

# WHY FTTN IS THE ANSWER

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## Abstract

*The case for additional broadband capacity in Australia is compelling. Broadband allows and promotes the next order of magnitude change in the way we do business and live. It is no longer just about communications, if it ever was. FTTN is the only currently available working technology capable of delivering vastly greater capacity. Mobile can help with the last mile and in sparsely populated areas but cannot take the place of fibre in areas that require massively high throughput. FTTN will be seen in retrospect as the most fundamentally important piece of physical economic infrastructure built in Australia in the twenty-first century. We need a resolution of the policy, regulatory and business issues about FTTN yesterday. If the new government wants an agreement on building FTTN infrastructure before the next election, it will need to negotiate with Telstra.*

Broadband is the new motherhood. Hardly anyone disagrees that it's a Good Thing and we just have to have it. But an equally important debate is about the technology we use to achieve this technological nirvana. I intend to argue two propositions: Fibre to the Node (FTTN) is a solution that will work; and with the current political timetable, Telstra is the only organisation that can deliver it.

Let me declare that I have shares in Telstra. A pathetic number, but sufficient to justify having an opinion on FTTN. So I heartily endorse Telstra's strategy of staring down the current and previous governments on the issue of who should build, own and be allowed to use the FTTN network as the best and most appropriate commercially for the company.

The last time I looked, the single most important duty of a company director was to act in the best interests of the company. That is exactly what chief executive Sol Trujillo and the board are doing. Many argue convincingly that this strategy is not in the national interest, or in the interests of the best technology solution, and certainly not in the interests of competition.

What else should Telstra do? We shareholders are a vigilant lot. We expect capital growth in our share price, higher dividends (fully franked, thank you) and if that requires beating up the federal government, so much the better. Telstra already has to manage its business within the (appropriate) constraints of the ACCC, ASIC, the unions and shareholder expectations.

Judging from the tenor of the public debate, however, too many politicians, commentators and government officials don't appear to get the fact that Telstra is now a publicly listed company. It is not a government instrumentality.

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Telstra's competitors under the banner of the G9 (or Optus plus 8) are at best disingenuous and at worst — given their alleged commitment to competition — just looking for a well-disguised taxpayer handout. Their position is best likened to hyenas demanding a bigger piece of the carcass after the lions make the kill. Of course, all this would be different if Telstra were still a publicly owned instrumentality. It's not. Get over it.

A stated goal of this and previous governments is to establish an environment that promotes competition in telecommunication services. However, this goal ran directly counter to the need for the Howard government to maximise the sale price for Telstra when it was first sold off. Competition has an annoying side-effect of devaluing an asset. Telstra is using the current 'review' period to continue to promote the benefit of it alone rolling out a FTTN network which, by the way, will largely prevent third-party access. And for good measure it proposes to rip out the old copper network in case someone gets the bright idea that it could be maintained to provide perfectly adequate ADSL2+ services to a host of 'working families'.

Much of the heat in the debate centres about ACCC pricing policies, physical access for third-party equipment and what constitutes a reasonable return on capital. Telstra says 18 per cent is a reasonable return on investment. It argues that the takeup of broadband is a risky proposition. A premium is required if it is to invest in this infrastructure or it will invest in something else. My view is that this is unmitigated rubbish. The takeup rates of broadband services, including 3G mobile, have exceeded all projections. The case for additional broadband capacity in Australia is compelling.

The political context, however, is something else. Minister Stephen Conroy and the prime minister need a proposed solution within 12 months. This was one of their big-vision promises. It helped differentiate the Labor opposition from the 'tired backward-looking Howard regime'. We were promised an Australia where every child would have a computer at school and access to broadband speeds.

So far, so good. But one certainty is that if the new government wants an agreement on building FTTN infrastructure before the next election, then it will need to negotiate with Telstra — unless, of course, it is very courageous in the way Sir Humphrey Appleby used the word when describing potentially disastrous government policy options.

