CEDA
COMMITTEE FOR ECONOMIC DEVELOPMENT OF AUSTRALIA

Broadband Australia – Why and How

SPEAKER

David Havyatt
General Manager, Public and Regulatory Affairs
AAPT Limited

CHAIR

Tony Tobin
Consultant
Gilbert + Tobin

Broadbanding Australia: Why and How?

David Havyatt

CEDA Boardroom Briefing

15 May 2007

STRAIGHT UP > GENUINE > SMART > ENERGETIC > IRREVERENT

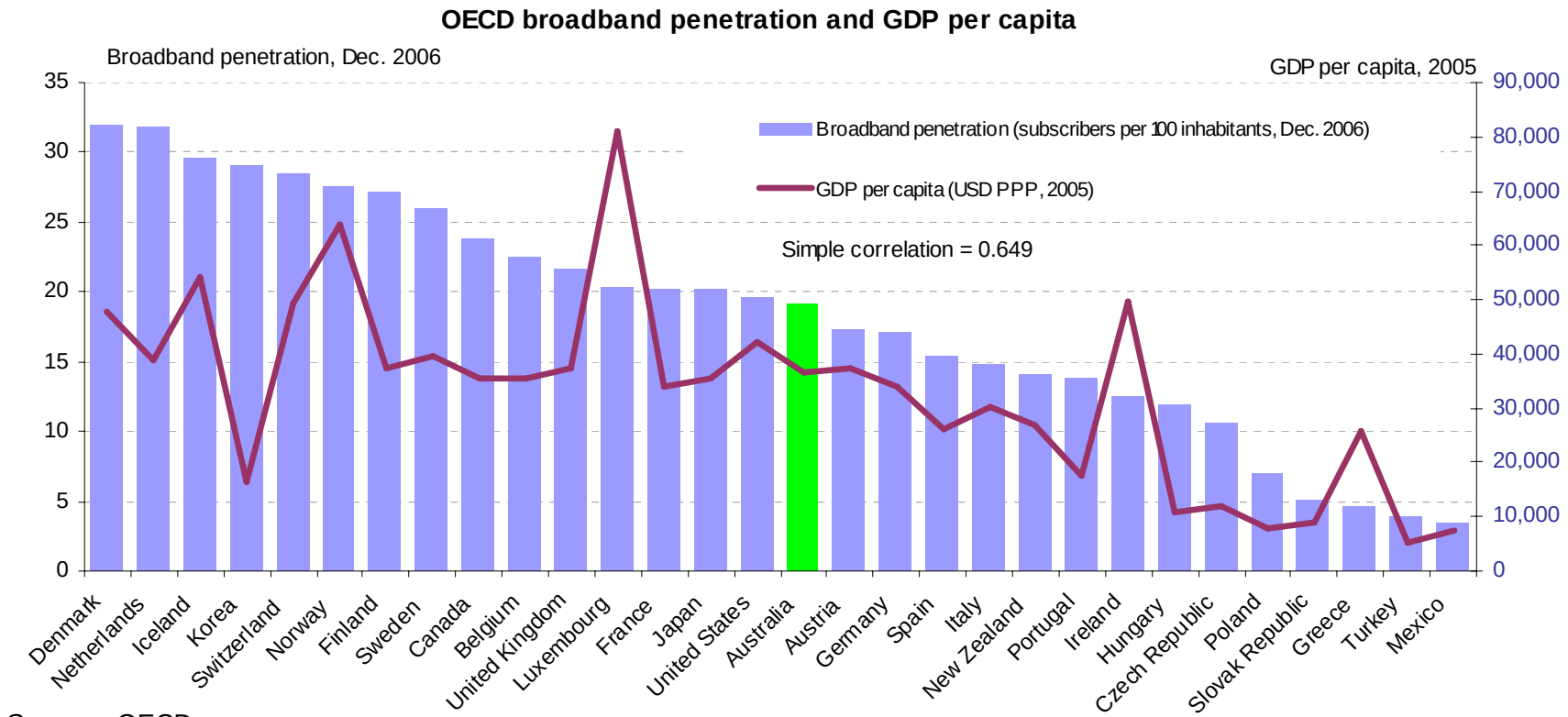
Outline

- Why?
  - Defining broadband
  - International comparisons
  - Claimed benefits
- How?
  - Current delivery
  - Telstra's Fibre to the Node (FTTN) proposal
  - Alternative proposals
  - Policy issues and policy solutions

Defining broadband

- The minimum Broadband speed defined by the ABS is a connection that can access the Internet equal to, or greater than 256 kbps.
- Broadband connections included in OECD data must have download speeds equal to or faster than 256 kbit/s.
- “High speed broadband” or “True broadband” are speeds over 2 Mbit/s and typically in the range of 10 Meg to 100 Meg
- These definitions are typically in relation to how fast I can access information from the internet, not how fast I can send information to it.

