

# Access Seeker Requirements

For the Expert Panel Assisting the Minister for  
Broadband, Communications and the Digital  
Economy

30 March 2008

**iiNet Ltd**



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## Introduction and Background

The Government's pre-election policy stated that building a national broadband network is a major and historic step and one that is critical for Australia's future economic prosperity.

Critically, the network's construction is not only an historic step, but a major and historic opportunity to set in place an access and regulatory regime that will secure the future growth, innovation and competition in the information, communication and telecommunications sector.

The Government's pre-election policy, *New Directions for Communications – Building a National Broadband Network*, correctly identifies the relative parlous position of Australia's access to broadband.

It also correctly identifies the benefits of a more extensive and comprehensive broadband availability. In doing so, it highlights that the lack infrastructure investment has left many Australians with no access to fixed line broadband.

While this in part is true, the level of access to high-speed broadband and expansion of the Australian ICT industry has also been driven by the lack of genuine open access to the current infrastructure.

Notably, where genuine open access is available, either due to competition or enforced by determinations of the Australian Competition and Consumer Commission (ACCC), many Australians have access to broadband at higher speeds than proposed by the Government's National Broadband Network policy.

For example, iiNet can provide ADSL2+ to more than 90 percent of metropolitan Australians as a result of its own infrastructure investment in more than 300 exchanges and competitive access to other existing infrastructure.

In considering the implementation of the National Broadband Network, the Government and its advisers must recognise and consider this important fact: "many Australians have been left with no access to fixed line broadband" not just because of a lack of infrastructure investment, but also because of a lack of genuine open access to existing infrastructure and a regulatory regime that promotes, encourages and protects competition.

In this context, the Government's commitment to "construct a genuinely open access national fibre to the node network and put in place regulatory reforms necessary to facilitate such an investment" is welcomed

Additionally, the Government's commitment that a pre-requisite for all proposals made under the policy must provide genuine open access to bottleneck fibre to the node infrastructure is also welcomed.

As noted in the pre-election policy, genuine open access must require equivalence of access charges and full scope for access seekers to differentiate their product offerings by allowing the customisation of

access speeds, quality of services and contention ratios.

Further, the recent High Court judgement in *Telstra Corporation v The Commonwealth* (6 March 2008) reinforces the critical importance of setting in place a statutory access regime in advance of awarding any consortium the rights to build the National Broadband Network. That statutory access regime must be directed at expressly “promoting ... competition in the telecommunications industry generally and among other carriers” and seeks to achieve this goal by “giving each carrier the right ... to obtain access to the services supplied by other carriers”.

The future access and regulatory regime will be a key determinant of the ability of the Federal Government to successfully implement its election policy and deliver on its commitment to put “Australian back into the fast lane of the information super-highway.”

The following submission is designed to provide the Government’s Expert Panel with specific and critical factors for its consideration as it develops the Request for Proposals documentation related to the National Broadband Network.

It based on the extensive experience of investing in, and delivering, high-speed broadband to hundreds of thousands of Australians with existing and new infrastructure and under the current access and regulatory regime.

## 1 Executive Summary

The opportunity to provide input to the Government's plan to move to a next generation telecommunications network is an opportunity to address some of the shortcomings inherent in the existing regulatory regime.

The general principles that need to be applied to the regulatory improvements are those that have been in place for some time and expressed by government policy:

- Promoting competition;
- The long term interests of the end user.

Additionally, these improvements should address obvious deficiencies in the powers provided to the regulatory authorities pursuing these principles. These include:

- The establishment of reasonable access terms;
- Broadening the scope and improving the efficiency of arbitration processes;
- Reducing the ability of parties to 'game' regulatory processes;
- Eliminating conflicts of interest between commercial interests and regulatory compliance.

Getting the regulatory settings right will ensure consumer interests are promoted and the benefits of competition are realised in months rather than decades

Getting the regulatory settings wrong at this significant opportunity will lead to a reduction in competition and a return to higher prices, less choice and reduced product innovation.

Deployment of a new telecommunications infrastructure provides a unique opportunity to achieve a true open access regime, unsuccessfully pursued by Australian Governments since 1991.

Getting the access framework right, so that markets can operate efficiently is the key. Failing to address the known deficiencies while changing the architecture of the network platforms will destroy the competitive gains achieved to date.

This is an opportunity to not only fine tune existing regulatory settings, but also consider innovative approaches to service delivery. With multiple providers and any-to-any connectivity comes an ability to create competitive tensions on a geographic basis.

Discrete State, Regional or Metropolitan licences could be considered in addition to a full National solution. This geographic approach is

already a matter of fact on a global scale and is not technically constrained. Considering new models to create additional competitive tension also has the potential to develop niche markets. The current national approach was conceived at a time when telephony network constraints were an over-riding consideration. The changed nature of telecommunications featuring IP based networks combined with Peering providers should encourage alternative approaches.

## **2 Access Seeker Requirements**

By definition, these requirements relate to the wholesale layer of service provision. That is, they describe the broad requirements for improvements in the relationships between the rights and obligations of the network owner/operator (Access provider) and those organisations purchasing access (Access Seekers). This access being purchased to services and or facilities for the creation and eventual sale of retail products and services to end users.

They do not relate to the sale of retail products and services to end users.

They focus on the requirements for an orderly and managed migration from the current generation network (CGN) to a next generation network (NGN).

## **3 Next Generation Network Frameworks**

### **3.1 Regulatory Framework**

The existing regulatory regime has a number of shortcomings which are easily identified by parties wishing to 'game' the regime. This has resulted in, for example nine years of dispute over the cost of the ULL declared service, with no conclusion in sight for even the most basic commercial term – the price.

This has limited progress in the deployment of ULL services and presents a hurdle to investment for competitive entrants. Investors see the uncertainty of the regime, the inability of the regulator to conclude the process and the blocking power of the network owner as significant barriers to enter into the market.

