Broadband Australia

the rural, the remote and the recalcitrant

Ewan Sutherland

http://www.3wan.net/

Contents

World-class broadband

- Competition:
  - speed
  - price
  - diversity of offers
  - combination with other services
- Multi-play offers:
  1. Internet access
  2. Voice telephony
  3. Television
  4. Mobile/cellular

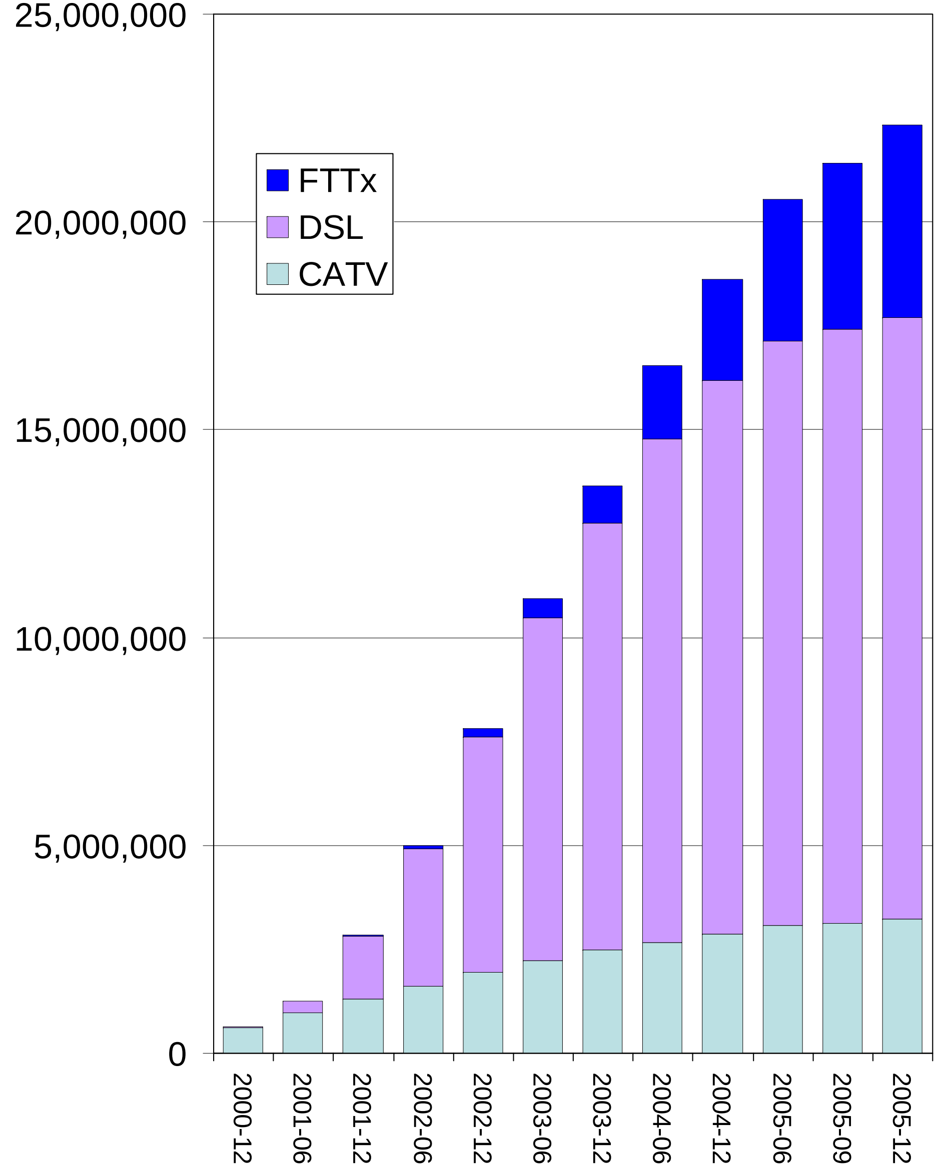
- Hong Kong: HKBN
  - 1,000 Mbps
  - free movies
  - HK$1,680 per month (AU$ 280)
- Singapore has announced 1Gbps as a target, with 100Mbps as an interim measure

AU$ 1 = HK$ 6

Japan

- NTT market shares:
  - 37.5% of retail DSL
  - 33.9% of FTTB
  - 77.8% of FTTH
- Yahoo! BB:
  - 50 Mbps down, 12.5 Mbps up
  - ¥ 4,500 per month (AU$ 52)
  - also VoIP and television
- Hikari FTTx:
  - symmetric 100 Mbps
  - from ¥ 6,000 per month (AU$ 70)
- Significant growth of “heavy-hitters” on the backbone, their traffic is gradually increasing