International Comparisons

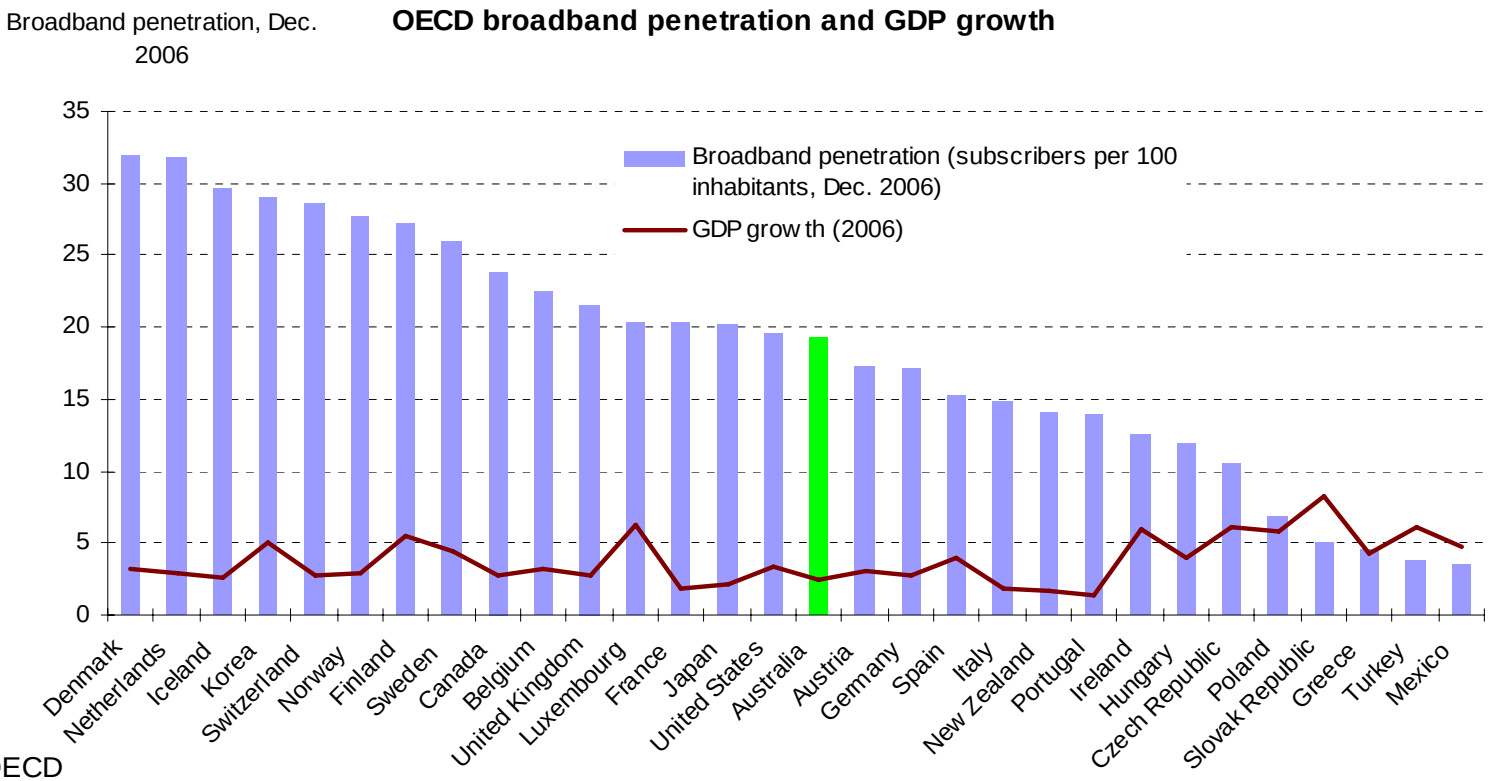


Source : OECD

Australia is 16th in the OECD league table

AAPT
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

