8 November 2010

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Submission RE National Broadband Network Points of Interconnect

OPENetworks is a wholesale only open access licensed telecommunications carrier operating FTTP networks in Greenfield communities in Australia. OPENetworks was the first truly open access wholesale only carrier to deliver fibre to the home services within the Australian market.

OPENetworks has not had sufficient time to provide a complete submission to the key questions asked in respect to the NBN Co's options for POIs as part of the NBN. We support the key ideas and objectives that were provided in Michael S Cox's submission to the ACCC and provide the following additional comments.

OPENetworks has major concerns with the current NBN Co proposed services, in that it does not provide any provision for alternate or competing operators in the last mile access network. OPENetworks has been designing FTTH networks for the past 6 years and as a licensed carrier providing true open access network services for the past 3 years on a commercial basis. Our business has been operating under an open access wholesale only framework long before the NBN was envisaged.

There is a need in the market for a value added service provider such as OPENetworks to deliver more than just the base layer 2 bit stream services. Our current community networks not only deliver PON Layer 2 services but also metro Ethernet point to point services under various levels of both SLA and QoS. We also deliver open access layer 0 (duct access) and Layer 1 dark fibre access and support direct access to not for profit local council and utility services.

To achieve one of the Government's stated objectives, to "deliver a Universal National Price for broadband access services to business and residential users irrespective of their geographic location", this does not rely on Fibre to the Home (FTTH) which is a last mile technology. The fundamental requirement to achieve this objective is a competitive, aggregated and national priced backhaul network. This should be the NBN's priority. The number and location of POIs associated with this network needs to be a combination of what is proposed. It is not a single option. The backhaul services also need to be able to deliver services down to a FAN point or even to a Node point.

Currently only Telstra has a national backhaul network. Telstra internally cross subsidize their BigPond services so that they can deliver a national price for end users to purchase a retail internet service. However when access seekers want to purchase wholesale access from Telstra, backhaul is not a flat rate service but is a distance based charge and as such, an access seeker is unable to offer competitive services, because regional backhaul costs are far greater than local backhaul service costs and the number of customers likely to connect to any single access seeker make cost recovery prohibitive. Separation of Telstra and a regulatory framework to ensure that all access seekers to either the Telstra backhaul services or (if there is some arrangement with NBN Co) with NBN Co, should mean that Telstra Retail/BigPond will have equity of

pricing with other service providers. That would encourage competition and potentially a repricing by Telstra wholesale of their backhaul services and fibre services to the Node.

To create this competition NBN Co should be the vehicle to deliver this fundamental infrastructure platform in the national interest, not as owner of the backhaul network (which in relation to the passive infrastructure should be retained by USO Co) but as an aggregator for services and purchaser of services from all of the current and future regional and local backhaul network service providers to deliver a ubiquitous fibre network to the Community and fibre to the node solutions which will foster innovation and competition.

This would aggregator role is essential to avoid at al cost the over build current and future network infrastructure whether it belongs to a current telecommunications carrier or a utility provider (such as rail, road or power authorities). The aggregator role for NBN Co should allows for some movement on the issue of over building infrastructure if the price or access terms are unreasonable but the exercise of those rights by NBN Co must be strictly monitored by the ACCC for anti competitive conduct by NBN Co to preserve the business of the current and future infrastructure providers in the backhaul network services marketplace.

This aggregation therefore does not depend on the proposed ($11B) deal with Telstra and would still create a competitive national backhaul network, without the building of new POIs as much of the current fibre backhaul (local and regional) terminate is one or more of the current data centres in operation around Australia. It is important to note that there are even more data centres under development and construction that will meet the changing need of retail service providers, application providers and emerging content service providers.

POIs do not need to be extravagant facilities particularly in regional areas or outer metro areas as these are fundamentally transmission facilities with the capacity to expand as needed, but can interconnect to community based micro-data centres, some of which have commenced operation through private investment in areas such as Townsville and the Sunshine Coast.