AU$ 1 = JPY 86



France

- Free.fr
  - 24 Mbps for € 29.99
    - includes calls to fixed networks in France, Australia and other countries
    - plus TV channels
  - 20 Mbps for € 14.90
  - both are uncapped
- Neuf.fr
  - 20 Mbps for € 14.90
  - 20 Mbps for € 29.90 including line rental and calls to the fixed network
- Wanadoo.fr
  - 18 Mbps for € 39.90

Telecom Italia
Alice brand in 3 countries

- Italy
  € 36.95 for 20 Mbps
- Germany
  € 49.90 for 20 Mbps
  including calls to the fixed network
- France
  € 29.95 for 20 Mbps
  also includes all calls to the fixed network and digital TV channels

AU$ 1 = EUR 0.61

Wireless VoIP

France Iliad “free.fr”

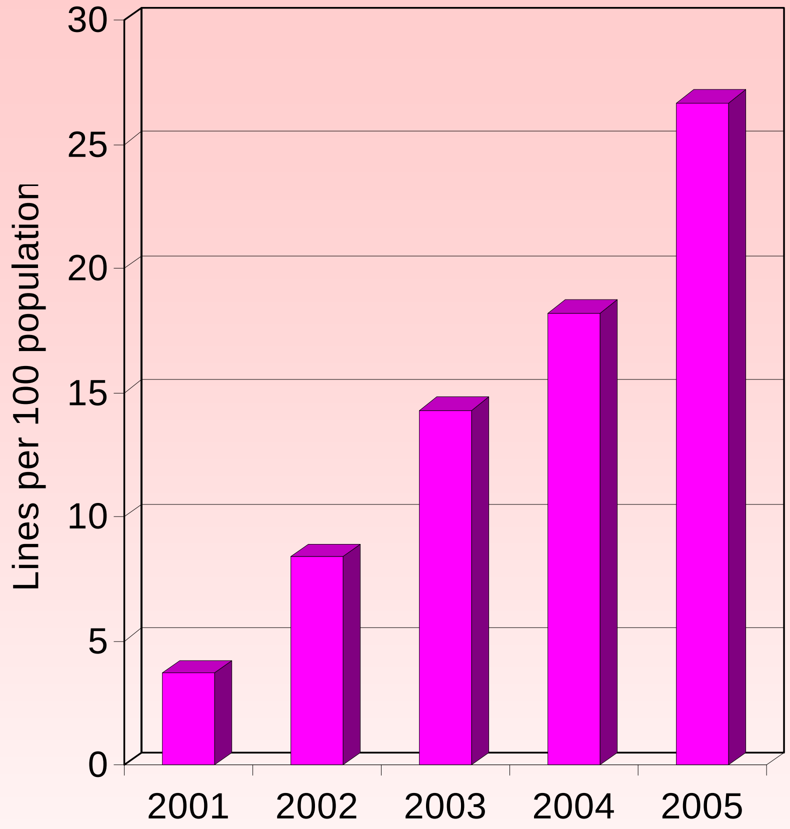
- Any Wi-Fi hotspot with “freebox”:
  - your home
  - your neighbours
  - people in the next street, village or town
- Free calls to fixed networks in:
  - France
  - 14 other countries

Nokia E-Series handsets

- Wi-Fi when in:
  - corporate offices worldwide
  - home
- SIP client
- otherwise GSM
- Being combined with iPASS, a global Wi-Fi supplier

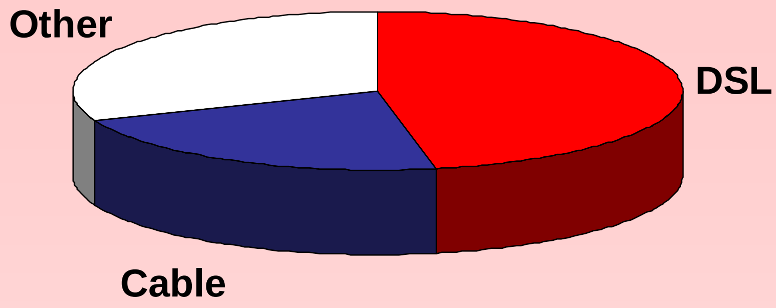
Iceland

- Now leads the OECD on broadband
- Overtook South Korea
- A volcanic island in the North Atlantic
- 300,000 people on 100,000 km^2

