

fibre to the everywhere: australia's new plan for broadband

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kevin rudd

- the single largest nation building infrastructure project in Australia's history...
- the most ambitious, far reaching and long term nation building infrastructure project ever undertaken by an Australian government...
 - Like the building of Snowy Hydro, like the building of the Sydney Harbour Bridge, this is an historic act of nation building.

enthusiasts

- big
- visionary, ambitious – ahead of the world
 - technically clean, leap-frogs an ‘intermediate’ step
- benefits in short- and especially long-term
 - breaking telecoms policy log-jam

very enthusiasts

- ISPs:
 - no FTTN: so continue making money from broadband delivered via ADSL over existing copper lines
 - government builds new FTTP network itself
 - don't have to build the new network themselves ...
 - but can decide whether to use it based on price and other conditions once set
 - Standing Up To Telstra
- media companies:
 - a new distribution platform paid for by government

overly enthusiasts

Stilgherrian in *Crikey*, after hearing the PM say
“The Australian government will move ahead to
establish a company in partnership with the
private sector which will build and operate a
fibre-to-the-home National Broadband
Network ... [splatter]”

*Sorry, I didn't catch the rest. Kevin Rudd was
drowned out by the sound of 10,000 pairs of
jeans being creamed at the thought of such
massive internet bandwidth.*

sceptics

... a huge gamble with more than a Whitlamite whiff of big government about it. If it goes wrong, it is unlikely anyone in the current Government will still be around to take the blame.

crikey.com.au, 7 April 2009

the plan

- goal and technology: 100 Mbits/sec to 90% via FTTP/FTTH, 12 Mbits/sec via wireless for rest
 - structure: public private partnership, govt provides at least 51% of capital
 - cost: \$43 billion – including \$250 million for regional backhaul ‘black-spots’
- time: 8 years... Tasmania and regional backhaul ASAP, 8-9 month Implementation Study
- end: sell down to private sector five years after complete and operating

origins

the other plans

- A: liberalize and privatize
 - B: plan A + targeted spending programs
- C: plans A + B + \$1 billion for wireless and fibre backhaul in the bush + co-ordinated investment in metro fibre
- D: \$4.7 billion for 12 Mbits/sec to 98% via FTTN public private partnership
- E: *The Plan*: 50% of \$43 billion public private partnership for 100 Mbits/sec to 90% via FTTP/FTTH and 12 Mbits/sec via wireless for the rest

what went wrong: version 1

- industry structure: Telstra 'far too big and dominant'
 - regulation: 'too weak to control Telstra'
- slow broadband take-up because 'Telstra kept prices sky high'
- sense of crisis about broadband performance created by Telstra
 - solution: tackle the problem of Telstra

Paul Fletcher, ex-Optus & Chief of Staff to Coalition Minister Richard Alston

Wired Brown Land, UNSW Press, 2009

what went wrong: version 2

- regulation: too extensive and too much ACCC discretion
- investment: Telstra reluctant because of regulatory imposts
- investment: Telstra's rivals 'clearly prefer to "cheap ride" on Telstra's network rather than upgrade, much less further deploy, networks of their own'
- solution: 'radically new approach' that is more modest about what regulation can achieve, provides a more certain and consistent environment for investors, and 'then allows market forces to do the heavy lifting'

*Henry Ergas, economic consultant to Telstra and other companies
Wrong Number, Allen and Unwin, 2008*

did anything go wrong?

australia's broadband backwater

- the oecd data
 - take-up: basic bband subs/100 inhabitants
 - speed: av advertised download speed
 - bitcaps: prevalence; cf. untimed local calls
 - price: av monthly price per advertised M/bit/sec
- future network development: the countries that are leading in fixed line broadband are the ones that are laying fibre access networks

how deep?

‘a disgrace ... real broadband, not the type they're talking about here - where you get, say, 20Mbits/second of data into your home, changes everything’

Rupert Murdoch, November 2006

how deep?

