

Telstra's FTTN Proposal: Key Policy Issues

Working Paper

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Report to AAPT, Internode, iiNet, Macquarie Telecom, Optus, Powertel, Primus, Soul and TransACT

The Allen Consulting Group Pty Ltd

ACN 007 061 930

Melbourne

4th Floor, 128 Exhibition St
Melbourne VIC 3000
Telephone: (61-3) 9654 3800
Facsimile: (61-3) 9654 6363

Sydney

Level 12, 210 George St
Sydney NSW 2000
Telephone: (61-2) 9247 2466
Facsimile: (61-2) 9247 2455

Canberra

Level 12, 15 London Circuit
Canberra ACT 2600
GPO Box 418, Canberra ACT 2601
Telephone: (61-2) 6230 0185
Facsimile: (61-2) 6230 0149

Perth

Level 21, 44 St George's Tce
Perth WA 6000
Telephone: (61-8) 9221 9911
Facsimile: (61-8) 9221 9922

Brisbane

Level 11, 77 Eagle St
Brisbane QLD 4000
PO Box 7034, Riverside Centre, Brisbane QLD 4001
Telephone: (61-7) 3221 7266
Facsimile: (61-7) 3221 7255

Online

Email: info@allenconsult.com.au
Website: www.allenconsult.com.au

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Telstra's FTTN Proposal: Key Policy Issues

1. Introduction

This report is a working paper which highlights some key policy issues arising from Telstra's proposal to build a fibre-to-the-node (FTTN) network. Telstra's plans were announced in briefings to analysts and journalists on November 15 and 16, 2005. It will build an FTTN network to serve four million 'service addresses' in Australia's five largest cities — Sydney, Melbourne, Brisbane, Perth and Adelaide.

However, Telstra has stated that its plans are conditional on it receiving generous concessions from the 'access' rules that would normally apply, under Part XIC of the *Trade Practices Act 1974*. These rules would allow other telcos to purchase access to Telstra's network, and so compete with Telstra in the provision of retail broadband services. Telstra has been in discussions with the Australian Competition and Consumer Commission (ACCC), in an effort to gain these concessions.

Telstra's proposal seriously threatens telecommunications competition in Australia. This working paper describes some of the key policy issues which arise. It is based on work that the Allen Consulting Group and dandolopartners were commissioned to undertake by an industry-wide consortium (AAPT, Internode, iiNet, Macquarie Telecom, Optus, Powertel, Primus, Soul and TransACT) to develop an alternative FTTN model.

The final report from this work — including a detailed proposal for an alternative FTTN model which avoids the problems associated with Telstra's FTTN model — will be released in coming weeks.

The remainder of this working paper is set out as follows.

Section 2 describes why Australia needs to do better on broadband, and what our national objective should be.

Section 3 describes why competition in the delivery of broad-based services is critical.

Section 4 explains the importance of ULLS-based competition, and the benefits it is bringing.

Section 5 details the problems with Telstra's proposal.

Section 6 outlines Telstra's likely motives behind its proposed FTTN network.

Finally, Section 7 sets out 10 key questions, which highlight the issues presented by Telstra's proposed FTTN network. Policy approval for Telstra's FTTN proposal will require satisfactory answers to these questions.

2. Australia lags behind on broadband and needs to do better

Australia needs high speed, widely available, low cost broadband services. Our national economic performance depends on it. Government policy aims to achieve this outcome. In 2004, the Federal Government released Australia's National Broadband Strategy, which includes the vision:¹

Australia will be a world leader in the availability and effective use of broadband, to deliver enhanced outcomes in health, education, community, and government to capture the economic and social benefits of broadband connectivity.

Many other countries are aiming for similar outcomes.²

However, in contrast to other developed countries, Australia's performance has been poor (although it is now improving). On most key measures, we lag behind other countries.

First, broadband take-up or penetration is low, with Australia comparing unfavourably when benchmarked against advanced Western economies. Australia is ranked only 17th amongst 30 OECD countries. Australia's ranking would be towards the bottom end of the benchmarking, if it were not for the inclusion of emerging Eastern European economies in the OECD group.

Second, broadband price levels have been too high. This has been the main reason why take up has been low.

Thirdly, the bandwidth available is very low. Telstra has positioned 256Kbps as the entry level broadband service. In many other countries, broadband means speeds of 10Mbps or more — forty times as fast as Telstra's entry level service. In leading nations like South Korea and Japan, broadband speeds of up to 100Mbps are available.³

Fourthly — and the root cause of the three problems identified so far — competition has been poor. Telstra is the dominant network owner, with almost 80 per cent of broadband services provided via the traditional copper loop.⁴ Hence price competition is limited as most operators are constrained by the wholesale price charged by Telstra. Even more seriously, competition in features and benefits is very limited. If Telstra chooses (as it does) to set the highest available speed on its DSL network to 1500Kbps, this is also the highest available speed that resale-based competitors can offer.

