

NATIONAL BROADBAND DEPLOYMENT APPROACH: AUSTRALIA

Presentation to WIK Conference

*National Strategies for Ultrabroadband Infrastructure
Deployment: Experiences and Challenges*

Radisson Blu Hotel, Berlin

26-27 April 2010

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Acknowledgement and Disclaimer

- Any views expressed in this presentation are my own, and are not necessarily shared by the ACCC.
- I am grateful to Michael Cosgrave, Kris Funston and Cathryn McArthur for helpful contributions, but I am solely responsible for the contents.

The Task Set by WIK

- *This session focuses on strategic approaches regarding broadband deployment in the AustralAsian region. For each of the countries Japan, New Zealand and Australia the session aims at highlighting the major elements of the different national broadband strategies, the status quo of implementation, and the envisaged further steps to achieve the ultimate goals. Furthermore, the specific approaches regarding regulatory and competition policy issues, financing, and demand stimulation will be addressed. Against this backdrop, the session will also focus on the specific roles and functions of the State, in particular with regard to the deployment and operation of the broadband infrastructure.*

This Presentation

- Surveys previous Australian broadband policies ... and what they achieved.
- Describes the NBN concept and implementation.
- Considers the structural, regulatory and competition issues surrounding the NBN.
- Considers WTP for higher-speed and multi-media.

The Evolution of Broadband Policy in Australia Pre-NBN

Early Start ... but slow progress until 2005

- The local loop was unbundled in 1999.
- There has been some competition for DSL from HFC cable ... although Telstra owns one of the two cable networks. (HFC cable was deployed by both Telstra and Optus in the mid-1990s with some overlap in Sydney, Melbourne and Brisbane.)
- Telstra reduced retail DSL prices substantially in 2005 and penetration began to grow more rapidly.

Two Proposals to Build FTTN

- In 2005 Telstra proposed building a fibre network (to the node).
- This was subject to intense negotiation, but eventually broke down.
- This was followed in 2007 by another proposal from a consortium of non-Telstra carriers (FANOC or G9), but ultimately this bid was also unsuccessful.

Broadband Connect

- There was some targeted subsidy for wireline/wireless provision outside the main cities (especially *Broadband Connect*), awarded by the previous Coalition Government to an Optus-Elders consortium.
- This arrangement was cancelled by the new Labor Government in early 2008.

Initial Tender Process

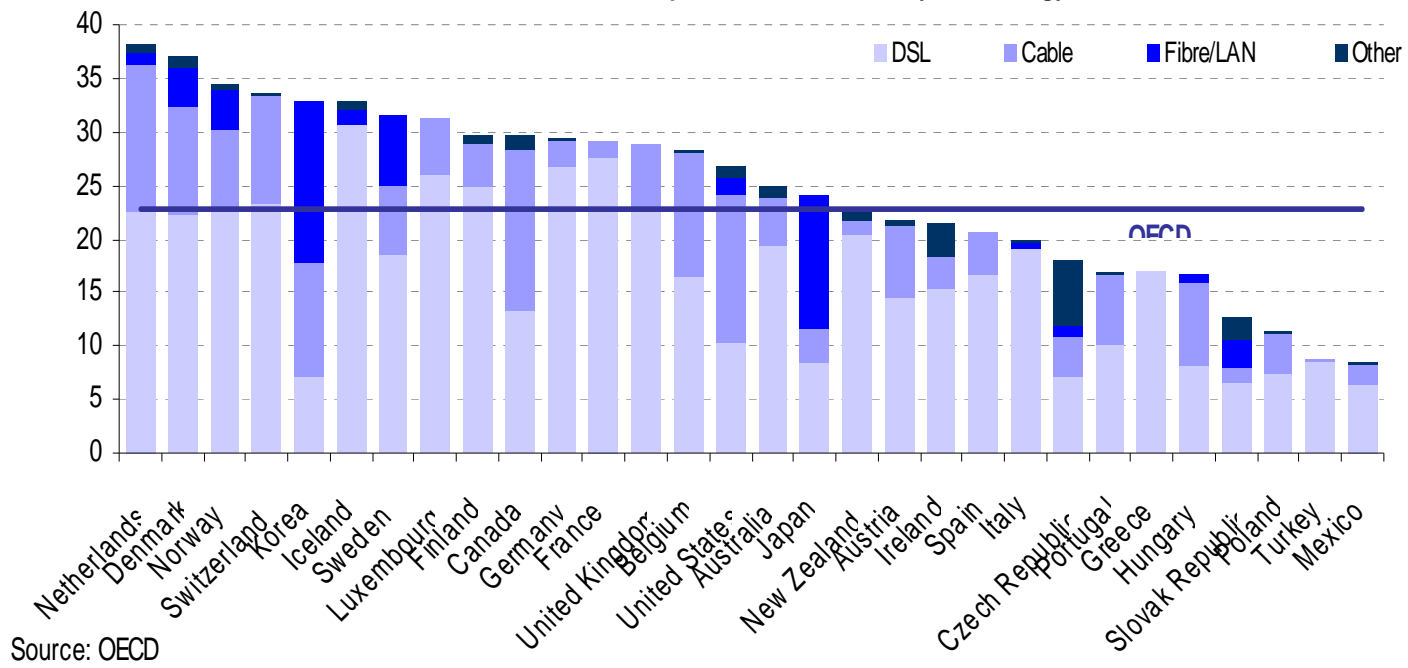
- The new government commenced a tender process in (April) 2008 to determine the provider of a fibre network (although ostensibly the process was technologically neutral).
- A Broadband Panel of Experts was established to guide the process.
- Telstra's bid was controversially excluded from the tender because it did not comply.
- In April 2009 the tender process was abandoned and the NBN proposal was made.