‘the phoney broadband crisis is gradually being fixed at least in built-up areas’

Australian Financial Review, April 2008

how being fixed? DSL

- 63% of broadband [>256 kbits/sec] subscribers; broadband subs = 84% of all internet subscribers [Dec 08]
 - xDSL enabled in more than half Telstra's exchanges, serving 98% of population
- ADSL2+ enabled in 1400 of 5000 exchanges including almost all metro exchanges
 - nearly half popn within 1.5 km of exchange, capable of >12 Mbits/sec, up to 24 Mbits/sec
- lots of ULL/LSS DSL competition in a few places

how not being fixed? cable

- 2 overlapping HFC networks
 - Telstra, 2.5 million homes: Brisbane, Gold Coast, Sydney, Melbourne, Adelaide, Perth
 - Singtel/Optus, 1.4 million homes [of 2.2 million passed]: Brisbane, Gold Coast, Sydney, Melbourne
- <14% of broadband subscribers [Dec 08]
 - pay TV: late start and concentrated industry structure

how not being fixed? fibre

- small greenfields FTTH deployments:
Telstra 'Velocity', Internode
 - Canberra: TransACT FTTN
- National Broadband Plan: delays ... now over?

how being fixed? 3G mobile

- mobile wireless broadband subscribers rose to nearly a fifth of all broadband subscribers at the end of 2008
- ‘game-changing’ devices: smartphones
 - infrastructure competition:
 - Telstra NextG
 - Optus
 - Merger of Vodafone and Hutchison/3

who benefits?

‘a cynical bribe to the powerful media proprietors and to country voters, and a come-on to punters who want to download their porn faster, disguised as a far-sighted, imaginative initiative to make us internationally competitive in the productivity-oozing new world of e-everything’

Ross Gittins, *Sydney Morning Herald and The Age*

the 100 mbits/sec household

- mum: videoconference for the business she runs from home [18 Mbits/sec upstream and downstream = 36 Mbits/sec]
 - dad: high definition footy [15 Mbits/sec]
- daughter: video lecture streamed from university [15 Mbits/sec]
 - son: interactive game [at least 80 kbits/sec?]
 - grandparents
 - downloading a movie [15 Mbits/sec]
 - connected to an uninterruptible medical video feed to a remote monitoring facility [15 Mbits/sec]
- background, home appliances monitored, home security cameras sending video feeds to emergency operations centre [10 Mbits/sec].

Stephen Ezell et al, *The Need for Speed: The Importance of Next-Generation Broadband Networks*, Information Technology and Innovation Foundation, Washington DC, March 2009

‘transformative functionalities’

- faster transferring of files
- better quality streaming video, making the internet a much more visual medium
- true real-time collaboration using high-bandwidth tools
 - simultaneous use of applications

types of benefits

- productivity
 - innovation
- new products
- quality of life
- the environment

Overall, the empirical evidence to date on the productivity impacts of broadband is scant. This is mainly the result of measurement problems, time lags between implementation and impacts, and the difficulty to disentangle the effect of broadband from that of information and communications technologies in general. Furthermore ... although broadband appears to have a positive measurable economic impact, to date it remains difficult to draw precise conclusions due to the lack of firm-level (and employee-level), geographically disaggregated, time-series panel data.

OECD, *Broadband and the Economy*, 2007

who pays?

paying for the plans

- A: liberalize and privatize
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powerplay

... think of this package as something a bit like the batting powerplay that's been introduced to one day cricket - a short burst of intense and purposeful policy aggression to keep our eventual target within reach.

This economic powerplay has been carefully designed to help us achieve our long-term goals in education, skills, housing, infrastructure modernisation, sustainability and business competitiveness.

It does not represent a sideward step nor a barrier in the path towards our longer term plans.

Wayne Swan, 'Turning Crisis into Opportunity', Address to Business Council of Australia, Melbourne, 4 Feb 2009

barack obama: the agenda, technology

‘Let us be the generation that reshapes our economy to compete in the digital age. ... let’s lay down broadband lines through the heart of inner cities and rural towns all across America.’

Springfield, IL, 10 Feb 2007

Deploy Next-Generation Broadband: Work towards true broadband in every community in America through a combination of reform of the Universal Service Fund, better use of the nation's wireless spectrum, promotion of next-generation facilities, technologies and applications, and new tax and loan incentives. America should lead the world in broadband penetration and Internet access.

<http://www.whitehouse.gov/agenda/technology/>

what would keynes do?

Citing Keynes gives us special licence to talk economics without using any. To paraphrase the lawyers' dictum, when the facts are on our side, we pound the facts; when theory is on our side, we pound theory; and when neither the facts nor theory are on our side, we pound Keynes – and to great effect.

Benn Steil, Director International Economics, Council on Foreign Relations, *Financial Times*, 6 Feb 2009

the 'aspirational NBN': what we are really paying for

- a goal: FTTP
 - rejection of a different goal: FTTN
 - a start: Tasmania, regional backhaul
- a stimulus for structural change [Telstra] and regulatory change [access terms negotiated and set out in contract]
 - 8-9 months further thinking

the future

kevin rudd

What the Government is demonstrating today is our confidence in our nation's future...