These shortcomings militate against Government competition policy.

#### **3.1.1 Recommendation**

All parties must have incentives to conclude negotiations quickly and reasonably priced, efficient access provision must be pursued as an attractive commercial proposition by the access provider (rather than a regulatory obligation). This is best achieved by removing the conflict of interest between access provider obligations and retail commercial imperatives. Structural separation of the access provider from a retail business unit is essential.

### **3.2 Conflicts of interest resolution**

The existing network owner is seriously conflicted. It is required to by law to provide network access to its retail competitors. It is also required by law to maximise the return to its shareholders.

It is expected to do this in the long term interests of all end users (not just its own customers).

It views these obligations as mutually exclusive and is forced to choose between the two.

It is unreasonable to expect a listed corporate entity to put the interests of its competitors, the broader industry or government policy ahead of its fiduciary obligations to its shareholders.

The letter of the current law is loose and provides many opportunities to avoid efficient access provision or policy compliance. Conflicts of interest cannot be resolved by notions of good behaviour or the expectation of good will between commercial opponents.

Accounting separation and operational separation requirements do nothing to address the conflict of interest issue, in fact they may be seen to highlight the conflict by reporting the differences.

### 3.2.1 Recommendation

Structural separation between the access provider and any and all access seekers will resolve this conflict of interest. A network owner or operator who is prohibited from retailing services to end users and licensed to sell only wholesale access will be incited by the commercial success of that wholesale provision, not by retail market share.

## 3.3 Price setting

There are no current price setting arrangements in place. Instead, parties are expected to negotiate commercially. If negotiations break down, the ACCC has the power to arbitrate, those determinations being binding, but only on the parties to the dispute. Any other parties wishing to obtain the same result must negotiate/arbitrate separately and serially. Binding arbitrations between parties A and B have no flow-on to an identical dispute between parties A and C or B and C.

The current 'Negotiate – arbitrate' process is dysfunctional. It is based on the premise that two parties (Access Provider and Access Seeker) will negotiate in good faith to come to a commercial settlement for the provision of services.

Negotiation requires two parties. If one of the parties disagrees with the concept of providing access to its competitors, there is no incentive to participate in discussions on the terms of that access.

The 'arbitrate' step is designed to be a fall-back position in the event that parties cannot agree on an aspect being negotiated. In the current environment, no negotiation takes place, so the arbitration step is employed as an unsatisfactory substitute for a bilateral talks. The Arbitration process, as it stands, is subject to ACT and ADJR oversight. Given the starting point is that one party does not want to be in negotiations to start with, the arbitrations are taken to their maximum time-frames and then appealed.

[The ACCC website](#) listing current Access Disputes shows 32 disputes notified to the ACCC for arbitration and unresolved at 26 March. Telstra is a party to all those listed. There are only 17 Disputes [published](#) on their website by the ACCC as having reached a determination.

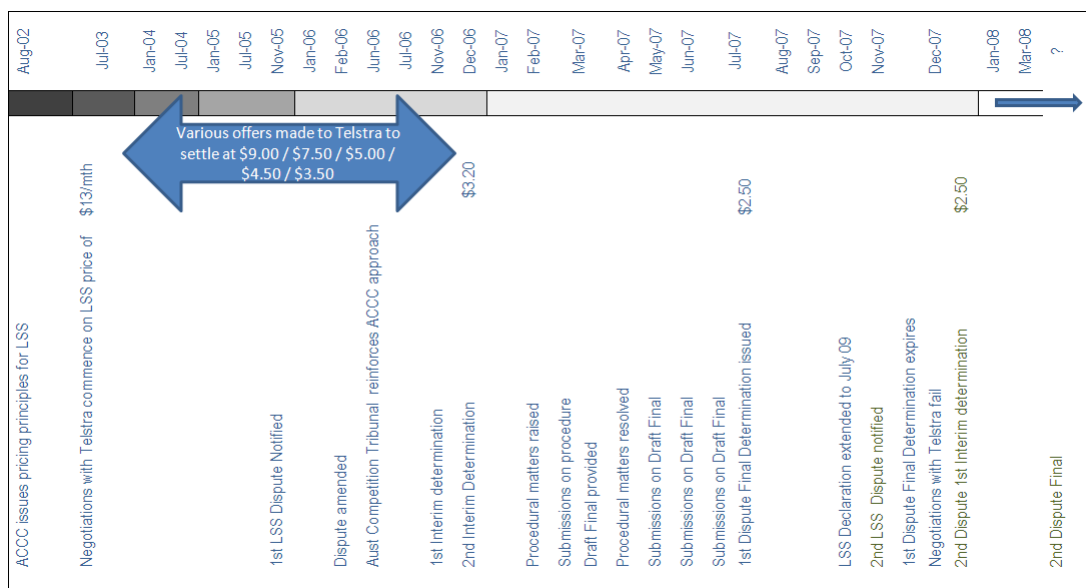
As an example of the time required to reach a conclusion using the negotiate / arbitrate method, we can use the Chime Vs Telstra LSS

dispute<sup>1</sup> to illustrate the time frames.

Negotiations commenced with Telstra in the middle of 2003, at which point Telstra's 'rack rate' for LSS was \$13.00/month. After failed negotiations and a lengthy arbitration process, a Final Determination was handed down by the ACCC in 2007 which expired on December 31 of that year.

This means that even when a dispute is 'finalised', it's not.

A 2<sup>nd</sup> LSS Dispute was notified by Chime in November 07 and is ongoing.



The ULLS was initially declared in 1999. In 2008, approaching the 10th anniversary of ULLS declaration, there is still no resolution to the price that should be charged for this regulated product.

The current process is therefore clearly not a suitable method for establishing prices in a dynamic market with hundreds of participants.