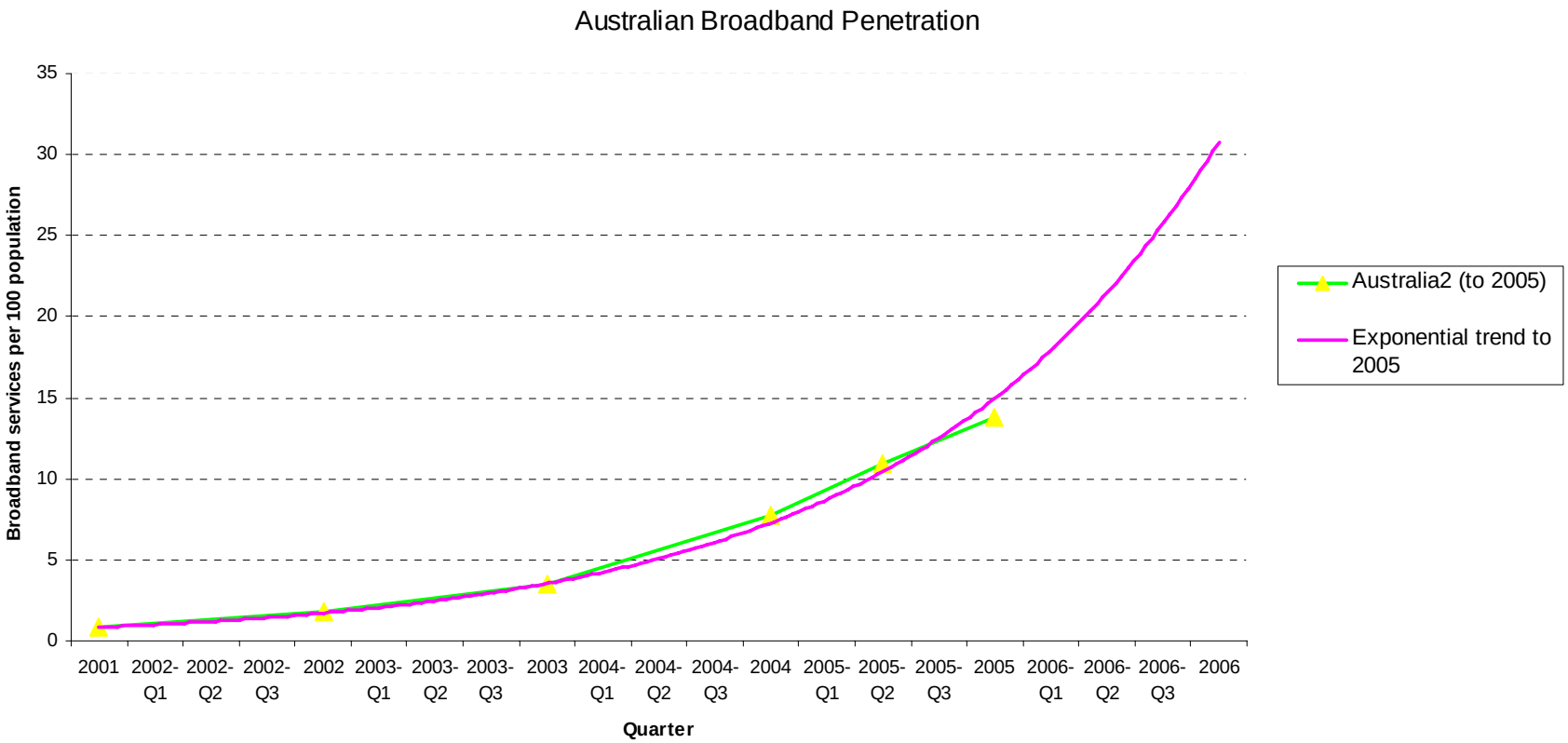
There is no correlation to growth



Source : OECD

AAPT
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