Given the productivity gains associated with this investment, the full benefits will continue to flow for decades beyond the project's completion...

Going beyond fibre optic to the node to fibre optic to the premises is the right way to go.

It puts us in the slot when it comes to being competitive with the world economy, the 21st century.

Over to you, folks.

the last network

‘the end game’

‘the final destination’

‘completely future-proof’



Source: Royal Australian Mint

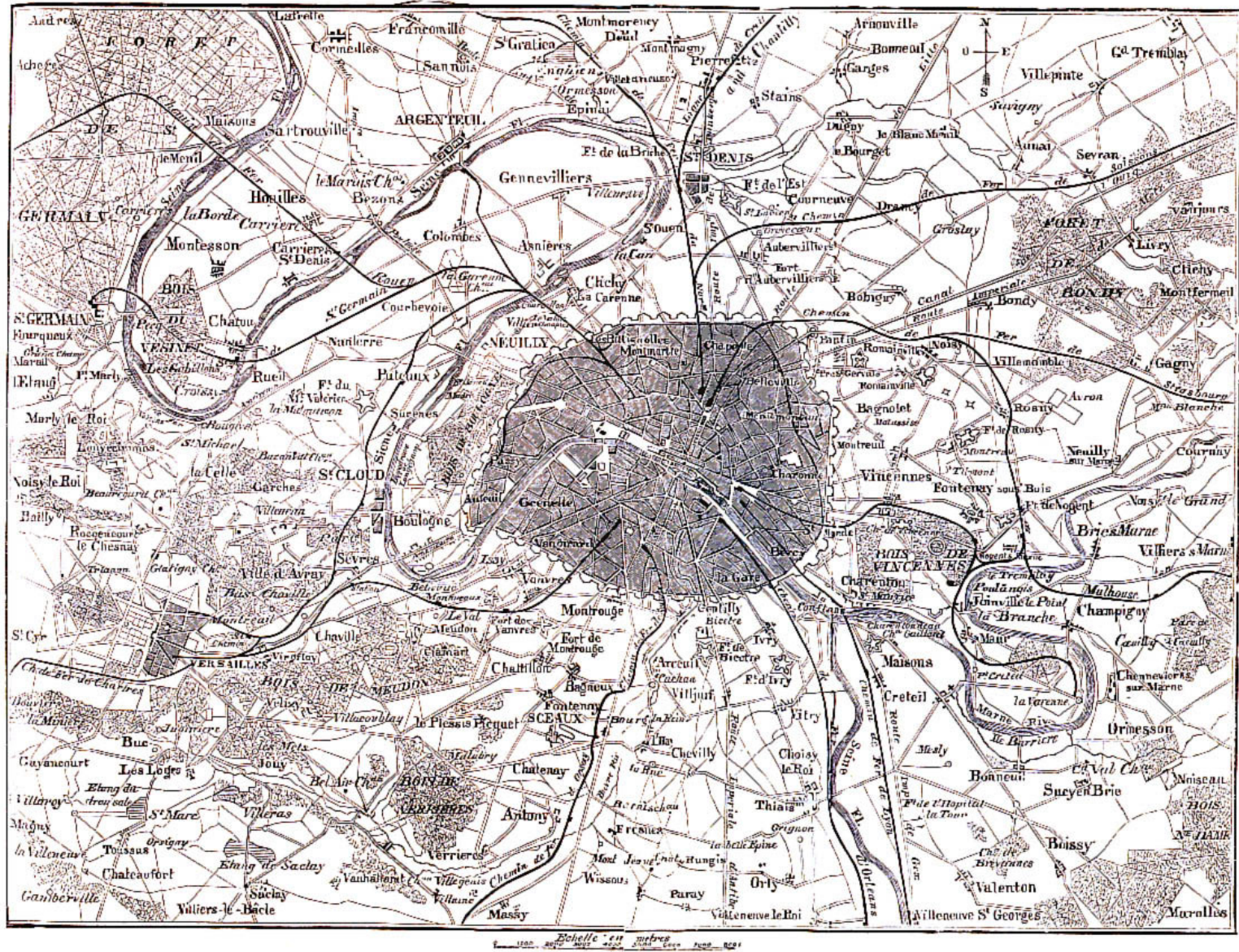


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ENVIRONS OF PARIS



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