### 3.3.1 Recommendation

In the event that the negotiate / arbitrate model is to continue, the minimum change required would be for a single arbitration to automatically be applied to all similar arbitrations brought during the life of the determination. An arbitration determination would, therefore, have the power of price setting for the industry at large.

This concept should be broadened to cover any determination relating to a dispute on access provision as price is not the only basis for dispute or in need of arbitration.

<sup>1</sup> [Chime/Telstra LSS final determination - ACCC published reasons August 07.](#)

### **3.4 Access Terms**

The current wholesale DSL environment in Australia provides end-user services at a variety of speeds, usually without any form of Service Level Agreement and an aggregation or backhaul service which is billed separately and with various terms and conditions attached. Artificial constraints are applied to line speeds, average throughput, and backhaul configuration.

ISPs operating their own networks do not have these constraints applied externally. These are decisions that may choose to make as it fits their business model.

#### **3.4.1 Recommendation**

Access seekers must have the ability to operate the services delivered over the NGN as if they were their provided over their own networks. Limits on throughput, line speeds (both up and down), contention ratios, and any other network characteristics must be at the discretion of the access seeker.

### **3.5 Aggregation**

The cost of aggregation should be embedded in the end user access price paid by access seekers.

The NGN should be capable of allowing access seekers to use the full line speed of each and every end user. This means that the aggregation network must be non-blocking and un-contended.

The minister has set a minimum bandwidth for each end user of 12 megabits. This should also apply to the aggregation network and there must be sufficient capacity from each Node per end user back to the point of interconnection with the access seekers.

Unbundled aggregation has been one of the major commercial drivers encouraging Internet providers to deploy competitive DSLAM networks in Australia.

The cost of providing the backhaul service from a DSLAM to a service provider's network is largely fixed at the cost of obtaining dark fibre from the DSLAM site. The actual capacity of a single core of dark fibre already exceeds the total downstream capacity of a rack of VDSL2, let alone ADSL2+ DSLAMs, so the cost of operating the backhaul is essentially fixed.

To put this in commercial terms, the operating expense per megabit for backhaul of metro area DSLAMs is around \$5 per megabit or about one twentieth the cost of Telstra's current wholesale charge. This cost will only go DOWN on a per megabit basis as demand increases because the operating cost is fixed, regardless of capacity used.

#### **3.5.1 Recommendation**

Embedding the cost of aggregation into the end user access price for access seekers is the simplest way of ensuring that:

- Access seekers can offer the same retail prices for regional and rural users
- True broadband applications are affordable on the network

### **3.6 End user access**

Access costs are not that variable. The price an access seeker pays should ideally be fixed. (Usage costs in Australia may vary according to where data is sourced, but access is by and large fixed).

We have the situation today where competitive service providers running their own DSLAM infrastructure are able to offer a wide variety of data services from their DSLAM to their end users.

They can offer a variety of data speeds (depending on copper loop length):

- ADSL 1: 1Mbps/8Mbps
- ADSL 2: 1Mbps/12Mbps
- ADSL 2+: 1Mbps/24Mbps
- ADSL 2+ Annex M: 2.5Mbps/24Mbps

They can offer a variety of services

- PSTN over analogue, direct connected telephony
- PSTN over ATM via the DSLAM
- Voice over IP via the DSLAM
- Voice over IP via the Internet service
- Access to private IP data networks
- Access to private ATM data networks
- Access to multicast IP for delivering audio, video and data
- And even plain old Internet service

They can do this with no real incremental cost of backhaul or access ports because this is already in place. If one service is provided, any or all services can be provided as long as bandwidth is available on the copper pair from the DSLAM to the end-user.

#### **3.6.1 Recommendation**

Any NGN must provide access seekers with a platform capable of the above AND MORE at a cost the same or less than current costs to provide these services.

### 3.7 Access versus Resale

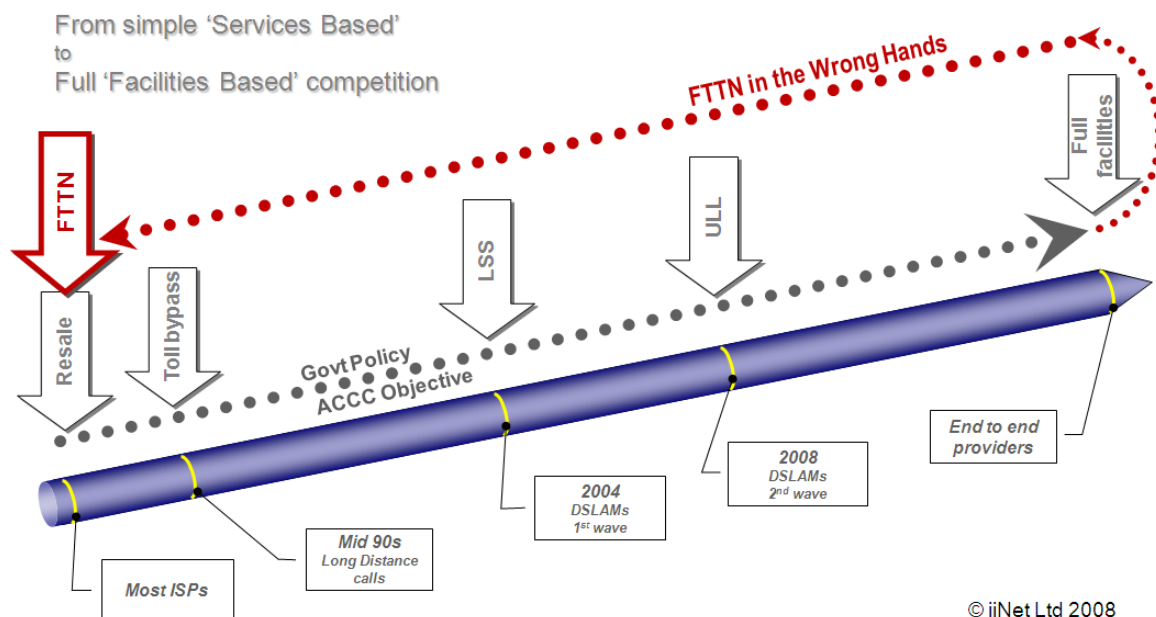
In the current Australian regime (and in other jurisdictions), the concept of a 'ladder of investment' encourages new entrants to previously monopoly markets. It suggests that a new entrant can enter a market with limited investment, gain some market share and then expand that market share by targeted investment in infrastructure (which offers efficiencies and improved profitability), proceeding, over time, to a point where the new entrant has comparable infrastructure to the incumbent.