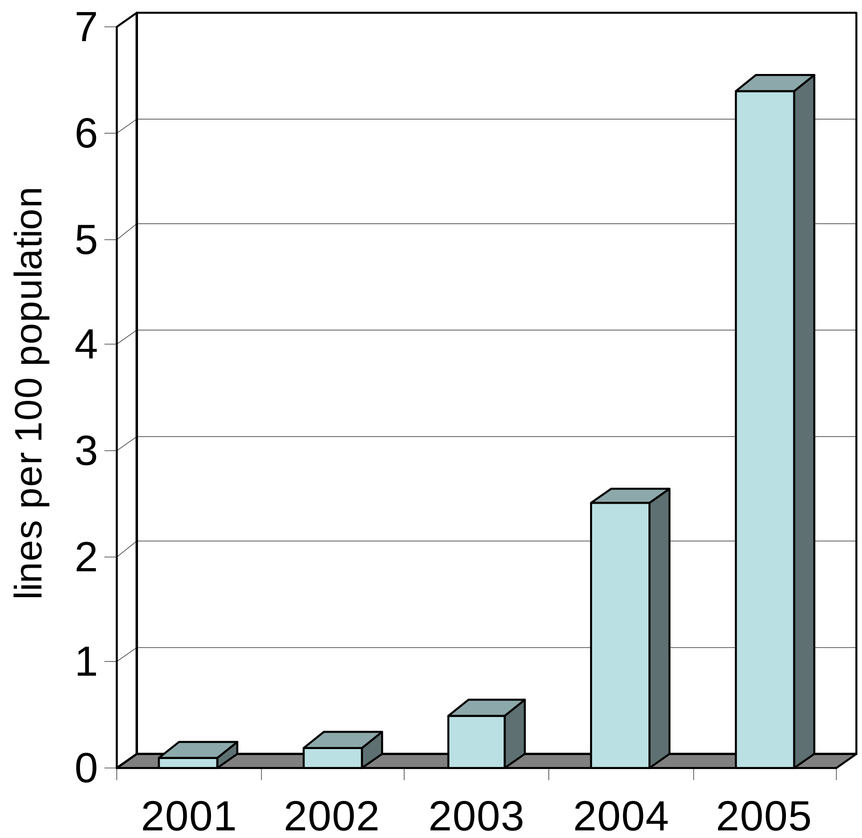


Iceland should be ranked among nations enjoying the most efficient, secure, accessible and innovative electronic communications services.
Iceland Telecom Policy Statement 2005-2010

Czech republic



- 24th in OECD
- Modest copper network
- Lack of development before 1989
- Subsequently NMT and GSM
- NMT converted to cdma450 1X EV-DO (up to 800 kbps)