The following Figure 1 shown the proposed NBN Co POI locations and Figure 2 a parallel diagram showing the community network or last mile networks operated by a last mile operator such as OPENetworks interfacing to services provided by NBN Co.

Figure 1 – NBN Co's depiction of POIs
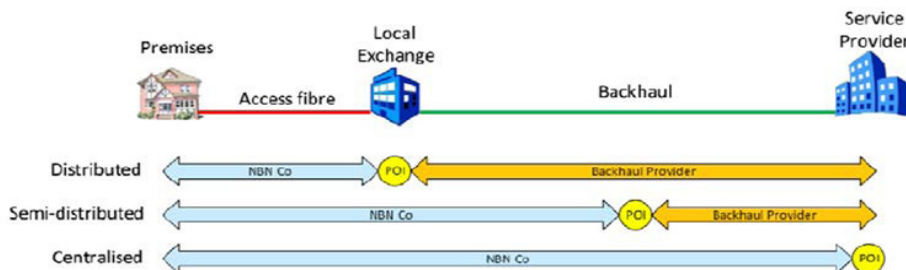
Source: NBN Co Public Position Paper: Proposed NBN Points of Interconnect (POIs)

Figure 2 – POI options with consideration to Last Mile Operators

Last Mile Operator = LMO
Community Point Of Interconnect = CPOI (FAN)
Green POI = Operated by LMO
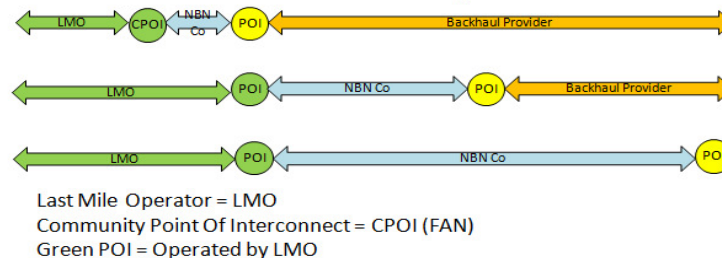
In the paper presented by Michael S Cox to the ACCC in relation to this same "request for comment", Michael Cox refers to a model with the Community Network and interconnect requirements. OPENetworks fully supports this model as outlined in his submission.

The other key requirement to deliver social and economic benefits to residents and businesses was to have access to "affordable" high speed broadband services. The key is "affordable". This includes both the periodic service fees payable by end users to retail service providers and the capital investment to build or integrate the network services. The capital cost needs to be at a level that the nation can support and the NBN strategy must not result in the wasting of existing or future private useful infrastructure, when it can be integrated into an overall NBN solution.

The OPENetworks proposed model will deliver the advanced broadband services faster to the Australian community than the current NBN model. A fundamental problem with rolling out an end to end FTTH network is that it will take 8 to 12 years and the NBN Co will stifle potential investment by any other parties wishing to deliver last mile access services and backhaul networks if the proposed NBN model is allow to continue. If the OPENetworks model is adopted then the majority of the Australian community will get the benefits of access to high speed broadband without stranding substandard DSL 1 low speed services or creating congested and expensive wireless services.

By leveraging the existing copper network in a true last mile network (and by not restricting DSLAMs to the Telstra exchange) a 100Mbps service can be delivered for a significantly lower cost (potentially as little as one 10th of the likely costs under the current NBN plan). It could still deliver the required social and economic benefits in a shorter (say, 2 to 3 year period) and could be entirely funded through private investment. Then as demands for even greater bandwidth is required, the next step of FTTH can be deployed where the copper network is unable to deliver the required services or has become un-maintainable at an equivalent cost to deploying FTTH.

The ACCC should open up the access to the Telstra copper ULL at the Telstra pair-gain, RIM or CMUX or node level locations and enable access to open access only wholesale operators (not Retail Service Providers (RSPs) wishing to install dedicated DSLAMs) at a national flat rate for a copper pair (500-1000m). The cost of a copper ULL must not be different in CBD, Metro and regional areas.