It is uncontroversial that Australia needs to do better on broadband.

What, then, should our national objective be? Wider availability of high speed services? Today's services, but at lower prices? Or some combination?

¹ See www.dcita.gov.au/ie

² For example, the UK Government target for broadband is for the UK to have the most extensive and competitive broadband market in the G7 by 2005.

³ Assessing competition within the Australian market – a neutral view, Spectrum Strategy Consultants, 22 March 2006

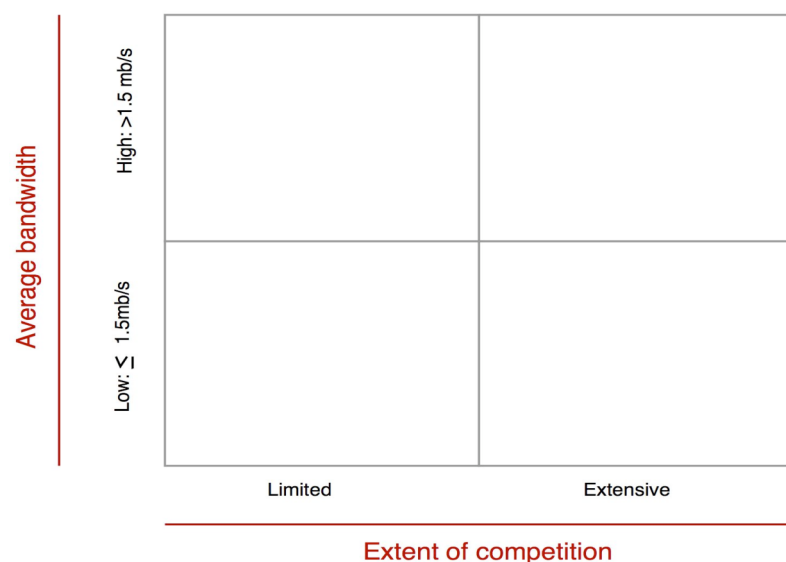
⁴ Telco regulation 'necessary' to development: ACCC, ACCC media release 1 June 2006

We suggest that the right way to think about this policy problem is set out in the matrix below. One dimension shows average bandwidth or speed. This recognises that, other things being equal, we want the highest available bandwidth to the largest possible number of people (Note that if half a million Australians receive 100Mbps, but the remaining 19.5 million get 256Kbps, then the *average* bandwidth will not be particularly high).

The other dimension shows the degree of competition in the marketplace. This recognises that, other things being equal, more competition will drive lower prices, better service, more innovation, and faster take up. It is not much use having a high bandwidth service widely available if only one operator controls it, and sets prices so high that it is barely used.

Figure 1

SUMMARY OF BROADBAND POLICY CHOICES



Today, Australia has limited competition and relatively low bandwidth. We are in the bottom left hand box in the matrix. Our national objective should be to move into the top right hand box. But how best can we get there?

3. Competition in delivery of broadband is of critical importance

Supply side competition and innovation

Competition between suppliers is the critical driver of innovation in price and service delivery. In 2000, the National Bandwidth Inquiry noted that:⁵

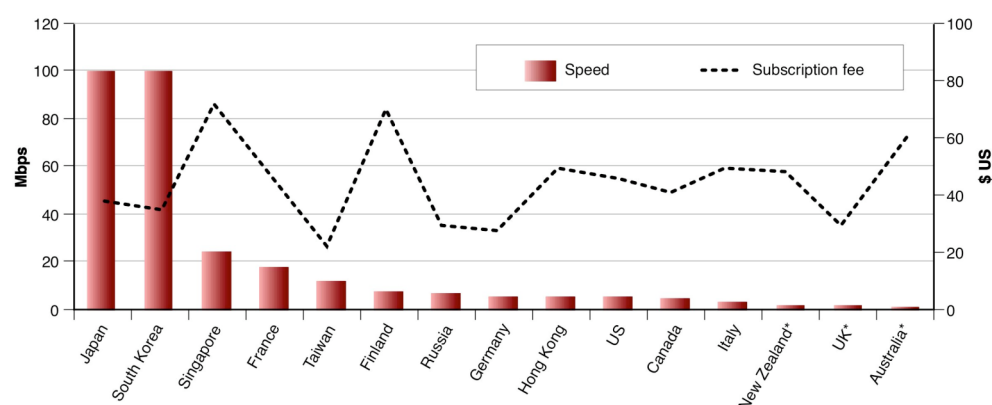
...the Australian bandwidth market has not to date seen the same levels of innovation in the type and range of infrastructure service provision as is seen in the most competitive North American and European markets.