In the telecommunications market, this has been illustrated by new entrants investing initially in sales and marketing (call centres, billing systems, CRM, etc) and re-selling fully developed retail products and services purchased from others.

A next step has included the installation of voice switches, transmission systems and interconnection facilities. Later, data switches, DSLAMs, and access networks have been deployed (see below).

The introduction of a monopoly NGN platform brings to an end most of this investment ladder and leaves only those on the top rung with a path for investment.

#### The 'Ladder of Investment'



#### 3.7.1 Recommendation

Opportunities for competitive investment in the NGN must not be excluded.

Legitimate infrastructure owners must be either compensated for stranded assets; or Allowed to retire the assets in line with reasonable investment returns or product life-cycles;

### **3.8 Unbundled services**

Customers of some Service providers (who do not currently force a bundle of telephony and Internet) will be forced to change providers as they find themselves having to choose a new provider. Under the new regime, they could be obliged to take both components from the same provider. Retailers will recognise this and will be able to force customers to pay more for the bundle than the customers currently pay for the sum of the parts, because there will be less competition.

Further, forced bundling of non-regulated services may exclude end users from accessing Pay TV entirely, if they choose a competitive service provider. This is the case in France in 2008.

#### **3.8.1 Recommendation**

The NGN framework must allow -

- Delivery of multiple streams (PVCs or VLANs) of service to each end user
- Delivery of services by multiple service providers to each end user
- Delivery of multicast IP and ATM to each end user
- Delivery of a basic PSTN access bearer to each end user

Each of these services must be able to be connected to different service providers. End users must be able to choose between providers for each service.

The ultimate driver for these connections must be the end user who must have the right to freely choose a service provider as is the case today.

### **3.9 Transition period CGN to NGN**

#### **a) Network operators**

Under the current regulatory regime, in line with the 'Ladder of Investment' concept and synchronised with government policy, many investors have developed infrastructure at great cost of both time and resources.

#### **3.9.1 Recommendation**

- Transitions from CGN to NGN must be possible without significant outages or compulsion;
- A no-disadvantage test must be satisfied prior to services being migrated to NGN (E.g. telephone numbering remains the same;

service performance and price must be equal to or better than the service being replaced);

- Interconnection between CGN and NGN must be developed to allow a continuation of any-to-any connectivity.

b) End-users

In addition to the principles above, end users are particularly vulnerable to sweeping technology changes which have the potential to render their own current hardware investment worthless. Hundreds of millions of dollars have been invested by end users on ADSL Customer Premises Equipment (CPE) in the last two years alone. Business users must be allowed to continue to depreciate this equipment for years to come.

### **3.9.1.1 Recommendation**

A guiding principle for an NGN must be:

- End users must be able to use existing ADSL CPE for at least five years from the commencement of an NGN; or
- The NGN builder must replace and configure the ADSL CPE of an end user acquired within five years before the commencement of an NGN such that the end user can achieve a transition from CGN to NGN without outages.

### **3.9.2 Exemptions**

Consideration must be given to end users who are currently serviced by technology other than ADSL over copper pairs. Numerous end users are currently serviced by dial modems on PSTN or ISDN. Other users are in estates serviced by Fibre to the Home from a variety of carriers, often with no access to Telstra copper or competitive services. Many rural users receive Internet service via wireless using proprietary protocols, WiMax or 3G.

These customers must not find themselves casualties of a hasty deployment of an NGN

(Note: This is not meant to be a complete list. )

### **3.9.2.1 Recommendation**

Technical and commercial provisions for exemptions from forced migrations to the NGN must be incorporated in specifications.

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## **3.10 Commercial Framework**

### **3.10.1 Unbundling provisions**

Functionally equivalent services (to that available pre-NGN) must be available to access seekers, in particular the maintenance of choice for unbundling of services. Economies of scale and innovation are not mutually supportive. Simple re-sale of services permits no product innovation, other than by the access provider who is remote from the end-user.

Current arrangements allow unbundling at a number of points of access. New arrangements must not reduce these opportunities to add value for consumers or the development of new products and services overlooked or decided against by an access provider.

Forced bundles of telephony, Internet and Pay TV do not fit the existing ladder of investment and do not reflect the current competitive landscape. There is no natural requirement to force the bundling of different classes of service in an NGN and neither is there any natural requirement to block access to certain classes of service. In particular, excluding competitive access providers from providing telephony or Pay TV would be a significant reduction in competitive opportunity since these are services which current infrastructure operators are able to deliver via their own equipment over ULL copper pairs today.

#### **3.10.1.1 Recommendation**

An NGN must support:

- Delivery of multiple streams (PVCs or VLANs) of service to each end user
- Delivery of services by multiple service providers to each end user
- Delivery of multicast IP and ATM to each end user
- Delivery of a basic PSTN access bearer to each end user

Each of these services must be able to be connected to different service providers. End users must be able to choose between providers for each service.

The ultimate driver for these connections must be the end user who must have the right to freely choose a service provider as is the case today.