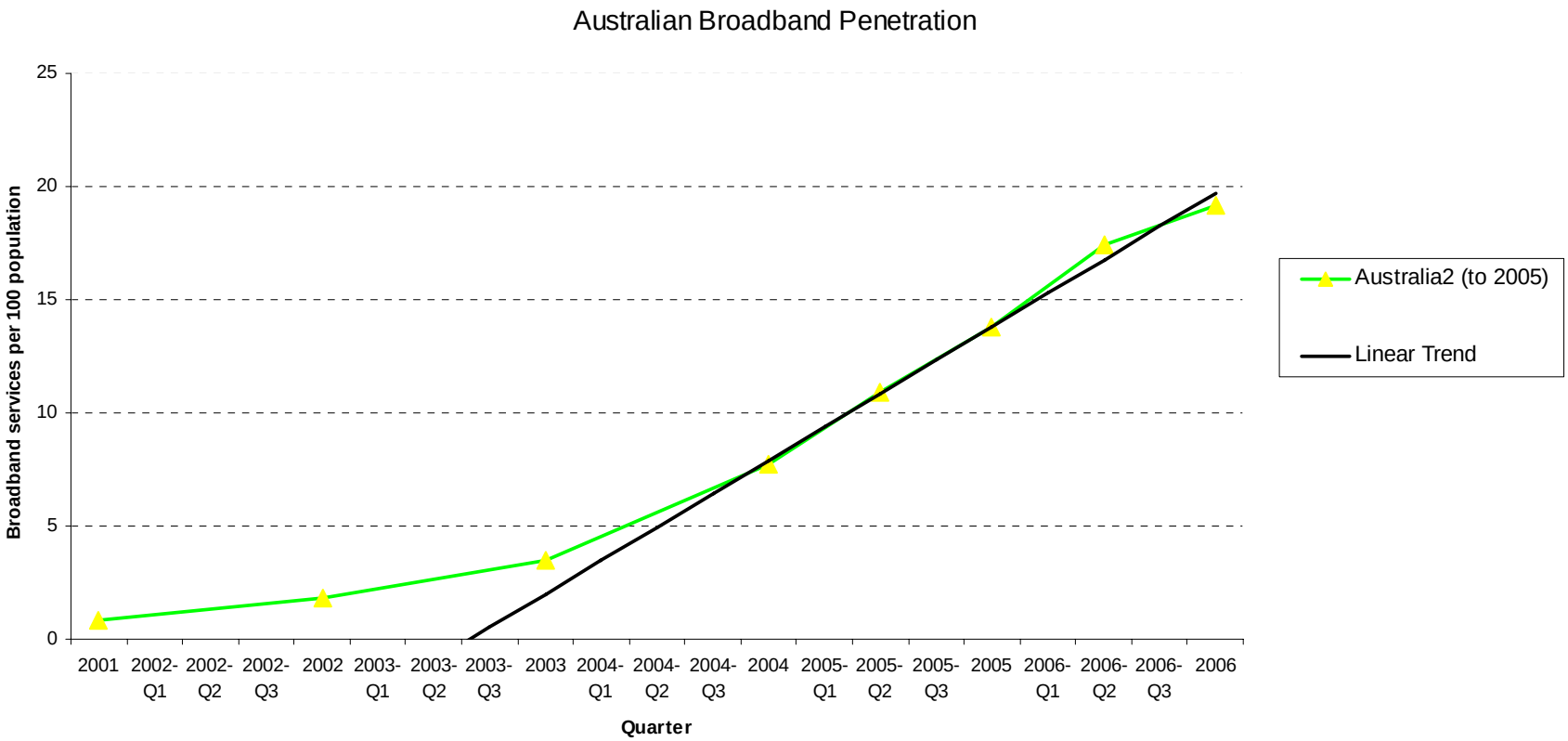
Broadband take up in Australia



AAPT

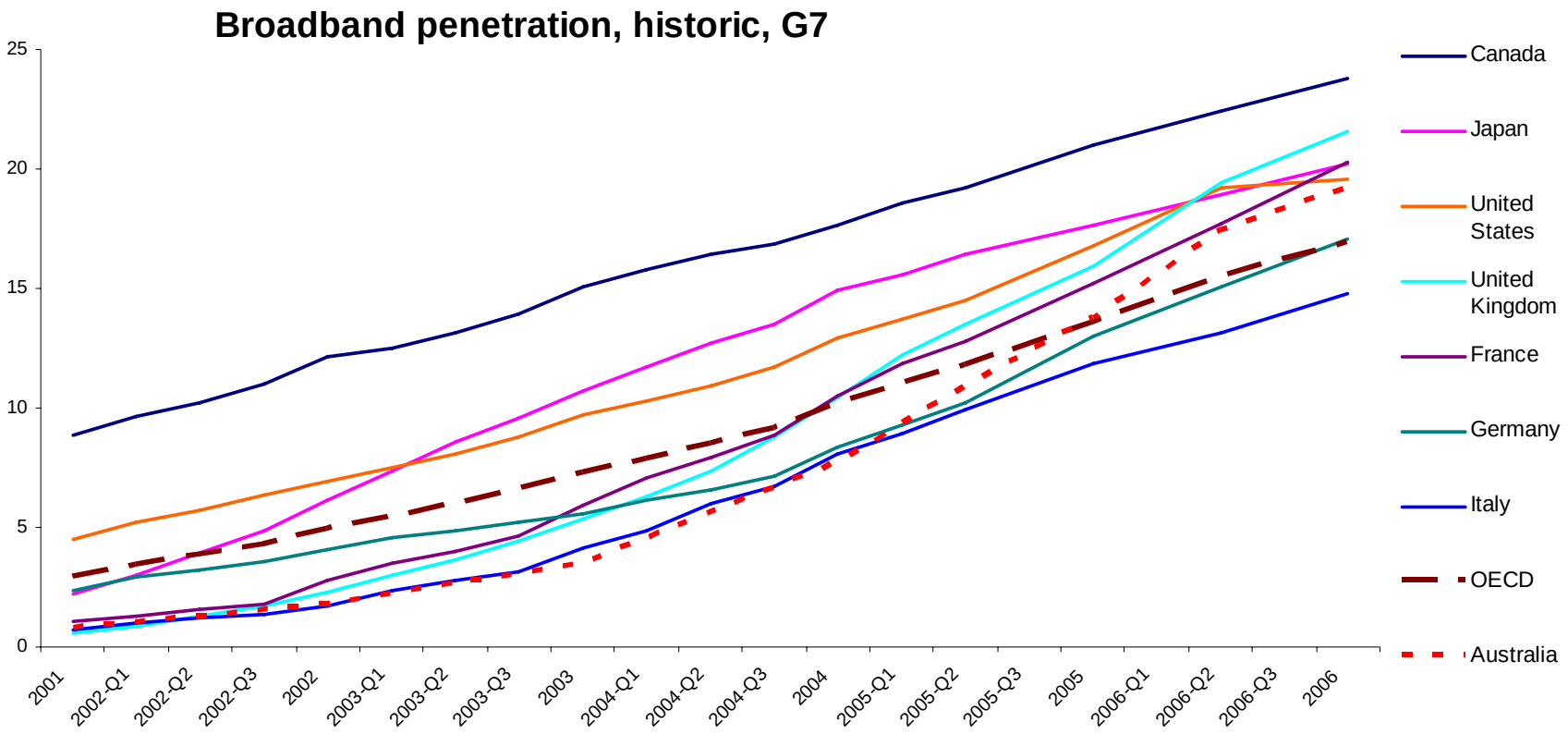
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