⁵ National Bandwidth Enquiry report, April, 2000

According to the National Bandwidth Inquiry, the level of competitive pressure in the market, and underlying cost structures, exert a major influence on price trends. Currently, Telstra has the dominant share of the broadband market in Australia and its broadband prices and service levels, despite improvement over time, remain relatively poor when compared with that of incumbents in other countries. This is illustrated in Figure 2.⁶ Increased broadband competition, in particular, competitive pressure placed on the incumbent, has the potential to act as a key driver of price reductions and service improvements to deliver real consumer benefits.

Figure 2

TOP ACCESS SPEED OF INCUMBENT'S RESIDENTIAL BROADBAND AND MONTHLY SUBSCRIPTION FEE



Note: (1) data only for DSL and FTTH service plans (2) Data for Canada, Japan as of Dec 05 (3) Data for Finland as of Sep 05 (4) Data for Spain as of Nov 05 (5) Data for France, Germany, Singapore, Taiwan, US as of Jan 06 (6) Data for Australia, HK, Italy, South Korea, Taiwan, as of Feb 06 (06) Data for New Zealand, UK as of March 06 (7)* indicates capped plans

Source: Spectrum Strategy Consultants 2006, *Assessing competition within the Australian market — a neutral view*, 22 March.

The effect of competition on service improvements can mean greater broadband innovation in the form of upgrades to networks and increases in speed. For instance, in the Netherlands where the telecommunications environment is 'tough but innovative', competition has led to availability of cable access speeds of 20Mbps, capacity increases of 60 per cent per annum, and the potential for high speed capabilities of up to 100Mbps by 2008.⁷

Demand side choice and flexibility

Demand side choice and flexibility gives consumers greater capacity to select between service providers, and to find and customise solutions to meet specific demands. Telstra's dominance of Australia's broadband marketplace has had the effect of reducing choice and flexibility for consumers. In markets that are less concentrated, such as Japan, Belgium and Korea, consumers can derive real benefits from competition.

⁶ Spectrum Strategy Consultants 2006, *Assessing competition within the Australian market — a neutral view*, 22 March.

⁷ "Cable in the Netherlands: full blown competition", March 2006, <http://www.vecai.nl/downloads/docs/budapest270306.pdf>

Japan provides a good case study. In 2000, the Japanese Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT) established rules for local-loop unbundling and co-location in order to encourage deployment of DSL. These rules made it much easier for new ADSL operators to interconnect with the local networks of the incumbent, NTT, and led to more vigorous competition. The entry of Yahoo!BB energised competition amongst ADSL providers and set a price benchmark. Providers' monthly charges rapidly fell to around JPY 3000 (US\$25), at the same time that quality of service rapidly increased from 1.5 to 8 to 12 to 26Mbps.⁸

Protecting competition

Economic regulation is an essential driver of competition and therefore investment. This recognition is shared around the world and is central to the ACCC's approach to regulation. The European Competitive Telecommunications Association (ECTA) notes that:⁹

Regulation will promote competition as well as efficient investment and innovation so long as:

- Returns on investment are sufficient for shareholders; and
- Regulation is clear and predictable (ie low risk).

It comments that even in the less challenging European environment, there is

..no rationale for [a] 'moratorium' on economic regulation.

ECTA points out that investment growth depends on *effective competition* [their emphasis].¹⁰ Its findings demonstrate a clear link between regulatory effectiveness and total telecommunications investment in a cross-country comparison of 10 European countries.

4. ULLS/LSS are bringing substantial improvements

The Government and the ACCC are following a plan to drive Australia to a world where the average bandwidth available to customers is higher, and the level of competition is higher, than today.

The core of that plan is to stimulate competition through the 'unbundling' of Telstra's copper local loop network – under which Telstra's competitors can use either the 'unbundled local loop service' (ULLS) or the 'line sharing service' (LSS).

The merit of unbundling is that competitors to Telstra build their own networks. The competitor uses only one element of Telstra's network — the 'dumb copper' from the Telstra exchange to the customer's premises. When the competitor does this, it can offer very different features and services to Telstra. For example, both iiNet and Optus are delivering DSL services of up to 20Mbps — much faster than Telstra's limit of 1.5Mbps.

⁸ "The impact of new technologies such as broadband and VOIP on telecommunication markets", Robert Shaw, ITU Internet Strategy & Policy Advisor, September, 2003: <http://www.itu.int/ITU-D/finance/>

⁹ ECTA (European Competitive Telecommunications Association), 'Promoting Investment through Competition', Goals for 2010

¹⁰ ECTA (European Competitive Telecommunications Association), 'Promoting Investment through Competition', Goals for 2010

ULLS/LLS based competition is still in its early days. iiNet has over 100 000 customers that it serves using LSS, and combined with PowerTel has 262 exchanges in service today. TransACT has also offered ULLS-based services for over two years, experiencing strong customer take-up. Optus commenced ULLS-based services for consumer customers in December 2005, and already has over 10 000 customers (which are served using ULLS), a number that it expects to grow rapidly over the next three years. It has also committed to build its own ULLS equipment in 340 Telstra exchanges.¹¹ Primus has plans underway to build 200 DSLAMs in Telstra exchanges.