### **3.10.2 Transparent Ts & Cs**

Transparency in the provision of (what will effectively be) monopoly access services is essential to reduce disputes and provide for accountability. It assists in driving down costs and encourages access seekers to develop innovative products on the platform.

There are two types of barrier in the current environment and they would naturally be transferred into an NGN world if the Ts &Cs remain unchecked. Financial barriers include Access Seekers being forced to wear disproportionate commercial risk in the form of unnecessary security deposits, onerous payment and trading terms and a loss of commercial security over their own customers.

Additionally, the instability of service brought about by the Access Provider retaining the right and capability to withdraw wholesale service from access seekers with minimal notice, leaving access seekers without recourse or the ability to provide alternative services for their end users.

### **3.10.2.1 Recommendation**

Access terms and conditions must be submitted to the regulator in the form of access undertakings, they must be transparent, comprehensive, complete and available for publication.

### **3.10.3 Dispute Resolution**

Dispute resolution is a point of failure in the current regime.

#### **3.10.3.1 Recommendation**

Any access dispute brought by any access seeker should be accepted by the regulator as an industry dispute. Any outcome of arbitration by the regulator should be applied to all participants seeking or providing access under the NGN.

This should not be limited to price. Where an access undertaking omits terms or conditions required for effective negotiation, the regulator should identify the omissions and facilitate either a negotiated outcome with a fixed timeframe of six months or provide a binding determination itself.

### **3.10.4 Product definitions**

The debate about FTTx has been conducted within very limited parameters. The FTTx by definition has the potential to de-commission the existing copper customer access network that delivers a range of products and services other than broadband.

The NGN must allow the continuation of, or the migration to, functionally equivalent services currently used by customers in residential, business, corporate and government markets for a range of services such as secure ATMs, corporate data networks, Eftpos terminals, credit card authorisation, PABX networks, trading networks and so on.

Customers have systems and equipment installed with specific interface standards that may not be compatible with an NGN. An NGN then, has the potential to strand the investments of millions of

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customers, not just access seekers.

### **3.10.4.1 Recommendation**

Any new network infrastructure must allow the continuation of existing communications products and services as well provide for managed migrations, when and if required.

### **3.10.5 No disadvantage test**

Services currently provided on the CGN are provided under a range of terms and conditions, developed over time.

### **3.10.5.1 Recommendation**

The NGN must be required to offer terms and conditions at no disadvantage to consumers over those applying to any services being replaced.

### **3.10.6 Residential**

a) Above all, residential users are price sensitive. They buy the service they can afford and simple observation of cars on the road demonstrates that there is a wide spectrum of affordability.

There remains a large group of Internet users in Australia who for reasons of affordability, access or frequent relocation access the Internet via dialup modems. Testing with various FTTx technologies has shown that dialup modems are not necessarily compatible with the network.

b) Regardless of the Minister's goal of 12 megabits access speed in each direction, ISPs will doubtless seek the ability to implement some limits in order to protect their networks from large quantities of peer to peer (P2P) traffic.

### **3.10.6.1 Recommendation**

a) Consideration must be given to how these people will access the Internet in an NGN world.

(Commercial models in other countries (such as Germany) where end users pay a fee to the access network provider and then acquire Internet services from one of the many service providers available on the access network. Such models allow end users to obtain access to their service provider, even when they move house, without any interruption. This style of commercial access is unlikely to be proposed by a network builder who also intends providing retail service over the network but could easily be mandated by Government as a condition of building the network.)

b) This must be under the control of individual access seekers.

### **3.10.7 Business**

Small business users do not limit themselves to the telephone or broadband access. Eftpos and other transaction systems must be maintained under the NGN with no additional cost to business users. Any other services such as alarm and other remote monitoring systems which are dependant on CGN infrastructure must be guaranteed continuity.

Health providers must be able to maintain the provision of emergency call services and other independent living aids for the aged, infirm and disabled.

#### **3.10.7.1 Recommendation**

Service continuity must be maintained.

### **3.10.8 Corporate & Government**

Larger commercial networks bring together end users from around the entire planet into complex, blended networks. Access to the network is frequently provided in homes and the premises of contractors, vendors, customers and service providers. These networks are usually private and secure.

#### **3.10.8.1 Recommendation**

This ability must be maintained and under the control of individual access seekers.

### **3.10.9 Law enforcement**

Service providers are currently obliged to provide interfaces for lawful interception.

#### **3.10.9.1 Recommendation**

All provisions for lawful interception must be maintained.

## ***3.11 Operational Framework***

### **3.11.1 Customer transfers**

Customers must be able to choose providers or service types and be able to switch without penalty.

Under the current network arrangements, there is no consistency of transfer arrangements between infrastructure or service types. Number portability arrangements vary as does platform portability.

Some existing transfer arrangements are non-existent and customer transfers between providers or even different access arrangement with the same provider may be accompanied by enforced outages which create barriers to switching. Some customer transfer processes are voluntary and some are not.

### **3.11.1.1 Recommendation**

A fully automated and compulsory customer transfer regime must be put in place in order to provide customer choice and drive competition. This transfer regime must incorporate CGN to NGN transfers as well as provider to provider transfers.

### **3.11.2 Infrastructure Builds and deployment**

The current access regime allows the network owner to dictate the pace that competitive services are deployed. Restrictive work practises are the norm and infrastructure deployment and interconnection is progressed, delayed or blocked without negotiation and at the whim of the dominant access provider.

There is no third party auditing, no justification for unilateral decisions and no appeal.

There is no incentive for any other approach by the incumbent.

### **3.11.2.1 Recommendation**

Structural separation between the network owner or operator and any retail business entity must be a pre-requisite condition.

### **3.11.3 Facilities access**

The current access arrangements to exchanges and other facilities are not transparent and are unbalanced in favour of the incumbent.

