



November 8th 2010

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Communications Group
Australian Competition & Consumer Commission
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Dear Sir,

Please find attached the Internode response to "An ACCC Discussion Paper on points of interconnect to the National Broadband Network"

Internode thanks the ACCC for the opportunity to be involved in this consultation process.

Yours sincerely,

John Lindsay
GM Regulatory and Corporate Affairs
Internode and Agile

Effect on relevant markets

1. *To what extent will the number and location of POIs impact competition in the backhaul market in the short term and in the long term?*

All access networks suffer from the constraint of how far the network must be extended for each connected subscriber. In metropolitan areas this is typically a street frontage so for every 20 metres of backbone extension two subscribers are passed. This is 10 metres per subscriber. If there are subscribers all the way back to the POI the total extension is 10 metres per subscriber. If however there is a backhaul without customer connections, between towns or across parks or industrial estates this additional length must be added to the extension. To service 1,000 subscribers in a town 10KM distant from the edge of an existing network the additional extension is 10 metres per subscriber for a total of 20. That generally doubles the cost of the network.

This model becomes worse if each access seeker or service provider must provide their own connection to the distant town. There is no economy of scale to be enjoyed and small service providers must either abandon the attempt to service subscribers or acquire a wholesale managed service from a POI more conveniently located.

The biggest risk to the industry is to entrench a duopoly of retail price competitive service providers and a long tail of uncompetitive providers who slowly, or in fact quickly, implode. The inevitable result would be a rapid increase in retail prices to whatever the market will bear at the lowest access speed the network can provide which would entirely negate the purpose of the NBN.

2. *To what extent (if any) do you anticipate that any of your transmission assets (or other relevant assets) will become stranded under any of the proposed approaches to POIs on the NBN? What is the value of and location of those assets?*

Internode and our sister company Agile that holds and operates our carrier assets expects that most of the regional transmission assets will be impaired to some extent however, based on briefings received we expect most of them to retain most of their value because they service locations that NBNSCo do not intend servicing with fibre or wireless.

Of more concern are the 160 or so ADSL sites where we pay other carriers for backhaul services. The total cost of these services is over 3 million dollars per year and in many cases the contracts have years left to run.

The network architecture used by Internode for this backhaul network is a daisy chain ring of up to ten exchanges, fed at both ends which makes the ring very reliable in the event of a fibre cut. If one of those exchanges becomes redundant due to the NBN Internode will incur increased costs for all subscribers on the ring because the exchange will need to remain connected even though there are no customers.

Of grave concern is the likely cost of re-contracting those services when their current term expires but where neither we nor the provider has any idea how many years will pass before than last LSS or ULL service is shut down in a given Exchange Service Area.

3. *What is the current state of competition in the relevant backhaul markets? To what extent are backhaul services priced competitively in CBD, metro, regional and remote areas?*

The backhaul market in capital cities is reasonably vibrant although it must be noted that generally Pipe Networks are the only provider of dark fibre services.

Internode has wide experience with obtaining transmission services in various markets around Australia and the world. Services are generally uneconomic except where a disruptive player like Pipe Networks is prepared to offer a Dark Fibre service.

Due to the low subscriber count at the far end of a backhaul and the long distance involved it is rare for isolated towns like Alice Springs or Mt Gambier to be economic to connect and even when they are the service frequently has less than "carrier grade" reliability.

This is the key reason that very few non metro exchanges have competitive DSLAMs. Those that do are generally on inter-capital transmission routes where the extension distance from the backbone is measured in metres rather than kilometres.

4. *How would investment in backhaul infrastructure used for other networks, such as mobile and non-NBN fixed networks, be affected by the number and location of NBN POIs?*

Internode was rather under the impression that the backhaul would be needed due to having an access network. If NBN Co builds that access network and provides aggregation at capital city POIs there will be no need for additional backhaul.

5. *To what extent will the number and location of NBN POIs impact competition at the retail level in the short term and in the long term?*

Every link in a network requires a certain amount of head room for bursting traffic. If a service provider has a few customers each with high bandwidth access but low average traffic, as is currently the case on the NBN network in Tasmania, the cost of running a backhaul circuit with sufficient capacity to allow customers to reach their line speed is prohibitively expensive. This pattern is likely to be repeated at many of the 114 metro and outer metro and almost all of the 81 regional serving areas.