ULLS and LSS competition have been held back by lengthy regulatory skirmishes over the price that competitors must pay for the two services. However, Telstra's delay game on these issues is nearing its end. Telstra has lodged four successive undertakings with the ACCC on ULLS since the year 2000, for example. But the price setting principles are now much clearer following a recent decision on LSS pricing by the appeal body, the Australian Competition Tribunal. Within a few months, major competitors to Telstra such as Optus, iiNet, PowerTel and Primus expect to receive the price certainty they need to expand with confidence.

Over the next three years, unless the ACCC and Government change the rules on LSS and ULLS, the use of these services are likely to grow strongly — and in turn cause a step change improvement in the Australian broadband market. We can expect:

- strong growth in the number of customers taking broadband;
- continued improvements in pricing driven by competition; and
- steady improvements in the average bandwidth provided to customers, as more and more companies deliver speeds well in advance of Telstra's current limit of 1.5Mbps.

These gains will be substantial and tangible. If the benefits of an FTTN network are to exceed its costs, it will have to do even better.

5. Problems with Telstra's Proposal

There are four fundamental problems with Telstra's proposal:

- By reaching only 4 million homes and businesses, it would create a two tier Australia, with less than half the country able to receive high speed broadband, and the remainder stuck with low speed broadband.
- It would establish Telstra as the monopoly provider of FTTN — because there is no way for competitors to use 'unbundled' elements of the FTTN.
- It would seriously damage ULLS-based broadband competition — indeed this appears to be a significant motivation for FTTN.
- It would enhance Telstra's capacity to sabotage its competitors.

¹¹ *Optus steps up competition with broadband network*, Optus media release 30 March 2006

It would create a two-tier Australia

Telstra is proposing to invest \$3.1 billion to build its FTTN network to potentially serve four million customers in the five major capital cities.¹²

According to Telstra, it has approximately 8.6 million customer premises nationally.¹³ Hence, Telstra's proposal would serve less than half of all Australians. It would exclude all rural areas. It would exclude all regional centres including fifteen cities with a population of over 50,000 — Albury Wodonga, Ballarat, Bendigo, Cairns, Canberra,¹⁴ Darwin, Geelong, Gold Coast, Hobart, Launceston, Newcastle, Rockhampton, Toowoomba, Townsville and Wollongong.

Telstra also appears to claim that the FTTN network will serve 100% of customers in the five largest cities.¹⁵ However, data from the Australian Bureau of Statistics (ABS) indicate that over 60 per cent of Australia's population is in the five major cities.¹⁶ Making the reasonable assumption that service addresses have the same distribution as population, if there are 8.6 million service addresses nationally, there should be approximately 5.2 million service addresses in the five largest capital cities.¹⁷ Put another way, it appears that many people who are defined by the ABS to live in the five major cities will not, in fact, be served by the new FTTN network.

Telstra is proposing to include the most lucrative and easy to serve, densely populated areas in the FTTN network. That is, it is 'cherry picking' the most attractive markets. Once it is established in these lucrative markets, the prospect of competitors establishing themselves in other markets that are less population dense is extremely low. In turn, Telstra will feel under no pressure to extend its FTTN network throughout the rest of Australia.

This will create a two-tier Australia. A minority of Australians will enjoy high bandwidth services. The majority will receive only lower speed, lower quality services. Given the importance of broadband as an economic enabler, Australians in the communities unserved by FTTN will likely see a steady decline in the relative standing of their local economies.

¹² There has been some confusion around the amount that Telstra is proposing to spend. The figure of \$3.1 billion comes from Telstra's "National Broadband Plan", 11 August 2005, attached to ASX release 9 September 2005. This plan spoke of the delivery of 6Mb/s in the FTTN network. Telstra's Technology Briefing of 16 November spoke of a network that could deliver 12 Mb/s, but did not give any updated cost figures. Subsequent media reports (e.g. in the Australian, June 11, 2006) have said that Telstra's FTTN network will cost \$3.4 billion, but this figure may be confused with the amount that Telstra will pay Alcatel to upgrade its networks generally (not just FTTN). Other media reports (e.g. Herald Sun, 23 May 2006) have the cost of the FTTN network at \$3 billion.

¹³ Telstra, The Digital Compact & National Broadband Plan, Canberra, 11 August 2005, slide 9 of pack entitled 'National Broadband Plan: Equitable Access to High Speed Internet for Families and Businesses Across Australia'. This presentation was released to the stock exchange on 9 September. It states that there are 8.6 million 'premises' nationally, of which 6.8 million are urban. We believe that 'premises' means the same thing as 'service addresses.'