The access points and points of interconnect under the proposed NGN are not clear.

Any facilities access arrangements under NGN need to be transparent, fair and equitable for all parties.

### **3.11.3.1 Recommendation**

Structural separation between the network owner or operator and any retail business entity must be a pre-requisite condition.

### **3.12 Conclusions**

3.12.1 Structural Separation between access provider and access seekers must be the starting point for the provision of an NGN that will outlast any government putting it in place

3.12.2 Dispute resolution should be streamlined and strengthened

3.12.3 Price setting powers should be incorporated into dispute resolution.

3.12.4 Customer transfer processes are essential and should include service provider to service provider as well as CGN to NGN

3.12.5 No Disadvantage test should preserve existing services and terms including -

- Security for aged and infirm
- Maintenance of service types
- Price performance compared to pre NGN services
- Bundling choices

3.12.6 Transitional arrangements are essential -

- Interconnection with CGN must be available
- Compensation for stranded assets must be incorporated for all existing asset owners
- Should not be enforced prior to five years from the commencement of NGN services in a given location.

3.12.7 Innovative licensing arrangements should be considered in addition to a single national network. This could include geographic network deployments servicing State, Regional or Metropolitan areas.

## 4 Supplementary information

### 4.1 Availability of high speed broadband

Much has been made of the need for high speed broadband with comments such as 'deplorable' and 'sub-standard' being used by some for their own agenda.

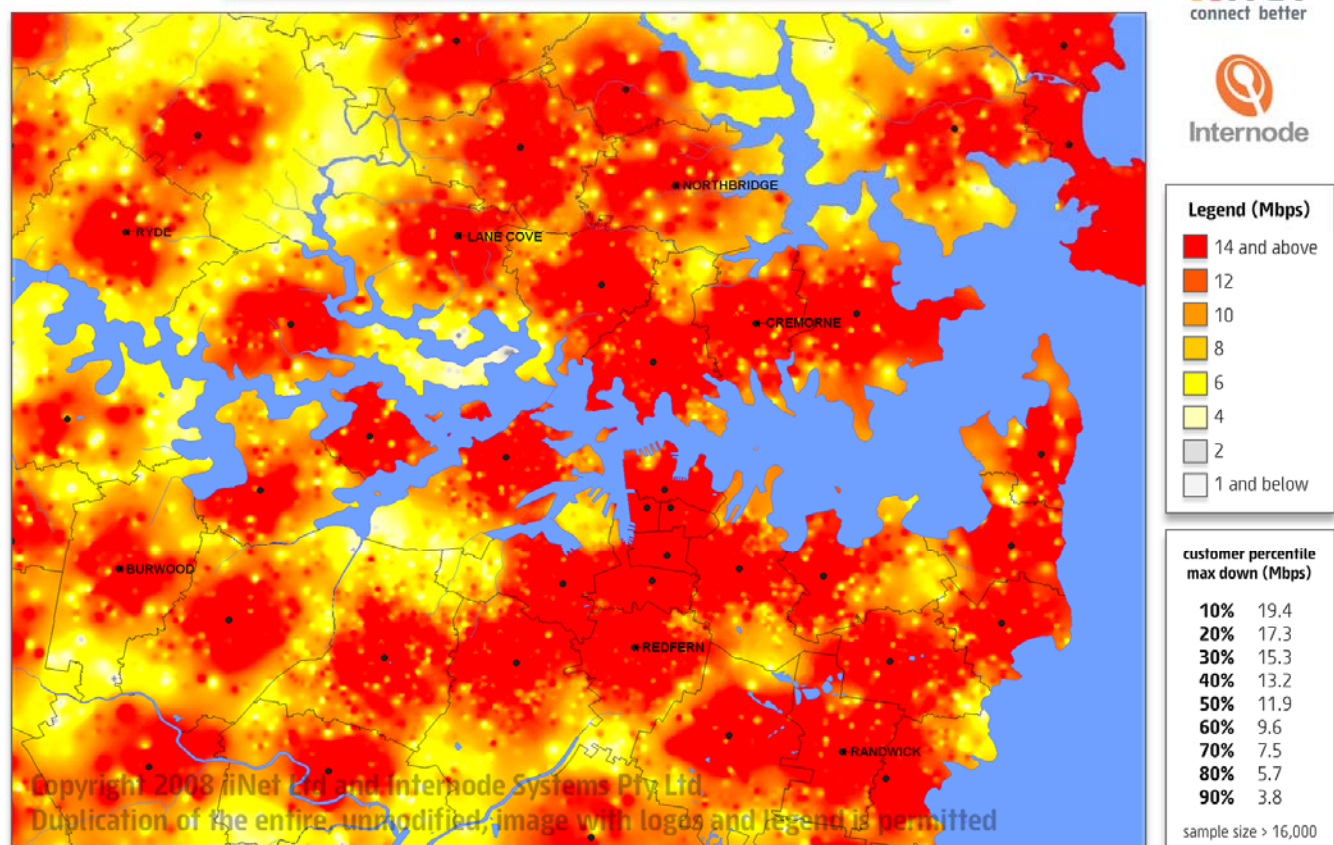
iiNet has often taken offence at such comments given that the generalisations made by those not that well informed ignore the fact that many companies, including ourselves, have made a successful business out of the provision of high-speed internet access since early in this decade.

We have pursued the construction of our own networks to ensure the delivery of the fastest available consumer grade services and this has resulted in a number of awards, including 'Product of the Year' in 2007 and 'Carrier of the Year' in 2008.

The Minister's ambition to provide broadband to all Australians should not imply that many Australians already have high speed broadband today.

iiNet teamed with Internode to sample 16,000 customers services to produce the following 'heat map' using colour coding to illustrate the speeds available to consumers across Sydney.