Broadband take up in Australia



AAPT
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

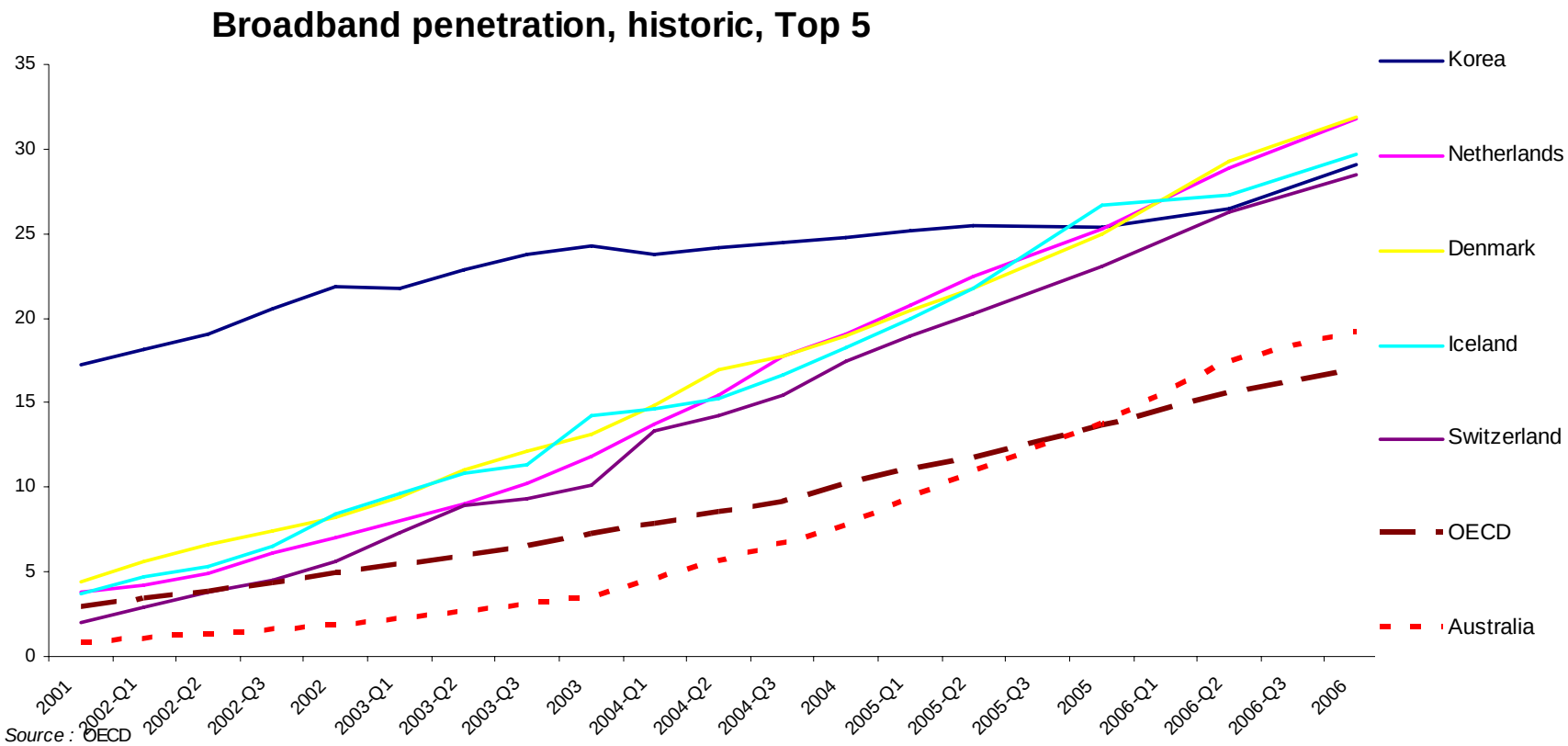
Australia vs G7



Source : OECD

AAPT
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

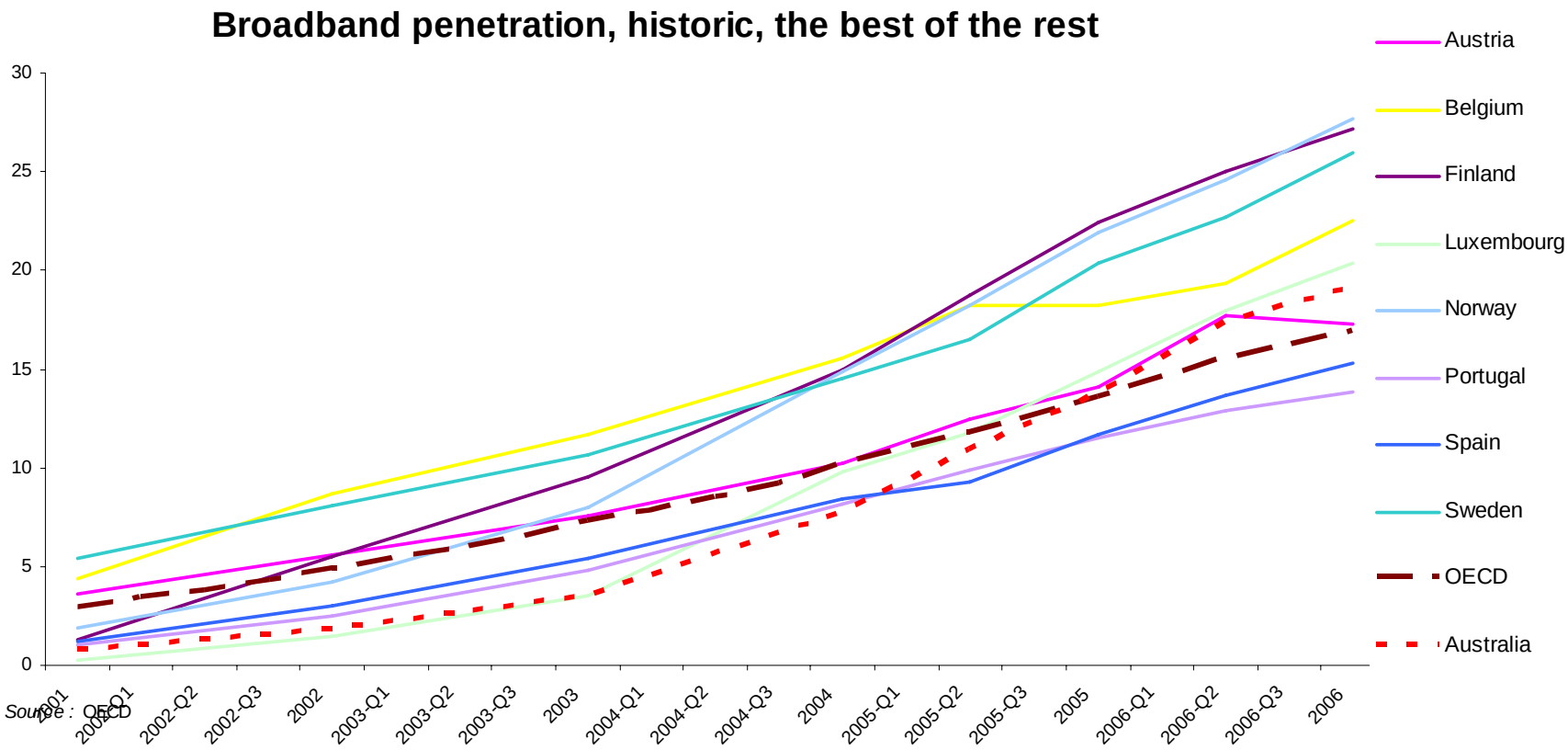
Australia vs Top 5



Source : OECD

AAPT
STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

Australia vs Best of the Rest

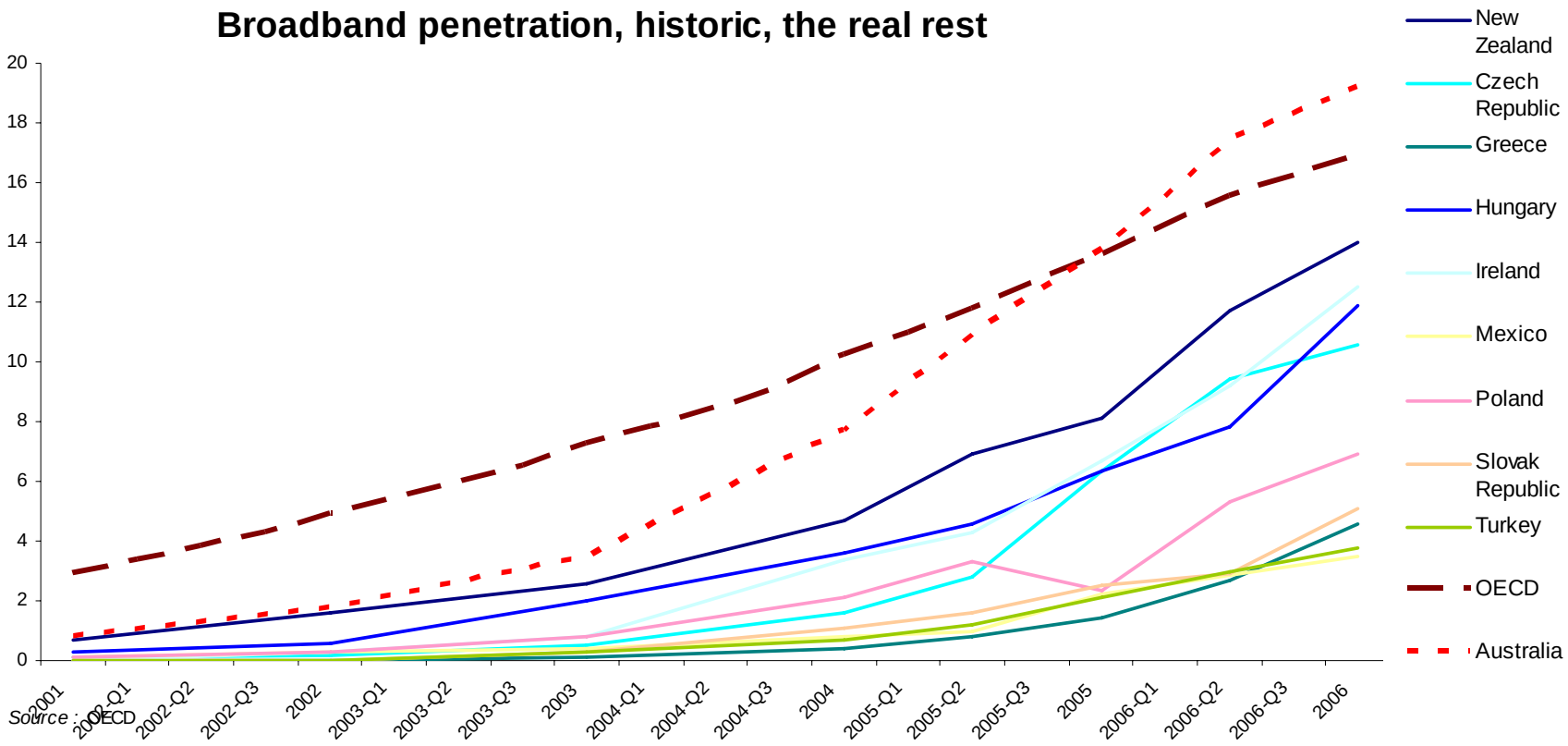


Source : OECD

AAPT

STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

Australia vs The Rest of the Rest



Source : OECD

AAPT

STRAIGHT UP > GENUINE >
SMART > ENERGETIC > IRREVERENT

Conclusion on International Comparisons

- The data is unreliable
- There is no evidence that broadband penetration correlates to GDP
- There is evidence that broadband penetration follows an s-shaped diffusion curve the shape of which is determined by
  - the years since launch
  - the existence of competition between fixed line and Pay TV
  - the cost of dial-up (especially untimed local calls)

Claimed Benefits