¹⁴ While Canberra will not be included in Telstra's proposed FTTN network, Canberra enjoys high bandwidth services provided by the TransACT fibre rich network.

¹⁵ Telstra ASX Release, 16 November 2005, 'Telstra Technology Briefing', Page 7, slide headed 'Delivering at Least 12 Mbps'

¹⁶ ABS 1301.0, Year Book Australia, 2006

¹⁷ This conclusion is supported by another piece of data. Telstra stated in its 16 November briefing that the five capital cities have 5.4 million PSTN and ISDN lines. (Slide 15, headed 'Today's Fixed Voice Network.') But Telstra's 2005 annual report states that Telstra has 10.12 million PSTN lines (page 78) and 1.3 million ISDN lines (page 88), for a total of 11.4 million — meaning that the replaced lines will represent around 47.4% of all lines nationally. Again this is significantly lower than the population share of the five largest cities.

It would establish Telstra as the monopoly provider of FTTN

FTTN is an ideal technology for an incumbent with anti-competitive ambitions. Firstly, unlike the existing copper network, it cannot be unbundled. This means that if Telstra is able to build the FTTN network on the terms it proposes, it will be protected against competitive entry. Telstra will be the monopoly supplier — allowing it to keep prices high and capture monopoly rents.

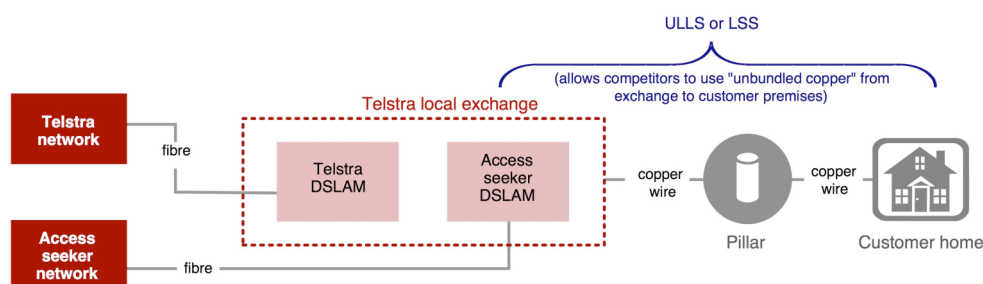
Secondly, this means that the only competition will be from resellers — but with the speed, grade of service and other features all determined by Telstra, it will be impossible for resellers to differentiate or to offer truly effective competition.

The importance of unbundling

In its current architecture, Telstra's network can be 'unbundled.' That is, a competitor is able to purchase a single element from Telstra — the copper line linking the exchange to the customer's premises. The competitor can purchase this without having to purchase the remaining elements of the 'bundle', which are required to provide an end-to-end service to the customer. Instead, the competitor puts the unbundled element (the copper line from the exchange to the home) together with the other elements which it provides itself — the electronic equipment that the competitor installs in the exchange (the DSL Access Multiplexer or 'DSLAM'); the fibre running from the exchange back into the competitor's network; and the core of the network including switching equipment. The manner in which the ULLS is provided to Telstra's competitors is illustrated in Figure 3.

Figure 3

THE CURRENT CONSTRUCT



The reason that competition regulators around the world have mandated unbundling is that they want to facilitate competitive entry into telecommunications. An incumbent's telecommunications network is a massive enterprise, built up over many years. Telstra has an access network with over 10 million lines. If other carriers were required to duplicate the whole of Telstra's network before they could offer a service, then Telstra would be protected by a massive barrier to entry — in turn allowing it to keep its prices high. That is why the Government and ACCC require that Telstra must rent the unbundled copper line to competitors. That allows a competitor to combine that line with the elements that it has built (using its own funds) — in turn allowing it to compete with Telstra. This means more competition and therefore greater choice and better service offerings for customers.

As discussed at section 4 above, unbundling of the local loop is gathering pace in Australia. This holds the promise of real benefits for all Australians using telecommunications services – both voice telephony and broadband.

FTTN cannot be unbundled

FTTN cannot be ‘unbundled’. There are both technical and economic reasons why not.

The first technical reason is that the ‘node’ — the cabinet which sits in the street and serves about 200 homes — is too small for competitors to install their own electronic equipment. By contrast, under today’s network structure, the competitor is able to install its equipment in the exchange, which has plenty of room.

The second technical reason is that it would be pointless for competitors to build their own nodes next to Telstra’s nodes – as there will be no way for the competitor to interconnect with the copper wires which will run from the node to customers’ homes. We expect that Telstra will build each of its 20,000 nodes next to a pillar – the existing device in the street from which the copper wires running to around 200 homes fan out.¹⁸ Today the pillar is connected to another set of copper wires running back to the exchange; tomorrow it will be connected directly to the node, which in turn will connect to a fibre running back to the exchange.