Australian Broadband Achievement Pre-NBN

- Throughout all this, broadband penetration and speeds in Australia increased (as they did across most OECD countries); especially after 2005.
- Several countries have exceeded 30 per cent population penetration* – the Netherlands (38%), Scandinavian countries, Korea and Canada lead in penetration.
- Australia's penetration level has risen relatively and is now (at 25 per cent)* about two percentage points above the OECD average ... but a fair distance below the leaders.

* OECD definition – excludes mobile broadband

OECD Broadband subscribers per 100 inhabitants, by technology, June 2009



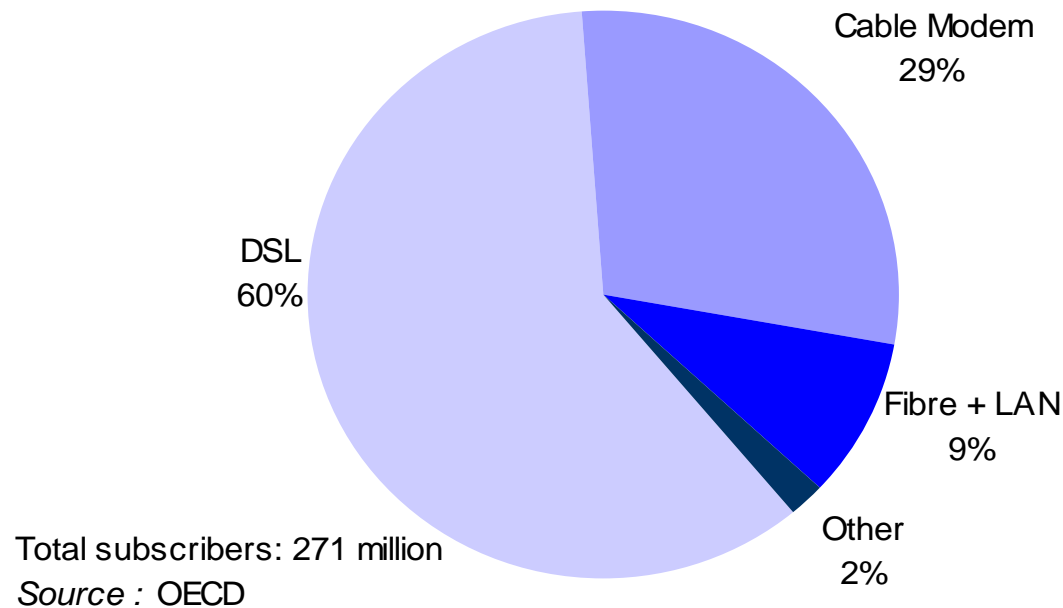
Existing and Emerging Technologies

- DSL is still dominant at 60 per cent of all subscriptions, but is not dominant in North America (where HFC has a larger share), but even more dominant in Europe (average 80 per cent DSL) and Australasia.*
- Fibre, LAN and 'other' account for only about 11 per cent.*
- The OECD data are the best available on a comprehensive basis, but there are sins of omission (mobile broadband like HSDPA) and of commission (includes things that are not very fast).

* OECD definition – excludes mobile broadband

OECD Broadband Technologies

OECD Broadband subscriptions, by technology, June 2009



The April 2009 NBN Proposal ... and the year since

The April 2009 Announcement

- After years of policy perturbation, a year ago the Australian Government announced a supply-side initiative, known as the *National Broadband Network* (NBN).
- The Government described its NBN as:
an historic nation-building investment ... the single largest nation building infrastructure project in Australian history
- It would cost up to \$43 billion (about \$36 billion US) over eight years.

NBN Co*

- The Government established NBN Co
 - to build and operate the network, providing 90 per cent 'fibre to the premises' coverage delivering speeds of 100 megabits per second with remaining coverage through state of the art wireless and satellite technologies, offering speeds of up to 12 megabits per second or more, to people living in more remote parts of rural Australia.*
- It was announced that NBN Co would be a wholesale-only provider, allowing regulated open access to service providers.