- Broadband Advisory Group (2003) cited an Accenture study (2001) estimating that next generation of broadband could produce economic benefits of **$12 billion to $30 billion per annum** to Australia.

- A 2003 study by Allen Consulting Group estimated the direct and indirect economic impact of just one broadband network throughout a major urban centre in Australia in SE Queensland of an increase in real output in Queensland **of $854 million per annum** at the end of 15 years (i.e., by 2018-19).

- A 2004 Multimedia Victoria report by economic consulting firm ACIL Tasman found that the annual contribution of broadband to the Victorian GSP (Gross State Product) was expected to peak in 2008 at just over $2.5 billion. It estimated aggregate benefits to the Victorian economy from 2004 to 2015 of between $12.7 billion and $22.6bn. When scaled up for the Australian economy as a whole, this represents a boost the GDP of around **$12 billion** in the peak year 2008**,** and benefits between **$55 billion and $96 billion** over 2004 to 2015.

All of the above extracted from Telstra's nowwearetalking website

Calls for improved performance

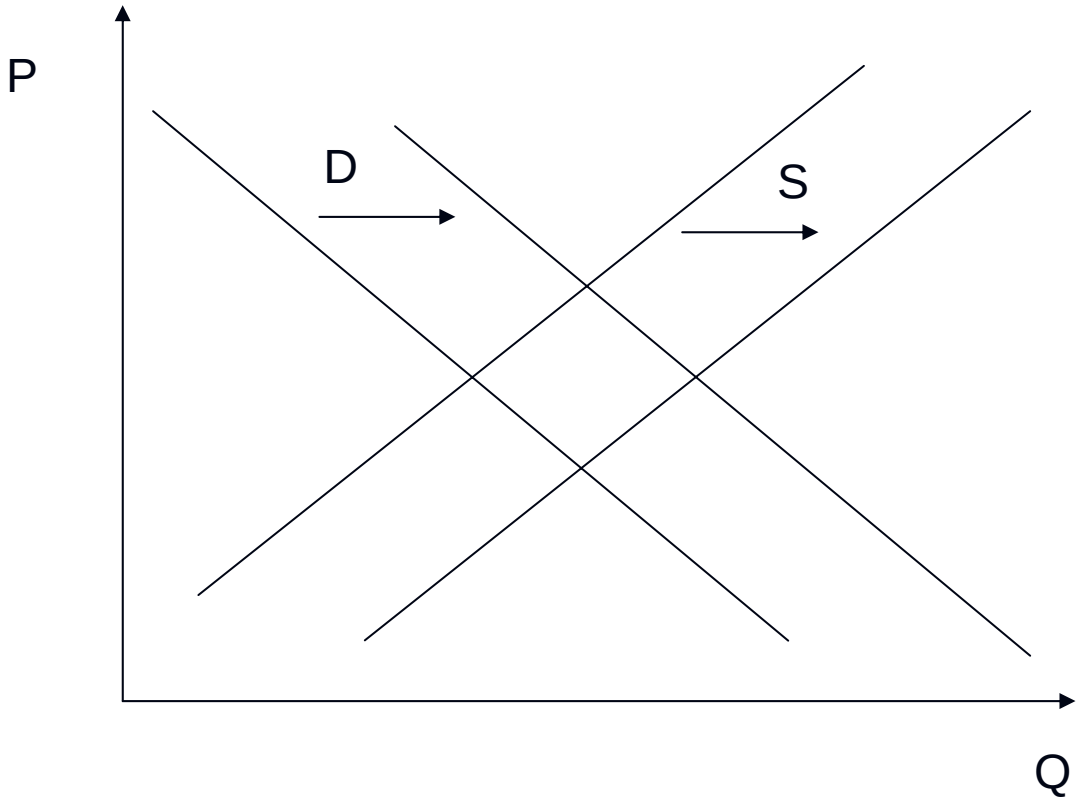
- Australia's broadband position is *"embarrassing"* and there was a huge consumer demand for online video that is being held back by Australia's antiquated broadband infrastructure. *"Australia needs ubiquitous, high-speed broadband infrastructure to be internationally competitive. This is a top-order priority for the nation"* (James Packer)
- *"The encouragement of broadband is a critical element in Australia's overall media policy…internet speeds are slower and internet pricing is more expensive, than many other developed countries"* (Fairfax submission)
- Australian broadband is a *"disgrace"* and *"We are being left behind and we will pay for it."* (Rupert Murdoch)
- *"Significant and meaningful changes in attitude and leadership from the Government and policy makers"* (Internet Industry Association)

All the above extracted from Senator Conroy's speech to business observers at the ALP conference

So what can you do with broadband?