This means that, once the FTTN network is set up, all of the copper wires which come into the pillar from the 200 homes will now be, in turn, directly connected into the node. There will be no available, spare copper wires which could connect to a competitor’s node. (It is almost as if the pillar is like an extension powerboard with four sockets in it. When Telstra connects the pillar to the node, it is as if Telstra has plugged an extension cord into each of the four sockets; there will be no spare sockets for a competitor to plug its cord into).

The economic reason why an FTTN network cannot be unbundled is directly related to the small number of households served from a node — only around two hundred, as compared to the ten thousand or more served from an exchange. It is economically viable for a competitor to invest in putting its electronic equipment into a Telstra exchange. The competitor has a reasonable chance of securing enough customers — out of the ten thousand available — to cover the cost of installing the equipment. But when there are only two hundred customers available — the calculation changes dramatically.

Therefore Australia will revert to resale competition – which is much more inferior

With unbundling of an FTTN network not a viable option, what are the prospects for resale competition under an FTTN network? In short, they are poor. Australia has had considerable experience of resale competition in fixed line voice telephony. This experience shows that competitors operate on very low margins, so they are unable to put the incumbent under much price pressure.¹⁹

¹⁸ There are pillars sitting on most street corners in Australia. They are a ‘junction point’ between the Telstra exchange — serving around 10,000 homes — and the home. Each pillar serves around 200 homes. Copper comes in from one side of the pillar — the home side — and connects to a termination point. Copper comes in from the other side of the pillar — the exchange side — and connects to another termination point. Another short copper wire runs, inside the pillar, from the termination point on one side to the termination point on the other. This makes it easy to reconfigure services, by moving the short wires around.

¹⁹ Indeed, currently, Telstra sets the GST-inclusive wholesale price of line rental at \$30.36 – which is more than the retail price of line rental under its two most popular plans, Homeline Complete at \$26.95 and Homeline

Equally as important, resellers are unable to differentiate their product from Telstra's. Under an FTTN network, if competitors are reselling Telstra's product, they will have to accept Telstra's decisions regarding bandwidth, grade of service, and other key factors such as the contention ratio.²⁰ This is because all these decisions are made by configuring the node in one way or another — and Telstra will control the node.

It would seriously damage ULLS competition

As discussed, FTTN is an ideal technology for Telstra because of the market structure it produces. Once the FTTN network is in place, Telstra will have regained its monopoly. But it is an ideal technology for Telstra in another way — it will largely head off the competitive threat which Telstra faces from ULLS and LSS.

Again, this is so for a combination of technical and economic reasons.

Telstra has made it clear that, of the four million households who will be served by its FTTN network, around one third are within 1.5 kilometres of the exchange and hence can receive 12Mbps using existing DSL technology. These customers will continue to be served by that technology; and hence competitors will continue to be able to serve these customers using the existing ULLS and LSS. Therefore the discussion in this section concerns customers who are more than 1.5 kilometres from the exchange.

The technical problem is that, once Telstra converts services from a particular exchange to FTTN, it will be difficult for Telstra's competitors to continue to serve customers (who are more than 1.5 kilometres from an exchange from that exchange) with ULLS-based services.

The reason for this is because of interference or 'cross talk'. This will affect about two-thirds of access seekers' addressable market. Consider two homes which are next to each other. Assume they are three kilometres from the exchange. The first is served by Telstra's FTTN network; the second is served by a competitor using ULLS. The first home receives a service which runs over fibre from the exchange to the node; there, it transfers across to copper for the final part of the journey. The signal on the copper will thus have last been 'amplified' by the electronic device in the node, some 1.5 kilometres upstream. The second home, by contrast, will receive a signal which has travelled over copper all the way from the exchange; a signal which was last amplified 3 kilometres upstream.

The problem is that for the last 1.5 kilometres, the two signals will travel along two copper wires which are very close to each other (given that they are part of a large bundle which ultimately runs down one street). One will be carrying a more powerful signal than the other, having been amplified more recently, and this will cause interference with the signal on the second copper wire. This will render the quality of the second service unsatisfactory.

Plus at \$29.95. It is unsurprising that resale competition produces anaemic results when competitors face negative margins on line rental.

²⁰ This is the ratio of the sum of the maximum bandwidths promised to the 200 customers taking service from the node, to the aggregate bandwidth made available on the fibre, which comes into the node. Therefore, the less bandwidth Telstra reserves on the incoming fibre, the lower will be the quality of service experienced by the customer.

Now consider the economic problems. There are two. The first is the impact on the competitor's service once Telstra commences FTTN. The competitor will be in the same position as an airline offering propeller aircraft in the 1950s when a competitor introduced jets. If competitors are restricted to lower bandwidth services, and Telstra has a monopoly on high bandwidth services, there will be little competitive pressure on Telstra.