- Physical activity in the first year includes building the fibre network in Tasmania, deployment in five national test sites, filling in six gaps in the backbone transmission network and network planning.

* Search 'NBN Co Limited' for comprehensive information from its website.

The Implementation Study

- The Government commissioned an Implementation Study to determine operating arrangements, network design, ways of attracting private involvement, etc.
- This was performed by McKinsey and KPMG, at a cost of \$25 million.
- It was received by Government on 5 March 2010 but has not been released yet – the Minister says it will be released before the 11 May budget.
- Of course, its contents are subject to intense speculation.

Cost Considerations

- Some say \$43 billion does not have a rigorous basis.
- In considering cost there is a difference between the **cost to the economy** and the **costs to the parties**.
- The cost to the economy will depend largely on how much infrastructure sharing with Telstra (or with utilities) takes place.
- Will the new network 'duplicate' the existing one ('greenfields' or stand-alone) ... or will it supplement it? [considered soon]

Government *versus* Private-sector Involvement

- While the Government anticipates private-sector involvement, at present NBN Co is effectively a government business enterprise – at this stage NBN Co does not have a private-sector partner.
- The Government has said it will privatise its share no later than five years after it is fully operational (2009 + 8 + 5 = 2022).

The Proposed Legislation* – Structure

- The Government is seeking to move the industry to a structurally separated basis.
- It has placed pressure on the vertically integrated Telstra to separate ('voluntarily') its network and service elements.
 - 'the reforms address the structure of the telecommunications market and provide Telstra with the flexibility to choose its future path' with the 'Government's clear desire for Telstra to structurally separate, on a voluntary and cooperative basis'.*
- The Government has said it will preclude Telstra from spectrum allocation and exercise other Ministerial powers if Telstra does not separate voluntarily.

*legislation and EM available on DBCDE website: dbcde.gov.au.