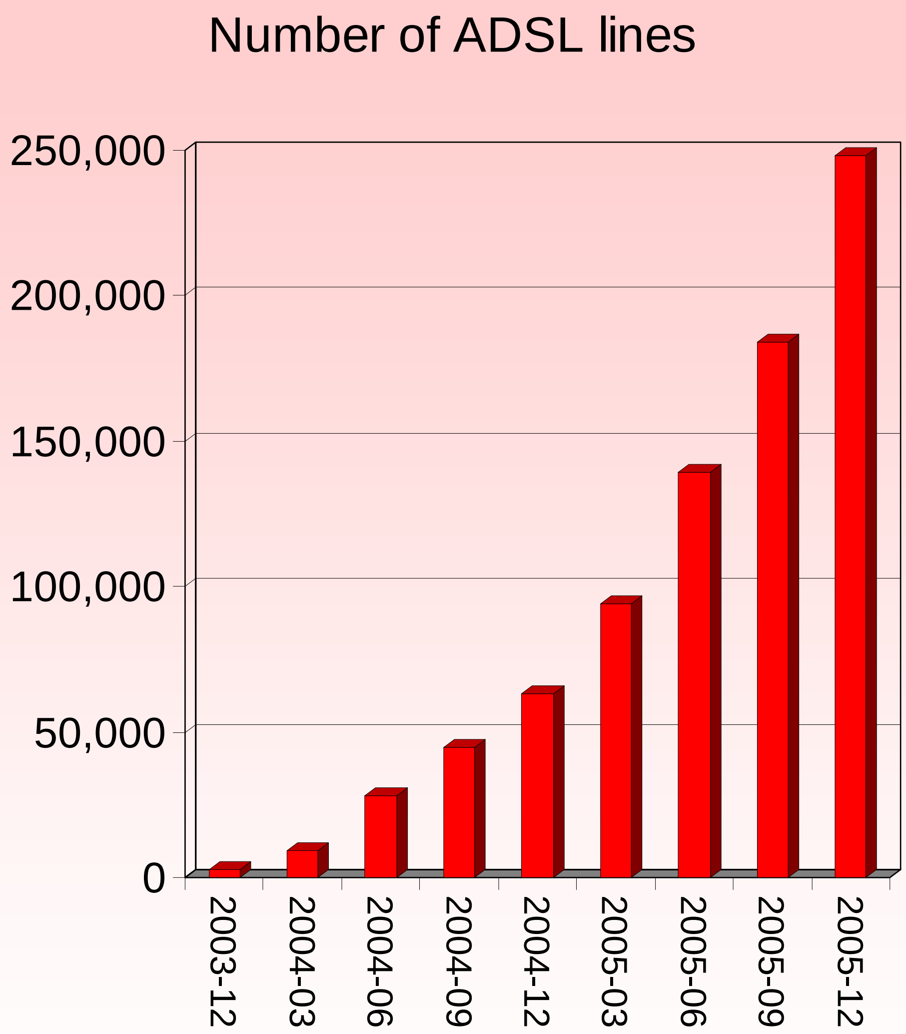


http://www.micr.cz/files/2185/MICR_brozura_en.pdf

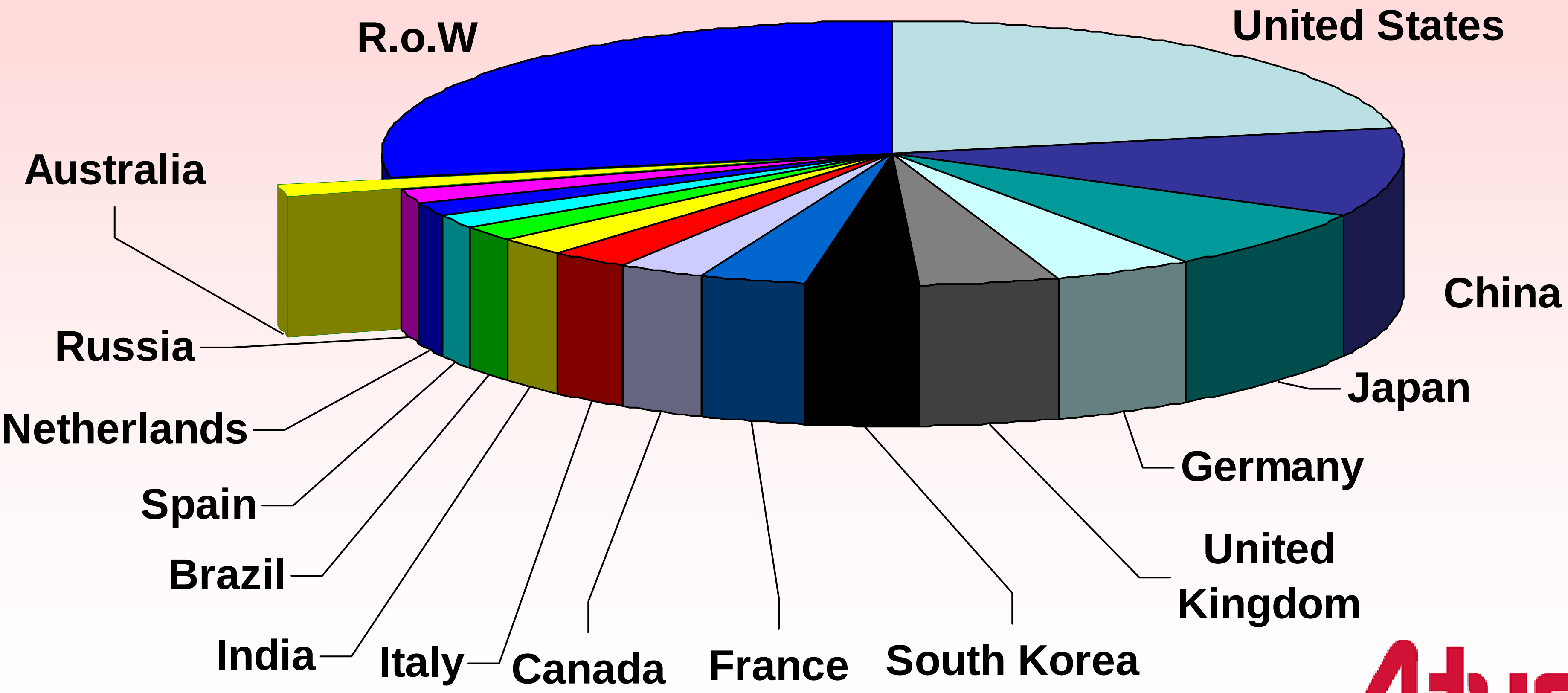
Morocco

- Leader in Africa
- 31 million people
- US$ 1,677 GDP per capita
- Menara:
  - 4 Mbps for MAD 799 (AU$ 116)
  - 0.512 Mbps MAD 399 (AU$ 58)
  - 0.256 Mbps MAD 299 (AU$ 44)
  - no download cap