The second economic problem is the impact on ULLS competition even before FTTN commences. If competitors expect that Telstra will deploy an FTTN network, this will have a serious chilling effect on ULLS investment. The chilling effect will be compounded if there is insufficient clarity (as there presently is) about how much notice Telstra needs to give to competitors before converting an exchange to FTTN – even if competitors are using that exchange for ULLS-based services.

So even before it commences a FTTN-based service, FTTN is an ideal technology for Telstra. Unless the Government and ACCC act decisively, Telstra will succeed in chilling competition from ULLS.

Enhance Telstra's capacity to sabotage competitors

An incumbent monopolist has the ability to degrade the quality of service offered by its competitors who gain access to its infrastructure. This is a particular problem with resale, and one of the reasons why ULLS is attractive to competitors. However, even with ULLS, competitors are vulnerable to sabotage by the incumbent, which creates effective barriers to take-up of the service.

Because FTTN cannot be unbundled, and under Telstra's proposed network it will control the end-to-end service, the problem of potential sabotage will be profound. Given the degree of control that the FTTN model offers, the issue of who controls the network becomes fundamental, and it is desirable that this control be removed from the network owner.

6. What are Telstra's motives?

A fundamental question underlying the analysis of Telstra's FTTN proposal is: what are Telstra's motives? Why is Telstra doing this?

Damage the competitive process

Telstra has made no secret of its fears that ULLS-based competition presents a real competitive threat.²¹ Its response has been two-fold. First, it has sought unreasonable ULLS prices to create unattractive economics for ULLS-based competitors. Most recently, Telstra has submitted an undertaking which proposed a national average ULLS access price of \$30 per month, rather than a price which is cost-based and hence reflects its own geographic variations in costs. However, this anti-competitive strategy was rejected by the ACCC in its draft decision of 15 June 2006.

Telstra's second and more fundamental response is its strategy to disrupt and destroy competition through its proposed FTTN network rollout.

²¹ For example, see the comments by Telstra executives Phil Burgess, Kate McKenzie and Jon Stanhope at the Telstra Regulatory Briefing on 1 December 2005, downloadable from asx.com.au.

As discussed above, the *effect* of Telstra's proposal will be that Telstra re-monopolises broadband services in Australia. But, many commentators have reasoned that this may be Telstra's *purpose*, as well.

According to Morgan Stanley Equity Research:²²

If Telstra's latest ULL undertaking is accepted by the ACCC, and it convinces the Australian Government to grant it safe harbour on its fibre roll-out, Telstra will have effectively re-entrenched its fixed line monopoly position ... once it rolls out fibre ... that [will] leave a lot of stranded DSLAM investment from competitors ... FTTN deployment is one way to undermine the competitive DSLAM threat ... **Telstra is not satisfied with making life tougher for competitors, it appears to want to keep them out of the market altogether** [emphasis in the original]

Could it be that forcing its competitors out of the market is merely a fortunate (from Telstra's viewpoint) by-product of a network infrastructure strategy that makes good business sense on its own terms? Not according to equity analysts from Citigroup, who wrote:²³

...we struggle to identify the commercial benefits associated with investing in fibre networks other than for customer and revenue protection on Telstra's behalf ... The construction overseas of fibre networks has been driven by customer retention strategies (eg: Verizon) or through massive tax incentives (eg: Japan). We struggle to identify any offshore markets where the ROIC on this type of investment is accretive in any way.

We believe that a significant motive for Telstra's proposed FTTN rollout is to see off the competitive threat posed by ULLS-based competition, and to do so in a manner, and using a technology, which will allow it to re-establish a monopoly market structure for broadband in Australia. This, in turn, will mean higher prices and lower take up for broadband – an outcome that is in conflict with Australia's national interest.

A significant indicator of Telstra's intentions is the scope of its FTTN network. It has nominated 450 exchanges in Australia's five largest cities. These are the exchanges where Telstra would expect competitors to be most likely to roll out their own ULLS-based networks. In tailoring its network rollout in this fashion, Telstra is replicating the strategy it used in the mid-nineties to head off the threat from Optus building a cable network. At that time, Telstra responded with the 'telephony defence strategy' — justifying its deployment of a new cable network that duplicated the Optus network on the basis of protecting its existing revenues from erosion.

Avoidance of proper consultation and scrutiny

The process Telstra has followed in disclosing its FTTN plans has been quite unsatisfactory. The details given at the announcement in November 2005 were scanty. Since that time, more detailed information has not been forthcoming, and there has been no consultation with the rest of the industry.

Telstra initially presented its proposal as a 'take it or leave it' proposition: unless Telstra received a legislated access holiday, the FTTN network would not proceed. Following a change of heart, Telstra commenced discussions with the ACCC in early 2006 – but no other parties have been involved.

²² Morgan Stanley Equity Research 2006, *Will Telstra Be Allowed to Re-entrench its Fixed-line Monopoly?*, January 24.