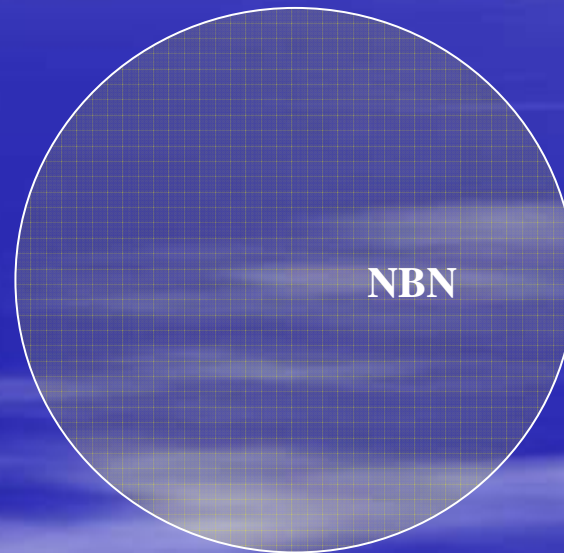
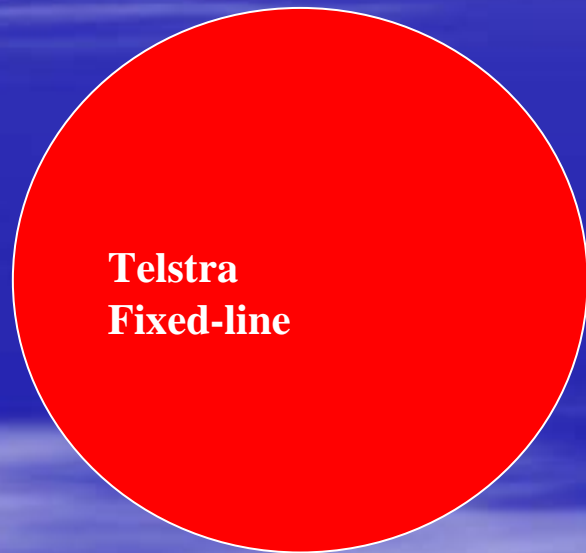
Proposed Access Arrangements

- The Government is also proposing changes to the access regime.
- In particular, the legislation would eliminate:
 - the negotiate-arbitrate approach that has operated since 1997
 - ordinary access undertakings
- Access terms would be determined in advance, based on specified principles.
- However, this legislation will not be considered by the Senate before 11 May.
- In the meantime, NBN Co is talking to the ACCC about lodging a special access undertaking.

Costs: Sharing Common Infrastructure

- Sharing common infrastructure is a feature of telecommunications, even between rivals – it is difficult to find even one example in major OECD countries of where a telecommunications network of any kind completely stands alone.
- In this case, the more the NBN can share with Telstra's fixed-line network, the lower the cost to the economy.
- Consider the following schematic:

Stand-alone ... or sharing common infrastructure?



Potential Cost Savings

- The amount NBN Co is broadly reported to have offered Telstra is \$8 billion.
- Telstra is reported to be asking upwards of \$12 billion (possibly much more) to cooperate.
- On the other hand, the Minister has said that the viability of NBN Co is not conditional on Telstra's cooperation.
- This is also said to be the view of the Implementation Study.
- At the time of writing, Telstra and NBN Co have not been able to reach an agreement on cost sharing.

Demand: WTP and Stimulation

WTP for the Fibre Services

- The WTP for high data speeds and multi-media by Australian users is important for the financial viability of the NBN.
- However, WTP for faster data speeds and multi-media has not been widely tested.
- Australians are known as rapid adopters – for example, the historical transition from dial-up to DSL, HFC and wireless broadband was rapid in spite of higher prices.
- Perhaps the closest we are currently getting to a market test is Telstra's 'ADSL 2+' costing up to \$200 per month (including phone rental).

Pricing Possibilities

- Estimates of the subscriber monthly charge range substantially.
- Estimates that monthly retail prices ranging up to \$200 per month would be necessary to defray the \$43 billion cost have been described as ‘fanciful’ by the Communications Minister.
- NBN Co’s executive chair has said that it will ‘have to meet the market’ with a ‘slightly higher price on wholesale’ reflecting real value added.
- There will also be substantial in-premises costs – set-top box and cabling.

Transfer of Telstra's Customers

- To be economic, NBN Co will probably need to get a very high proportion of customers.
- To achieve this, Telstra might have to be induced to transfer its customer base over to the NBN.
- Recently released draft legislation leaves open the prospect that NBN Co may have some access to retail markets. If this was to occur, Telstra is saying it will need even greater compensation to transfer its customers.