Economy of scale is vital for all the players, for NBN Co, backhaul providers and retailers. If any one of them cannot achieve it they will almost certainly fail which would likely result in a market failure.

At a fundamental level, tying the backhaul cost to the number of subscribers rather than the volume of traffic is the only way that the 100Mbps and gigabit services so widely touted as the reason for constructing the NBN will ever be used.

6. *Is the emergence of a Layer 3 wholesale sector likely under the NBN? If so, how will the location of NBN Co's POIs affect this market in the short and long term?*

It is hard to imagine the couple of hundred small ISPs surviving if they are unable to acquire access via a wholesale Layer 3 provider, replacing the services of Telstra Wholesale or Optus Wholesale. Indeed, it seems most likely that Telstra Wholesale would provide that service to its customers as part of a strategy to survive in an NBN world.

Location of POIs on the NBN and provision of related services

7. *What is the preferred number and location of initial NBN POIs and why? How would this be different in the short term and the long term?*

Internode's preference would be for each state to have a single capital city POI with a second redundant site for reliability. In addition, access to all downstream sites from deeper POI would be highly desirable but only on the basis that access seekers could "cherry pick" such sites. An all-or-nothing approach would be catastrophic because it would never be economic for any carrier to build a new backhaul network to every additional POI.

8. *What are the strengths and weaknesses of NBN Co's preferred 'composite model' outlined in its Public Position Paper?*

The composite model is Internode's preferred model and we see it as the least harmful to retail competition but would add the features mentioned in answer 7.

9. *Where a composite or low-medium consolidation approach is adopted for NBN Co's POI location, what factors should be taken into account in determining the location of the distributed POIs? For example, is the number of available backhaul routes relevant? If so, what should be the threshold?*

Yes, availability is extremely important but available needs to mean within hundreds of metres of the POI, not 20 KM. A 20KM fibre build in a rural area is likely to cost one to two million dollars. Doing that 160 times would exceed the market capitalisation or worth of almost every competitive service provider in Australia. Ignoring the 10 largest service providers it would exceed the value of the entire remaining industry.

10. *On what terms should NBN Co supply backhaul from the small number of centralised aggregation POIs to the decentralised disaggregated POIs if its 'composite model' is adopted?*

As stated in response to question 7, access to all downstream sites from deeper POI would be highly desirable but only on the basis that access seekers could "cherry pick" such sites.

While Internode could reuse existing backhaul assets and services in most, but not all of the proposed South Australian regional POIs it would not be feasible to access more than a couple outside of South Australia.

An all-or-nothing approach would be catastrophic because it would never be economic for any carrier to build a new backhaul network to every additional POI and backhaul providers would have enormous market power over a retailer who needed only a few sites to extend their coverage in a state.

11. *If NBN Co supplies backhaul, should this be on a Layer 2 Ethernet basis or in the form of dark fibre (or both)?*

Dark fibre is highly desirable for backhaul because the cost of the backhaul does not rise with increased network traffic thus more directly tracking the cost structure of the largest network operators, Telstra and Optus which ensures the competitor remains competitive.

However, given the nature of the access service and the length of the backhaul, dark fibre may not be technically feasible. The real issue is to ensure backhaul costs scale more directly with subscriber count and that increased network use does not significantly increase the access cost for retailers. For instance, doubling traffic to customers should result in a modest increase in network cost, in the order of 10% not 100%.

Internode has already had a nasty experience in Tasmania where the single provider of backhaul service from the NBN Co POI attempted to charge almost twice what Telstra quoted to provide backhaul. It was clear that attempting to use Telstra for the backhaul would have resulted in Internode missing the launch date for the Tasmanian NBN. This experience has made us incredibly cautious of backhaul from NBN POIs.

Timing and Business Rules for interconnection under NBN Co's composite approach

12. Under NBN Co's 'composite model', what "business rules" should govern when NBN Co will allow interconnection at the distributed POIs?

Cherry picking must be allowed and access costs must be largely subscriber focused rather than megabit focused.

13. What should be the process to coordinate the addition of interconnection at the disaggregated POIs?

There is insufficient information available at this stage to provide a meaningful answer.

Changes to the initial POIs

14. What factors should trigger a review of the location of NBN Co's initial POIs?

There is insufficient information available at this stage to provide a meaningful answer.