**Combined ADSL2+ Speed Distribution - Sydney**



The red areas indicating where speeds achieved on the current network exceed 12 Mbps. In fact 50% of all Internode and iiNet customers in the sample (16,000 customers) already get 12Mbps.

See [What Price FTTN?](#) for the associated press release accompanying this heat map.

## **4.2 ACCC commentary on the FANOC (G9) suggestions**

In handing down its draft decision on FANOC's Special Access Undertaking in relation to the Broadband Access Service in December 2007, the Australian Consumer and Competition Commission (ACCC), noted it was not its role to determine the type of FTTN network or all the measures necessary to ensure 'open access'.

Importantly it did, however, provide some general guidance on its thinking about the operation of a future FTTN network which, in most respects, provide a firm foundation upon which the Expert Panel and the Government should rely in its consideration of the future open access and regulatory regime.

### Pricing

The ACCC was generally comfortable with FANOC's proposed long-term approach to pricing. It stated that it would provide a high degree of regulatory certainty for significant new investments, and noted the initial prices for the first three year access period may be in the appropriate range.

### Vertical Separation

The ACCC also considers that a vertically separated ownership model could reduce incentives for the access provider to discriminate between downstream users of the access service and, therefore, facilitate strong and effective competition between access seekers in retail markets. Where such an ownership model is in place, the ACCC considers the need for regulatory oversight of non-price terms and conditions of access, in particular, could be relatively low.

### Access issues

The ACCC indicated concerns that the SAU gives FANOC too much discretion to determine access prices over the 15 year undertaking period without sufficient regulatory audit and review of the key inputs in the pricing methodology, including actual costs, demand forecasts and the depreciation profile. In addition, the ACCC was concerned that FANOC has too much unconstrained discretion in relation to determining non-price terms and conditions of access, including in relation to introducing or withdrawing BAS products, varying the service specification and setting notice periods for network changes over the life of the SAU.

It said it was not satisfied that the proposed ownership and governance structure supports the significant discretion reserved to FANOC to determine price and non-price terms and conditions of access for 15 years.

In relation to the BAS service specification, the ACCC's draft view was that FANOC has addressed many of the needs of a low level, bitstream access service over an FTTN network, although the it has some concerns as to whether the proposed approach to voice services is

appropriate, at least during the initial transition period.

#### ACCC General Guidance On The Implications Of An FTTN Network

The ACCC did provide guidance in its report on what would be expected of third party access on any FTTN broadband access network in order to promote the long-term interests of end-users.

The ACCC noted that all FTTN network upgrades would be likely to exhibit essentially the same bottleneck characteristics over the 'last mile' as Telstra's existing copper loop access network.

Appropriate terms and conditions of third party access to the bottleneck will be critical for competition in downstream retail communications markets and to promote the long-term interests of end-users, including Australian households and businesses.

It stated the terms of access should give network infrastructure investors the right incentives to invest and to recover their costs, with an appropriate return on risk, and also give access seekers the ability to invest in their own businesses, to compete and to innovate.

It said that as many of the same third party access issues are likely to arise regardless of how an FTTN broadband access network is built, or by whom.

#### Third Party Access To A FTTN Network

The ACCC considers that the lower the 'layer' in the network at which access is granted and the closer it is to the basic physical infrastructure that makes up the bottleneck, the greater the ability of access seekers to control their own costs and supply chain, differentiate service offerings, innovate and improve service quality.

The ACCC said that an approach to regulation that provides access seekers with greater control over their own business and products, to the extent that it is economically efficient, is likely to promote competition, innovation and investment in new services, and be in the long-term interests of Australian end-users.

Currently these requirements are met by access services such as the unconditioned local loop service (ULLS).

An FTTN access network upgrade is likely to make the current use of unbundled access to the copper loops via the ULLS more difficult, if not impossible. The ACCC expressed no view as to whether a ULLS service should continue to be available after an FTTN access network is deployed.

Regardless of the future approach to the ULLS, the ACCC says it will be possible to offer an access service of some kind over the bottleneck. This could be some form of bitstream access service. The access service should be as close to unbundled access to copper as is feasible and give the access seeker as much control as possible over its own customer traffic. Regardless, it is the ACCC's view that an appropriate approach to a ULLS replacement access service over an FTTN access network would normally include the following:

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A bitstream access service over the bottleneck, at as low a layer within the network as feasible, so as to give the access seeker as much control as possible over its own customer traffic.

Access prices that reflect efficient costs (whether actual or estimated) and give investors a return that reflects their investment risk.

Non-price terms and conditions of access that meet minimum quality of service standards and do not discriminate anti-competitively.

It notes that a smooth migration to the new services for current access seekers and their customers would also be critical.

#### Bitstream Access Service

The ACCC says a future bitstream access service would need to be at a much lower level in the network than a wholesale xDSL service.

If end-users are to reap the benefits of next generation broadband, access seekers need to be able to directly control their own customer traffic so they can innovate on services and applications and avoid simply reselling the access provider's product.

The user of a wholesale xDSL service has little control over the service and is often able to do little more than add its own marketing and call centre. By contrast, the proposed replacement for ULLS should be designed to give access seekers as much control as possible over their own customer traffic.

The ACCC notes that where the network owner is vertically integrated and has substantial market power in the retail market, a service which gives access seekers a lot of control over their traffic is also important to restrict the ability of the network owner to discriminate against access seekers. Therefore, the service specification of a bitstream access service is critical to promote competition and the long-term interests of end-users.

The ACCC stated that a bitstream access services should meet the following criteria:

A Layer 2 bitstream access service, which may be offered at a variety of speeds but should include a product that is not throttled as well as a product that is symmetric to the extent the technology permits. Products should be available to all access seekers on a non-discriminatory basis.

A service (whether the bitstream service or another service) that allows access seekers to provide a voice service.