This along with access to a national backhaul service will deliver the fundamental requirements as stated by the government while encouraging private investment and innovation whilst protecting the business and operations of the private companies who have already invested heavily in telecommunications infrastructure in the backhaul, local backhaul and last mile operations.

Recommendations:

1. NBNCo provide a national competitive backhaul service
2. Backhaul should be the focus initially of the NBN as this will deliver the fundamentals for a National Uniform Price for broadband services
3. Backhaul service should include both regional and local backhaul services
4. NBN should be an aggregator of commercially available backhaul services from multiple providers and should not overbuild any local or regional backhaul IP layer 2 services that are available for it to utilise
5. POI of interconnect need to be at all levels to cater for all levels of current and future retail service providers, content and application service providers including recognition of a LMO POI which may be at a FAN level
6. All current Data Centres should be designated POIs at the capital and major metro centre level
7. NBNCo make provision in it's service products for Last Mile Operators
8. ACCC regulate pricing for copper ULL to a flat rate and mandate Telstra provide access to wholesale open access providers at a "node" level
9. NBNCo should also provide both Layer 0 (conduit access) and Layer 1 (dark fibre access) services.

Attachments: for reference and consideration in OPENetworks' submission to the USO

5 November 2010

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Submission RE Universal Service Obligation Policy

Background

OPENetworks is a wholesale only open access licensed telecommunications carrier operating FTTP networks in Greenfield communities in Australia. OPENetworks was the first truly open access wholesale only carrier to deliver fibre to the home services within the Australian market.

For the past few years we have been competing on a commercial basis with other commercial operators and Telstra (Velocity) in the last mile or Greenfield operator marketplace. Telstra could apply the USO funding to offset the cost of connecting and delivering last mile infrastructure to new Greenfield communities. This same USO funding has not been available to competing infrastructure providers/operators and therefore the cost of service connection has been total born by OPENetworks and the community developer. When Telstra has not been selected by a developer as the provider of the community network infrastructure Telstra disclaim the USO obligation and state to anyone requesting a standard telephone service in these areas "that Telstra does not have infrastructure in your community". Telstra's cabling plans identify areas where Telstra retail services will not be provided because they say they are not obliged to provide services where another operator has the mandate to do so from the developer of the land.

OPENetworks networks are managed by Fujitsu Australia and we have a policy of open access without discrimination on price or terms of access and will make available (Layerl 0) access to the ducts, (Layer 1) dark fibres and (Layer 2) managed voice and data services to all access seekers and yet Telstra will not enter into any access or service agreements with OPENetworks.

The current regulatory framework does not permit other access providers to access the current USO rebates available to Telstra. Also the USO is related to the delivery of a retail service in respect to a standard telephone service. Whilst OPENetworks connect residential and commercial premises and have the ability to deliver a standard voice service the actual delivery of the service is up to the Retail Service Providers (RSPs).

Change to an OPEN Access Network Delivery

Whether it be NBNCo or another wholesale only open access provider the USO needs to be contemplated in respect to delivery of an access service which inturn allows the end user access to multiple RSPs able to deliver the USO services.

Basic broadband services as well as access to a standard telephone should be the fundamental platform for the USO as broadband services are the future of improved health and education services. Access to a minimum of 12Mbps if not more, should be a declared service for the USO.
Services such as emergency services access, relay services, directory services and payphone services can be contracted to an appropriate suppliers/operators to deliver these services.

The ability to provide access to these services needs to be mandated so that any provider of new open access services as a wholesale only operator needs to be able to deliver these services within the network elements they are delivering.

Open Networks - Public submission on NBN POIs.DOC

However the wholesale open access provider/network operator needs to be obliged to ensure that any dwelling within their local network/community is able to access basic telephone and broadband services on an non-discriminatory basis and have a "choice" of RSP that can and will deliver the basic services as defined by USO.

Recommendations:

1. Basic broadband must be included with a standard telephone service to all Australians under the USO.

2. USO Co should be a regulator of the USO services and a funding channel to ensure equity of funding available to all network operator/providers of open access infrastructure services (and that USO fund should not available to Telstra unless structural separation is undertaken and if separated then only to the wholesale provider).