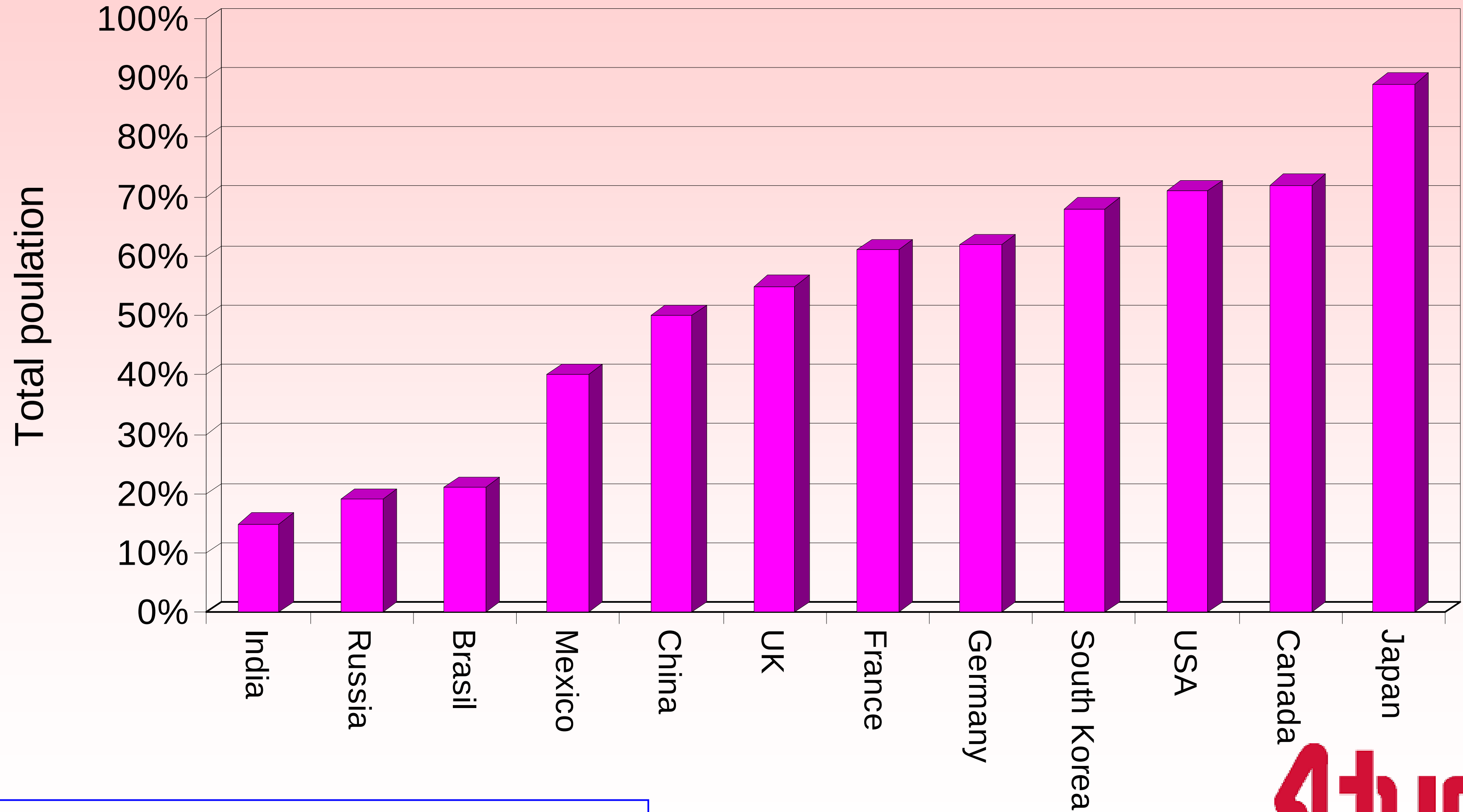
AU$ 1 = MAD 6.85



Internet population



Internet usage in last 30 days



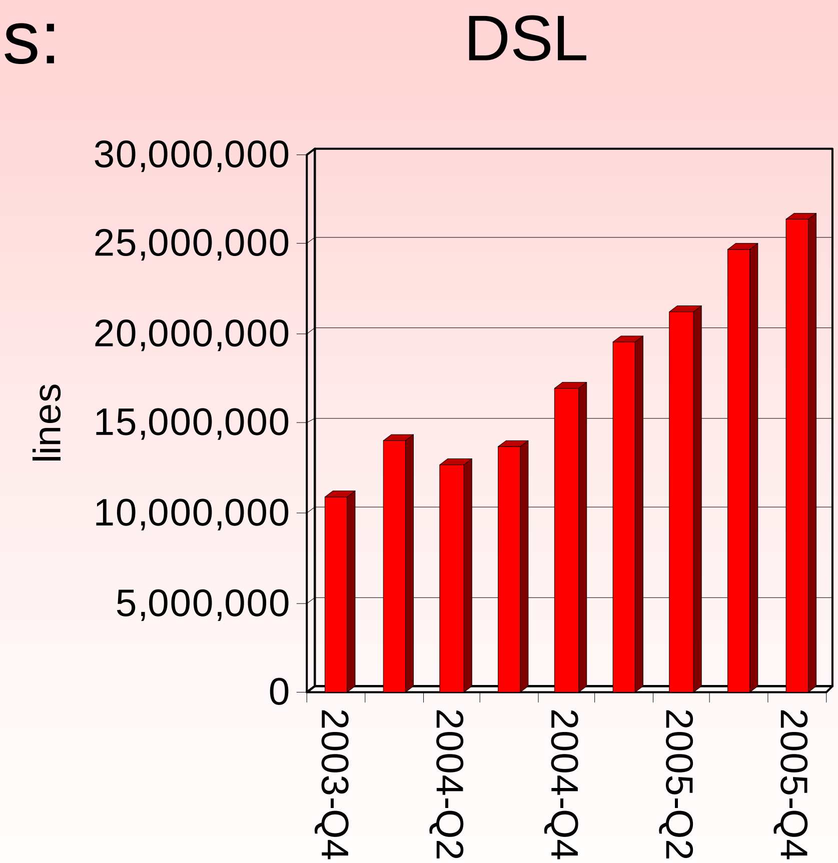
http://www.ipsos-na.com/news/pressrelease.cfm?id=3030

