it must recognise that Internet services delivered by the NBN will be delivered to each premises by a single retail service provider. The idea that users would disconnect their computer from their Internet provider and plug in to the government Internet feed is absurd.

So how can the government ensure services are delivered to citizens?

The key requirement is that government service content be delivered to all retail service providers at key locations at no cost. The easiest way to achieve that would be for government agencies to require that hosting and connectivity providers "peer" government content to all NBN retail service providers. There are already a variety of Internet peering exchanges in Australia and these could be used simply and cheaply. Internode is the provider to the South Australian government and does this today. Any service provider who peers at the Pipe peering point in Adelaide can access all government, health and education content at no additional cost. Internode accesses ACT, New South Wales and Victorian government content via public peering exchanges today.

Mandating free peering for government agency hosting arrangements would have no real impact on the cost of providing these services and will ensure that Australians are able to use the next generation of higher bandwidth services economically.

Educational resources

Online services like the Khan Academy are delivering video lessons and tutorials on a diverse range of topics. In the same way researchers can't function without indexing services like Google and increasingly depend on tools like Wikipedia, students are going to make more and more use of these online resources to fill the gaps in the quality and reduce the costs of their education.

The Internet will become the key delivery mechanism for formal and informal interactive education.

Business efficiencies

Internode turns twenty this year. Founded by Simon Hackett in a suburban office, we have been providing Internet services since before the Internet become commercial in Australia. Our sister company Agile started the CommsAlliance working group that allowed ADSL2+ to be deployed in Australia which raised residential broadband speeds from 1.5 megabits to as much as 24 megabits.

In those early days it became obvious that high speed connections to the Internet, which in those days meant 2 megabits, were around ten times cheaper in the CBD than suburbia so the only choice for ISPs was to move to the city. For the entire life of the commercial Internet in Australia high volume users, be they content sources or consumers, have concentrated around a handful of major hubs because of the prohibitive cost of the data services generally known as "backhaul".

It was only when competitive licensed carriers like our sister company Agile started running optical fibre that very high speed services became affordable and the distance from these hub was able to increase. Indeed today Internode sells dedicated links

operating at 100 and 1,000 megabits to many businesses, even to those that meet the test of being "small or medium enterprises".

An uncontended service means one that can always reach full line speed and is limited only by the capacity of the other endpoints on the internet rather than being shared by other subscribers or limited by some upstream choke point. In the days of dialup the contention ratio of the ISP was a key measure of quality and the ability to reach line speed was highly prized when the maximum speed was 14, 28 or even 50 kilobits. An ISP that did not have enough bandwidth to satisfy demand could even find itself falling foul of consumer protection laws for false advertising.

NBNCo finally released Product and Pricing documents to the public during the busy Christmas holiday period. We made numerous submissions to NBNCo, the ACCC, DBCDE, ACMA and parliamentary committees on various topics since last October. Many people would conclude that this release cycle was designed to wear out interested parties and that various parties are using a perceived lack of response as implied agreement and support.

Indeed yesterday Senator Conroy claimed on "Inside Business" that Internode had made no submission on the issue of NBN Points of Interconnection (POIs).

However in November last year I made an extensive submission to the ACCC on behalf of Internode explaining why a large number of POIs would serious impact smaller service providers. This submission was published on the ACCC's website.

Once the ACCC published a list of 120 POIs I made a further submission in February that reiterated our concerns.

When we apply the NBNCo Product and Pricing construct to Internode's existing business product set something disconcerting emerges. We see that while the NBN enables 100 megabit speed Internet services for business customers the access component is only economically viable if the subscriber doesn't use it very much. When we look at point to point uncontended services the wholesale cost of a point to point 100 megabit link is over $9,000 per month. This is a disappointing number because it's the same cost as a gigabit service today from existing wholesale providers.

Under the current Product and Pricing construct the NBN will be ten times as expensive as existing wholesalers are today for corporate and business grade services.

Community and Social benefits

While many have criticised the entertainment uses of super fast broadband it is inescapable that in the rest of the world most of the traffic these networks carry is "on demand" video. Netflix, legal movie streaming, has displaced piracy as the biggest traffic on the Internet is the USA. The Netflix service would not be economically viable under the NBN Co Product and Pricing construct because the $20 per megabit cost of the concentrating virtual circuits (CVCs) means that subscribers who use a Video on Demand service will cost their retailer at least $66 per month. The NBN Business Plan envisages this reducing to $33 over time which is still over ten times too expensive. On the other hand, it is viable for Internode to deliver over our current ADSL network because the incremental cost is essentially zero.

Another emerging service is off-site backups for retail consumers. Services like MemoryBoxBackup which is an Adelaide company use high speed Internet services to make copies of the data on your computer at a remote location. If your house is burgled or burns down you won't lose your photos and precious memories. As computer storage increases and more and more of our lives become digital these services will become vital but under the current product and pricing construct they will be uneconomic for residential users.

A revised product and pricing construct from NBNCo would allow Internet use to continue to grow and Australia would remain well placed to keep up with our neighbours. If not we will face the ignominy of New Zealand having an extensive fibre to the premises network with open access while Australians end up stuck with fibre that no one can afford to use.

Optimal capacity and technological requirements

Internode services around 4% of all broadband users in Australia and their online usage patterns could not be replaced with wireless delivery. What is more, the trend is only upward. For ten years Internode has seen per subscriber traffic increase by 1.5% per month. This has tracked through dialup, low speed ADSL and high speed ADSL. Our subscribers' current ADSL use is around 18 gigabytes per month. This contrasts with our 3G wireless service where average use is 1.8 gigabytes. (These are directly in line with national averages published by the ABS on April 1st.) While wireless services will be made to operate faster and carry more data, the performance increases from that technology have been linear, whereas fixed line services have increased in capacity exponentially and current fibre technology will continue this pattern of affordability for many decades. Indeed over the ten year build of the NBN Internode expects traffic will rise by a factor of six.

During the last decade Internode has been able to reduce the per gigabyte cost of ADSL service delivery by a similar factor such that our subscribers have been paying around $50 to $80 per month since 2002.

This value increase is about to come to a dramatic stop unless the NBNCo Product and Pricing construct is altered.

Last week our Managing Director, Simon Hackett presented his concerns at the CommsDay Summit in Sydney. He detailed the issues and proposed a solution: to raise the access port pricing by a couple of dollars and reduce the CVC charges from $20 to $1 per megabit.

In summary, the exact dollar figures are not critical but the concept of decreasing the cost of CVCs by an order of magnitude and increasing the per port charges slightly will be a key factor in the success or failure of the NBN.

Ends...