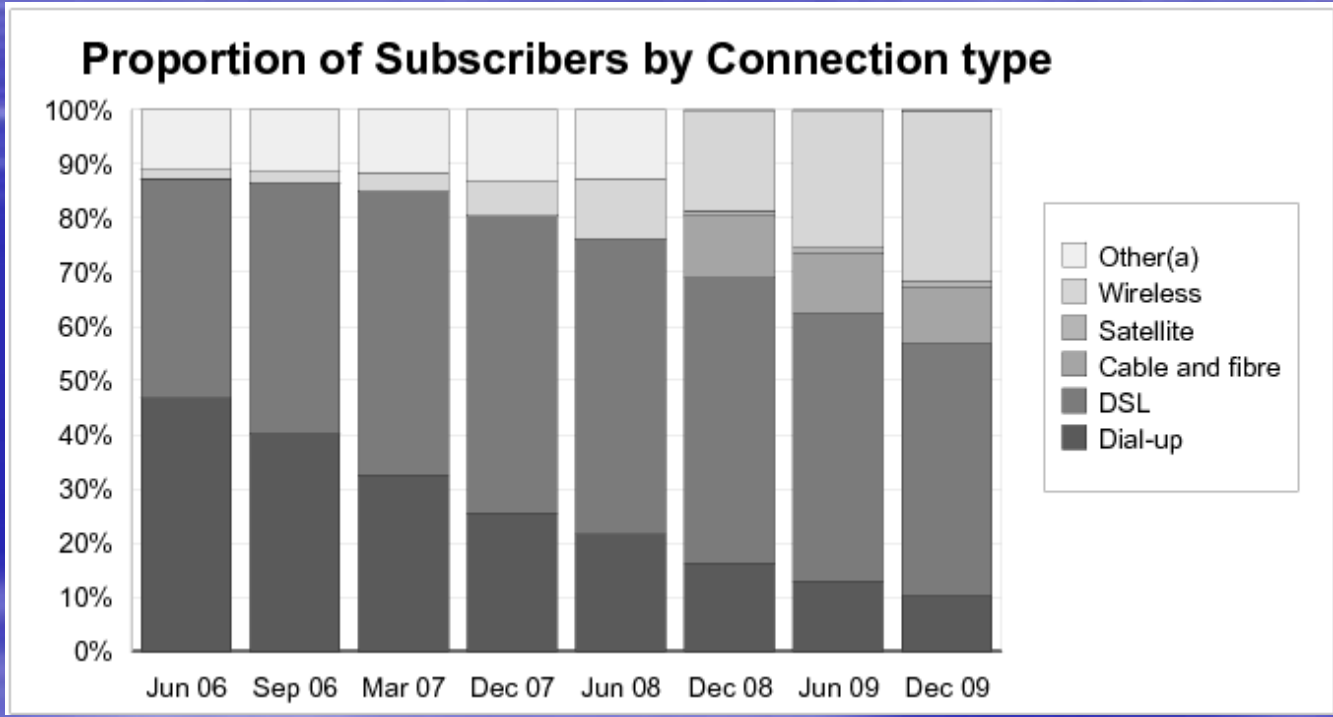
Conclusions

Well, more questions really!

- Deployment has commenced, legislation is making its way through the Parliament and various negotiations are taking place.

However, there is uncertainty about:

- the extent of private involvement
- the overall cost to the economy – depends on sharing possibilities (e.g., with Telstra?)
- whether NBN Co can go it alone
- what is the *need (WTP) for speed?*



Source: ABS Internet Activity Australia December 2009 Cat: 8153.0

OECD Position on Mobile Broadband

Why is mobile broadband not included in the OECD subscriber statistics?

Internet access via mobile networks has become an increasingly important way for people to access content and services. This growth in mobile broadband is an area which the OECD follows closely and OECD countries have expressed interest in measuring Internet access via mobile networks. There are significant methodological challenges to address before the OECD can publish a comparable mobile broadband indicator across countries. One of these is how to separate connections used for Internet access from standard 3G mobile subscriptions where subscribers have the capability to access the Internet but choose not to. The OECD is in discussions with member countries to develop a common methodology which will be comparable across countries. If there is agreement, a new mobile broadband indicator could be available in 2009.