²³ Citigroup, *Telstra Corporation Ltd: Any takers for a 40 year payback on FTTN?* 15 May 2006, p2

Limited information has been forthcoming from the ACCC. The Australian Government's statements on the issue have principally concerned the linkage between the Telstra-ACCC discussions and the forthcoming Telstra float.

The contrast with the process followed by the UK regulator Ofcom is telling. In that country, a special purpose body named NGN UK has been established; its members include the incumbent British Telecom and several of its major competitors; and NGN UK is determining key network design issues.

The behind-closed-doors discussions between Telstra and the regulator do not just affect Telstra; they affect the entire telecommunications industry; and even more importantly, they affect all telecommunications users. The Government and the ACCC should reject Telstra's behind-closed-door overtures, and insist on a public and transparent process.

7. Ten important questions

Our analysis has identified serious policy issues with Telstra's FTTN proposal. In this final section of the working paper, we set out ten questions which highlight the issues presented by Telstra's proposal. Policy approval for Telstra's FTTN proposal will require satisfactory answers to these questions.

1. Will Telstra's network upgrade create a two tier Australia?

Hypothesis: Telstra has 8.6 million customer premises in Australia. Its FTTN network will reach 4 million. The remaining 4.6 million will be in the second tier for broadband.

2. Will Telstra's upgrade really serve all service addresses in Australia's five largest cities?

Hypothesis: ABS statistics indicate that over 60 per cent of Australia's population is in the five major cities. The 4 million service addresses that Telstra says the FTTN network will serve are only 47 per cent of the 8.6 million premises Telstra serve nationally – significantly less than the figure of over 60 per cent suggested by Australia's population distribution. This suggests that many people who are defined by the ABS to live in the five major cities will not, in fact, be served by the new FTTN network.

3. How did Telstra choose the location of the exchanges to be upgraded to FTTN?

Hypothesis: Telstra has over 5,000 exchanges nationally; it will upgrade 450 exchanges to FTTN. It has chosen to focus its upgrade on the areas where it expects to face competition from competitors using the unconditioned local loop service (ULLS). For example, Optus has announced plans to build an ULLS-based network to 340 exchanges nationally.

4. Will the parts of Australia that are outside Telstra's FTTN network ever be upgraded?

Hypothesis: Telstra knows that if it heads off competition in metropolitan areas, the remaining areas of Australia generally do not offer a sufficient opportunity to competitors to build their own high speed networks (with a few exceptions such as the TransACT network in Canberra). Hence the fully privatised Telstra will see little need to invest to extend the FTTN network to the remaining parts of Australia – it will have successfully followed a 'cherry picking' strategy in metropolitan Australia.

5. Where is the business case for FTTN? How much of the justification for the FTTN network comes from heading off ULLS-based competition?

Hypothesis: A clear attraction to Telstra of FTTN is that it heads off the threat from ULLS-based competitors – by destroying the network architecture upon which ULLS is based. A significant component of the return on investment comes from heading off the competitive threat and defending existing revenues.

6. If Telstra is the monopoly supplier of FTTN, will prices be higher and take up lower than if there is competitive provision?

Hypothesis: If Telstra is the monopoly supplier of FTTN, prices will be higher and take up lower than if there is a competitive model for FTTN. As Australia's experience with DSL shows — and as cross country studies of European regulation proves — the more market power an incumbent telco has, the higher it will set prices, and hence the poorer will be the take up of new services.

7. If Telstra builds a FTTN network why should it get a holiday from the normal regulatory requirement to provide access to its network?

Hypothesis: The FTTN network will be a bottleneck access network, and under the regulatory principles that apply to all network industries in Australia – gas, electricity, water, rail and ports as well as telecommunications – the owner of that network should be required to provide access to it. The detriment to Australian consumers if there is no access to the FTTN network will outweigh the benefit received from having a higher bandwidth network available to a limited section of the population.

8. What is the role for unconditioned local loop service (ULLS) under FTTN?

Hypothesis: Once an exchange is upgraded to FTTN, only one third of customers within the network footprint will still have an unbroken copper connection to the exchange; the remaining two thirds will not, and hence will be out of reach to ULLS-based competitors. This is a major attraction to Telstra of building an FTTN network.

9. Can FTTN be unbundled – and if not, does this mean a return to resale competition only?

Hypothesis: Unlike the existing copper network, the FTTN network cannot be unbundled. This means that Telstra will face only weak resale competition, rather than the more intense competition emerging and growing that is based on unbundled services over Telstra's copper. This is a key reason why Telstra wants to introduce FTTN.

10. Why has Telstra failed to consult with industry on its proposed network redesign?

Hypothesis: Telstra has no interest in working co-operatively with the rest of the industry to upgrade Australia's broadband infrastructure. Instead, it aims to use FTTN to stifle competition.