- Download movies, audio files, video games – the entertainment industry is important, but that important?
- Speedier access to online transactional services – banking, online government
- Cheaper voice – but grade of service can be compromised
- Videoconferencing – if a lot more happens first
- E-health – but you still need the imaging machine and the patient in the same room
- E-learning – but paper works
- The biggest benefits are where broadband is hardest to deliver

How to increase penetration



How to increase penetration

- Increase demand – shift the curve to the right
  - Find more things people can do, and therefore be more willing to buy
- Increase supply – shift the supply curve left
  - Provide service in unserved areas
  - Reduce the cost of supply

Proposals to increase supply

- Telstra's FTTN
- The G9 FTTN
- The Gans approach

What is FTTN

- Fibre to the Node utilises optical fibre from the exchange to a street side cabinet in which the electronics to provide high speed data services are housed
- Cabinets typically located at existing cross-connect points – pillars serving about 200 houses
- Shorter copper length means higher speed services can be enabled
- Increases costs unless whole exchange cut-over – then save costs of exchange and use “soft-switch”
- Question – are the customers prepared to pay for extra bandwidth?

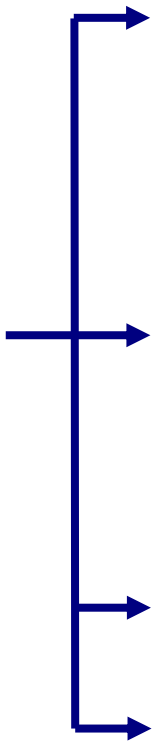
Telstra's FTTN

- First disclosed August 2005, announced November 2005 and canned December 2005
- From April to August 2006 discussed with ACCC – at point it was withdrawn
  - Telstra argues ACCC had failed to agree on a subsidy for loss making services
  - ACCC says it wanted Telstra to make proposal public
- February 2007 Telstra launches BACk Telstra campaign
- Model remains of access seekers acquiring an "equivalent" service – rumoured price point of $80/month

G9 Response

G9 Position - July 2006

1. Telstra's Nov 2005 proposal unacceptable
   - Destroyed ULLS competition
   - Made unbundling impossible in FTTN world
2. We stated required access/governance model for FTTN to proceed – 'SpeedReach'
3. We said G9 interested in joint investment with Telstra in FTTN network
4. We proposed financial model for FTTN network to be built and financed as infrastructure project



We said that if Telstra…	**…then G9…**
➢ Agreed to • Governance model (SpeedReach) **and** • G9 joint ownership of FTTN network with Telstra	➢ Would agree to FTTN proceeding **and** would co-invest with Telstra to expand the network's reach
➢ Agreed to Governance model (SpeedReach) but rejected G9 joint ownership of FTTN network	➢ Would agree to Telstra proceeding to build the FTTN network
➢ Rejected Governance model (SpeedReach)	➢ Would oppose Telstra building the FTTN network
➢ Indicated that it would not proceed with an FTTN network	➢ Would explore building its own FTTN network under the infrastructure financing model

State of Play

- Telstra's proposal requires difficult if not intractable regulatory requirements – that is giving Telstra the degree of certainty they seek and the prices they seek while still delivering retail competition
- G9 proposal requires difficult if not intractable regulatory requirements – specifically enabling us to cut over the entire node and hand back to Telstra an "equivalent" service
- Both proposals still depend on regulatory pricing of copper from the node to the premises
- Telstra proposal will result in immediate overbuild of competitor infrastructure, G9 proposal builds nodes in areas without any broadband first
- Telstra proposal requires regulatory determination of WACC for overlay, G9 proposal sees that determined by competitive market process
- All the issues could be sorted out by industry if Telstra was prepared to talk to its wholesale customers

Everything is local

- Is the customer access network necessarily a national problem to solve? The key technical bottlenecks are local not national
- Up to 85% of the cost can relate to civil engineering works
- Access networks are a club not a public good (non-rival but excludable)

Focus on content is wrong

- The applications that will grow demand are two-way interactive

  "*Phenomena that have taken industry observers by surprise, such as the enthusiastic embrace of Instant Messaging on personal computers and SMS on cellphones, show the primacy of communication over content in the consumer's set of priorities. By contrast, delivering content to mobile phones via WAP (Wireless Application Protocol) has been a disappointment despite enormous industry hype and considerable marketing efforts*."

Gans' questions

- Where is performance poor?
- Where are the economies of scale?
- Are the applications national?

Conclusion

- The extent to which Australia is a laggard can be over-stated, though there are pockets of very real unmet demand
- The benefits from broadband are probably over-stated
- The contending national solutions being offered need not be in conflict
- Ending the telecommunications cargo cult might be a better solution

CEDA
COMMITTEE FOR ECONOMIC DEVELOPMENT OF AUSTRALIA

Broadband Australia – Why and How

SPEAKER

David Havyatt
General Manager, Public and Regulatory Affairs
AAPT Limited

CHAIR

Tony Tobin
Consultant
Gilbert + Tobin