An Internet of things

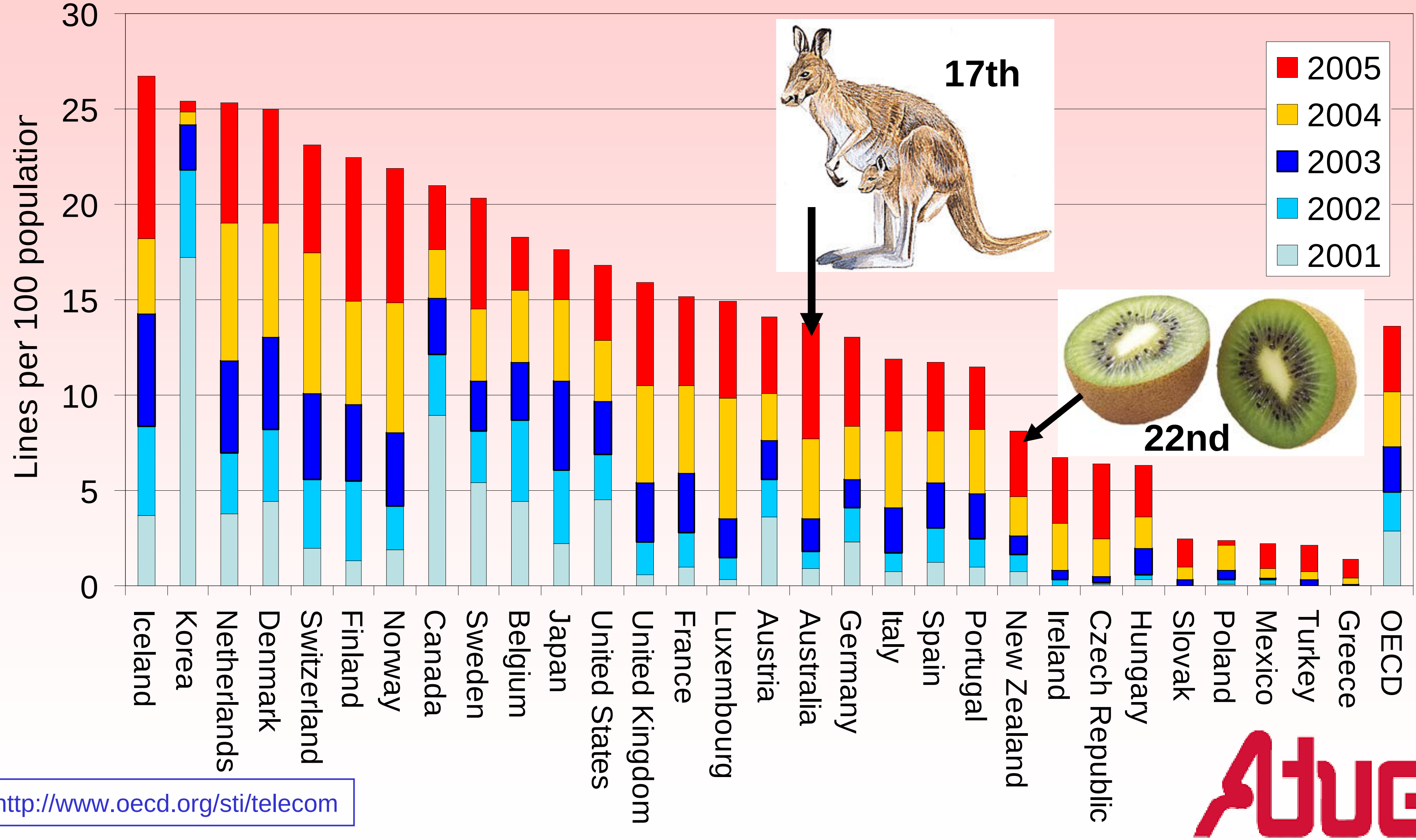
- Any time, any place, any network, any object
- Adding objects to the Internet:
  - sensors
  - RFID tags
- Now we can have:
  - person to person
  - person to machine
  - person to object
  - machine to machine
  - machine to object

China

- Wide range of technologies:
  - DSL
  - cable modems
  - wireless
  - fibre to the premises
- Massive growth
- Now probably a larger market than the USA
- Complements 3G



OECD broadband growth



http://www.oecd.org/sti/telecom

Netherlands and Denmark

- KPN (Netherlands)
  - 750 /128 € 19,95
  - 1500 /256 € 26,95
  - 3000 /512 € 32,95
  - 6000 /768 € 49,95
  - 8000 /1024 € 69,95
  - 12 Mb /1024 € 69,95
  - 20 Mb /1024 € 89,95
- TDC (Denmark)
  - 160/128 DKR 199
  - 256/128 DKR 239
  - 2048/128 DKR 399
  - Minimum price:
    - DKR 99 per month
    - plus 0.75 per MB
    - 2048/128 kbps

AU$ 1 = EUR 0.61 = DKR 4.51

Highly ranked because there is lots of “narrow” broadband.

Telstra broadband

Telstra Business Comms Max package:

- free installation for new customers
- ADSL up to 8 Mbps
- analogue telephone line rental
- 500 free minutes to any UK fixed phone number
- £48.49 per month on a two year contract (AU$ 117)
- an additional £10.00 per month for Enhanced Care
  - improved Guaranteed Time To Repair (GTTR)
  - Service Availability Guarantee

"As competition within the UK broadband market continues to intensify, we are delighted to be one of the first providers to launch up to 8 Mbps broadband on a nationwide basis, which forms an integral part of our 'Comms' packages. Notably, our standalone Business Broadband Max service is also £5 per month cheaper than the equivalent BT service."