15. What mechanisms should be used to effect a change to the location of NBN Co's POIs? (i.e. consultation requirements and notification periods)

Given that access seekers are likely to enter in to multi year contracts for backhaul any sort of uncertainty is going to be fatal for NBN Co and the backhaul market. It is very undesirable for an NBN Co POI to ever move. Certainly in the event of a move a new POI must be provided and made operational before the old POI is decommissioned to ensure zero disruption to subscribers.

Layer 1 Unbundling

16. What are the implications of the number and location of POIs for potential Layer 1 unbundling and home-run network topology for the NBN?

Layer 1 unbundling would require access seekers to connect at the FSA node. This has no direct bearing on the number and location of POIs other than the likelihood that many POI locations are likely to be FSA nodes.

Uniform National Wholesale Pricing (UNWP)

17. To what extent can UNWP be achieved independently of decisions about the number and location of POIs?

During the 2010 Telstra Wholesale / BigPond alleged price squeeze Internode's analysis showed that aggregation charges are the dominant cost of providing retail services over Telstra's wholesale ADSL network.

The biggest barrier to high speed access take-up is the cost of large usage cap Internet access plans. There is no point in discussing un-capped, volume charged plans because service providers bankrupting retail subscribers is politically unpopular and a dead end business plan.

UNWP is really only feasible where a capital city POI model is available for any retail service provider who needs it.

18. Is NBN Co's definition of UNWP "...that Access Seekers should face the same total wholesale cost from any premises to a designated state capital city point of presence" an appropriate one? If not, what alternative definition would you propose?

Yes, it is appropriate.

19. To what extent can it be ensured that Access Seekers face the same total wholesale cost in supplying services to end-users across regions independently of decisions about the number and location of POIs? That is, are there alternative ways to the approach proposed by NBN Co of ensuring that Access Seekers face the same total wholesale cost in supplying services to end-users across regions?

Internode is sure there are alternative approaches but no straight forward option, other than permitting access to additional POIs under the composite model, appears viable.

20. If NBN Co's preferred composite model were to have no price differentiation between interconnecting at designated capital cities or at CSA locations, what impact would this proposal have, particularly on regional retail markets and regional backhaul transmission markets?

Internode's preferred model is the composite model. Internode would expect there to be a lower access price at deeper CSA locations but the main benefit would come from deploying content servers deeper in the network for improved performance and reducing the total backhaul bandwidth required.

Wireless Services

21. Should the same approach for the number and location of POIs for NBN Co's fibre services be adopted for wireless and satellite services? Why and/or why not?

Wireless and satellite services need to be considered separately. Wireless services are much more like FTTH in that there are various points of aggregation between the base station and the capital city. These points are not necessarily going to be related to fibre serving areas but they will exist.

Satellite services are concentrated at a handful of uplink ground stations. Allowing access at the nearest reasonable location is desirable. Requiring it is likely to be prohibitively expensive and destroy the business case for most retail service providers.

Other

22. In relation to the data provided in Appendix A of NBN Co's Public Position Paper, do you believe that NBN Co's input information is accurate, and has NBN Co correctly assessed the current state of the backhaul and competitive DSLAM markets?

Internode isn't able to vouch for the accuracy of the data.

23. Are there any other considerations or information that you think are relevant to the selection of NBN Co's POI locations?

Internode observed in response to question 9 that 20KM is an enormous distance to be using as a benchmark for available competitive backhaul given that construction of 20KM fibre path with no prospect of a customer connection along the path has a direct cost of between one and two million dollars with no opportunity to off-set it against other revenue.

In Hobart the NBN POI is 8KM from the CBD and the cost of 100 Mbps of managed Ethernet backhaul is already twice as expensive as inter exchange dark fibre in other markets. The wholesale operator refuses to provide dark fibre. Internode expects this trend will continue with other operators connecting to other POIs.

It is very easy to think of this as an exercise in averages. This is a fatal mistake. The largest market player operates around 60% of end user access circuits, the next four account for the other 40% while the balance of retailers have no infrastructure and are totally dependant on wholesale service providers. Internode's experience as a wholesale customer has been remarkably painful. Optus investor briefing this year showed that they hated the experience so much that they stopped doing it three years ago.

For the NBN to be a success all access seekers need to be enabled to compete on an equal footing. If some access seekers are significantly more equal than others they will end up being the only retailers at which point they will ramp up retail prices as far as the market will bear.

Telstra, being compensated for the disconnection of subscribers from their copper network then using the remainder of that network to out-compete every other retailer while spending that compensation on a barrage of advertising would be the ultimate irony.