Some argue there are vital questions to be asked before all of this, questions as fundamental as: Why choose FTTN as the basis of our broadband future? Why not FTT Home, for example — or FTT Premises? These questions will probably receive little examination because of the battle that will ensue over the issue of who will build, own and operate the FTTN network as a given.

The answer to 'why FTTN?' is 'it's the economy, stupid!' Those of us who try to look into the future can usually agree on what has happened in the past. Demand for capacity has always outstripped supply. It will be ever so.

Sure 3G can do amazing things and 4G is like, totally sick. ADSL2++ is freaky fast to the deprived user but if you want to run a twenty-first century economy

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then you need fibre and a sophisticated switching infrastructure. And the closer you get to the end-user the better.

Note the key word here — economy. Not megabits per second or education revolution or even Web2.0. It is the economy (stupid). Want proof? Then consult the ABS. The latest figures on internet usage make for very interesting reading indeed. In summary, ‘blah blah massive increase in use of broadband blah blah’. As even the pathetic speeds of ADSL are rolled out across the country, the uptake is spectacular.

More importantly, the fundamental change in the nature of the use of the network is the best guide to what future revenues can be generated. Transformational is a go-to word for the McKinseys of the world.

Transformational is the word to describe what will occur over the next 20 years in our economy and society. Broadband allows and even promotes the next order of magnitude change in the way we do business and live. It’s no longer just about communications — if it ever was.

The key challenge for businesses in today’s global economy is how to keep up with developments like real-time decision support using massive data fusion, real-time scheduling, real-time data mining for customer interactions, just-in-time supply chain management with location-based services, and so on.

When you visit the ABS statistics and examine those industries that have not yet embraced information and communications technologies in a significant way, it is not difficult to imagine that the need for greater capacity will arrive on several fronts: new applications, new industries, established industries adopting greater use and finally those unknown unknowns which, if they are anything like Gen Y, will demand their own T2 connection.

At the core of all of these business imperatives is a reliable broadband infrastructure. Why FTTN? Well it works. Guess that distinguishes it from HFC. (Oops, don’t mention the Optus elephant under the carpet.)

What about mobile technology? It’s a wonderful thing. Can it help with the last mile? Absolutely. Can it help in sparsely populated areas. Absolutely. Can it take the place of fibre in areas that require massively high throughput? No. Think of a firefighter with a garden hose.

There is no doubt mobile applications and mobile devices will have an increased role in the economic transformation alluded to earlier. But just as applications have steadily demanded more memory and processing power, so there will be a matching requirement for greater capacity in the network which only fibre can deliver.

Paradoxically, the greater the use of mobile data, the greater the need for high-capacity fibre infrastructure to allow back-haul and prevent bottlenecks and service disruptions. The other inherent design problem with mobile networks is that the very nature of mobility requires architectures allowing for significant changes in traffic patterns.

There are plenty of issues to consider about how to roll out FTTN. Dynamic spectrum management will allow even greater throughput in the fibre infrastructure, but how this might work in an open access regime at the local loop is anyone’s

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guess. We should carefully consider whether we can build a sophisticated national network by the ‘integration of a series of regional economy based solutions’, as Simon Molloy argues in a recent article. Involving potential users in the initial design of the network might deliver economic benefits, although the integration challenges may just outweigh the benefits.

We need FTTN for its capacity and the economy. It works technically. It will be seen in retrospect as the most fundamentally important piece of physical economic infrastructure built in Australia in the twenty-first century. We need a resolution of the policy, regulatory and business issues that swirl about FTTN. And we need all this yesterday.

### References

Molloy, S. 2008, ‘Telstra an Obstacle on the Superhighway’, *Australian Financial Review*, 2 April, [http://afr.com/home/viewer.aspx?EDP://20080402000020493116&magsection=opinion&title=Telstra+an+obstacle+on+the+superhighway&source=/\\_xmlfeeds/opinion/feed.xml](http://afr.com/home/viewer.aspx?EDP://20080402000020493116&magsection=opinion&title=Telstra+an+obstacle+on+the+superhighway&source=/_xmlfeeds/opinion/feed.xml).

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