3. The base infrastructure where USO Co provides funding contribution, the Layers 0 and 1 infrastructure shall be retained by (the Crown via USO Co) The pits and pipes and dark fibre are a national asset just as the roads and sewage pipes). Open Access telecommunications infrastructure is the forth utility and as such a fundamental social and economic requirement for all. These basic assets should never be privatised in the sale of NBN Co or Australia will end up in the same situation as it is today, having to buy back the right to access pits and pipes and fibre and copper cables (from a privatised NBN Co).

4. If Federal Government pays NBN Co to provide fibre access services, the assets of dark fibre and access network should be owned by USO Co (The Government has set a precedence for this model in the delivery of the Black Spot Blackhaul program which they are delivering in partnership with Nextgen Networks (NN). The Crown has retained ownership of the fibre whilst NN has contributed to the active equipment and will manage the network on an open access equivalence basis. The Crown should not transfer the ownership of the fibre assets to NBNCo but make USOCo the asset holder.)

5. Other providers of last mile open access only infrastructure should be funded on an equal basis to NBNco for the delivery of access networks that will support the delivery of USO broadband and standard voice services within communities.

6. The fundamental requirement of delivering a National Uniform Price for a standard telephone service and a broadband access service is "Independent" of the last mile technology. Australia is such a large geographic country with a distributed population that the barrier to delivering this uniform pricing is a National Backhaul or National Network to the Node service. USO Co should be the regulatory body to ensure that a National Wholesale Open Access Backhaul to the Node network is provided.

7. USO Co regulate access to the copper network on a flat rate basis irrespective of location in Australia for access to a "last mile" copper pair and the ability for access seeker providing wholesale open access services to access the copper network at the node (ie 500m to 1000m from the dwelling and NOT restricted to the current Telstra exchange. The current Telstra network does not have copper form all homes running back to the exchange and in the past 10-15 years Telstra has deployed pair gain, RIM and CMux technologies which are fed via fibre from the exchange and copper only in the last 500-1000m. Access to the copper at a node on an open access only basis would meet the requirements for delivery of broadband and voice USO services.

8. The delivery of retail broadband and voice services to meet the USO Co standards needs to be available form a minimum of 2 RSP on any network segment and it is the wholesale open access operator's responsibility to ensure that this is provided.

9. Other national services such as payphone services, relay services, directory and emergency service access, the operations of these can be tendered by USOCo to retail service providers or operators for a nominated contract period.

10. USOCo should not regulate or mandate the migration of voice services from a coper service to a fibre service as the delivery of the universal service should be technology independent.

11. In Greenfield communities the requirement for delivery of the open access network should be a FTTP platform and if USOCo is contributing to the development of this basic infrastructure then the base pit pipe and dark fibre infrastructure ownership should become the property of The Crown but run and operated by a "licensed open access operator" under a regulatory frame work of equity of pricing, equivalence and equal access.

12. All licensed carriers who operate a network where it is a wholesale only or retail service should contribute to the USO. This will encourage telecommunications carriers to separate their network business form their retail business. With the delivery of new services such as content and applications providers and providers of specialist services over wholesale open access services such as smart metering and security alarm services it will be near impossible to charge a particular Retail Service Provider as many of the new providers will fall outside of the definition of a "Carriage Service Provider". A system similar to GST (but with no exemption so it is easy to manage) would the fairest whereby as carrier services are sold up the chain, the last wholesale provider to deliver the service to a Retail Service Provider would charge a fixed percentage of the wholesale service to the RSP. This is an equitable solution and provides for higher value access services used by business as an example would pay a higher amount but a flat percentage. If a Retail Service Provider was not providing a wholesale access product to their infrastructure and was selling an exclusive retail product then the USO percentage would be applied to the retail rate. This will encourage the development of true open access infrastructure and minimise network overbuild and maximise network infrastructure sharing.