Points of interconnection as close to customers as is appropriate and efficient, which in the first instance is likely to mean at or near existing local access switches and other points of interconnection for current ULLS and LSS products.

Interconnection protocols based on well-accepted standards for broadband, voice and, if applicable, video, which are sufficiently well-described to allow access seekers to design and build their own

interconnecting facilities.

Arrangements for access to buildings, shelters and facilities for interconnection.

Well-described and appropriate protocols for how packets are to be prioritized and handled.

Well-described and appropriate protocols for how congestion in shared network elements is to be handled.

Equivalent treatment of access seekers in relation to quality of service parameters such as jitter, delay and packet loss.

Interaction by access seekers with operations support systems.

No barriers to multicasting and IPTV by access seekers.

An appropriate process for amending service specifications in later periods as needed or desirable.

The ACCC considers a bitstream access service with a service specification that addresses these minimum elements would be likely to provide access seekers with sufficient flexibility and control over the access service to allow any-to-any connectivity and enable access seekers to compete effectively and make appropriate decisions in relation to the efficient use of and investment in infrastructure.

Therefore, the ACCC considers that such a service description would be likely to promote the long-term interests of end-users.

#### Access Prices

The ACCC says access prices should give network infrastructure investors the right incentives to invest and to recover their costs and an appropriate return on risk. If there is an increased degree of risk in an FTTN investment this should be appropriately reflected. At the same time, access prices should give access seekers the ability to invest in their own businesses, compete and innovate.

In making reference to the TSLRIC+ pricing methodology and it notes the Australian Competition Tribunal has endorsed TSLRIC+ in relation to historic, sunk networks.

The ACCC says it expects this approach may remain appropriate for such networks. However, it says there is no reason to rule out proposals for different pricing approaches, especially for new networks where efficient and prudently incurred actual costs can be known.

Therefore, it is unlikely to be possible to set an accurate schedule of fixed prices for any firm for much more than three years.

It may, however, be possible to set reasonable prices for the initial period and set a methodology for adjusting these prices over time. Such an approach is used in the gas industry, for example, where prices are set for the first year of an access arrangement period and prices for subsequent years within that period are adjusted according

to the pricing methodology contained in the access arrangement.

The ACCC states that any methodology for setting access prices to essential bottleneck infrastructure would require effective, independent regulatory audit or review of the key inputs and parameters in the pricing methodology in instances where the undertaking period is very long, regardless of whether the access provider is vertically integrated.

Further it states that while it may be appropriate for the ACCC to accept an access undertaking for a period of 15 years that contains initial period prices and a pricing methodology for setting subsequent access prices, the ACCC would need to be confident that the access provider would exercise its discretion in applying the methodology in an efficient and prudent manner.

It says this confidence could be achieved through providing the ACCC with a power to audit or review the key inputs in the pricing methodology (such as demand forecasts and forecast capital and operating expenditure) at appropriate intervals during the SAU period.

To be able to do this the ACCC notes that it would require new regulatory functions through an amendment to Part XIC of the TPA along the following lines:

If the undertaking provides for the Commission to perform functions or exercise powers in relation to the undertaking, the Commission may perform those functions or exercise those powers. If the Commission decides to do so, it must do so in accordance with the undertaking.

In relation to FANOC's initial prices the ACCC notes that if it is assumed that the cost of accessing Telstra's sub-loops is at the top of FANOC's estimated range of \$5-15 per line per month, FANOC's proposed initial access prices for broadband services will be between \$29 and \$50 per month, depending on the speed of the service. FANOC has proposed to set initial prices below the long-term average and have prices rise over time to build the market. The ACCC's draft view is that this approach may be appropriate. As a result, these prices may be in the appropriate range of initial prices for a network of this type.

#### Smooth Migration To The New Services

The ACCC considers that a smooth migration to the new services is critical, rather than a new network builder necessarily continuing to offer all existing services. While the ACCC considers that existing services should be replicated under new networks where appropriate, there are some services that may need to be altered significantly or may not be replaced if an FTTN network is deployed.

The ACCC considers that it would not be in the long-term interests of Australian consumers and business end-users to block network modernisation indefinitely to avoid any form of disruption to existing carriers and carriage service providers.

The ACCC notes previous Australian Competition Tribunal decisions in relation to these matters accepting that access seekers do not have an

unlimited right of access to Telstra's ULLS, or the right to prevent network modernization.

It says carriers and carriage service providers investing in a dynamic industry would usually be expected to factor into their business plans the risk of technological obsolescence. In line with this, the ACCC notes its role is to protect the competitive process rather than specific competitors.

However, the ACCC considers it is appropriate for access seekers to expect reasonable notice and appropriate migration paths to ensure a smooth migration to the new services.

If access seekers' investments are subject to sudden arbitrary stranding on unreasonable grounds, incentives for access seekers to compete, invest in facilities and create innovative new services for consumers and business users would likely be reduced. This would not be in the long-term interests of end-users. Similarly it is in the interests of Australian consumers and business end-users that the industry has sufficient time to develop solutions to migrate important services (such as payphones, EFTPOS and voice) to an FTTN access network.

Again, it notes previous Australian Competition Tribunal decisions and says they [access seekers] ought not to be placed in a position where their substantial investments in infrastructure might be isolated and made redundant as a result of [the network owner's] timing and location of network upgrades. Such a situation is not in the long-term interests of end-users of the services provided to them by access seekers using the ULLS.

The ACCC notes that issues surrounding network modernisation are inherently complex.

It considers that such terms and conditions would more usually be determined by bilateral or multilateral commercial negotiation or by agreed operational procedures through self-regulatory mechanisms. It would be preferable that key network modernisation terms and conditions are not determined unilaterally by the access provider or solely through bilateral negotiations in circumstances where one negotiating party has little countervailing bargaining power. The ACCC may have a role where industry procedures prove insufficient.

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