David Thorn, CEO Telstra Europe

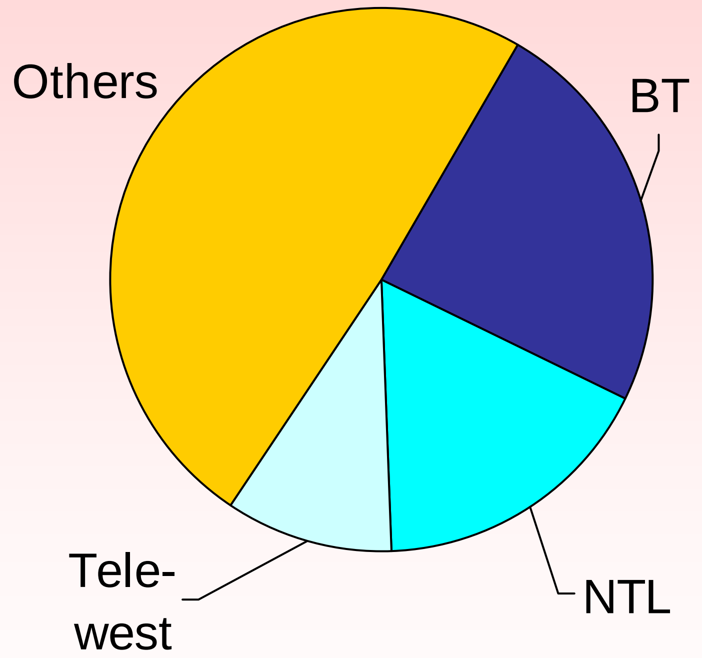
£1 = AU$ 2.40

http://www.telstra.co.uk/

United Kingdom

- Slow progress on unbundling
- Consolidation in cable television sector
- NTL has acquired:
  - Telewest
  - Virgin Mobile
- Prospect of entry by:
  - BSkyB (a.k.a. Rupert Murdoch) dominant satellite TV supplier
  - Vodafone
- Operational separation:
  - under UK competition law
  - not under telecoms regulation
  - fully understood by a only handful of people
  - too early to judge the effects

Broadband market shares



Source: *The Guardian* 7 April 2006

United Kingdom

- The number of lines unbundled has exceeded 360,000
- Weekly throughput is around 15,000
- The delivery of backhaul for PoPs in exchanges is still unacceptable
- Co-Mingling PoP build performance has suffered a significant setback
- There are no disputes in progress at the present time

http://www.offta.org.uk/

Ladders of investment

- Start small and build up:
  - customers
  - brand
  - revenue
- However, ladders change rapidly with:
  - time (voice to ADSL to fibre)
  - geography (city to rural, each country is different)
- They are also differences between business and consumer markets

Significant risk of regulatory capture when regulators believe in their "products", the NRA becomes a supplier to new(er) entrants.

Pimp my loop

- Blatant opportunism of incumbent operators
- They are asking governments to shelter them from competition
- Some governments pander to their incumbent operators

"They don't have any fiber out there. They don't have any wires. They don't have anything ... they use my lines for free -- and that's bull. For a Google or a Yahoo! or a Vonage or anybody to expect to use these pipes for free is nuts!"
Edward Whitacre, AT&T, CEO

http://www.mtv.com/onair/dyn/pimp_my_ride/series.jhtml

Asking for more

- Will consumers not pay enough to recover the investment?
- Is the Internet peering and transit model broken?
- Does it need to be a two-sided market?
- Are incumbent abusing their market power?
- Will they drive innovation to other networks and other countries?
- Do Telcos have a record of innovation and partnerships with innovators?

America de-unbundles

- Telecommunications Act 1996 created unbundled network elements (UNE)
- FCC ran into severe problems in the courts
- It withdrew unbundling obligations for “deep fibre” and then for copper
- The outcome of this is still uncertain
- xDSL market has heavily consolidated
- USA has been unusual in having cable modem suppliers with more than 50% of broadband
- Nonetheless, it is a high risk strategy

Microsoft bundles

- A long and complex problem in competition law, through bundling of:
  - browsers
  - music players
- Clearly Microsoft is very dominant, but does it abuse that position?
- United States *versus* Microsoft
- European Commission *versus* Microsoft
- South Korea *versus* Microsoft
- Japan *versus* Microsoft
- Cases that take years, even decades to resolve, by which time most of the competitors are out of business

Deutsche Telekom AG

- The German incumbent operator argued that it needed a regulatory holiday to recover its VDSL infrastructure investment
- It persuaded the Grand Coalition (CDU/CSU and SPD) to include in its agreement special treatment for investment in new infrastructure
- The first effort to implement this by the *Bundes-netzagentur* was rejected by the European Commission
- Now trying to establish this in German law, but it will be struck down by the European Court of Justice
- An obvious fallacy is that VDSL is not a separate market, but part of the evolving retail broadband and ubiquitous market

Canada – telecoms review

- An independent report for government
- Industry performance ranks amongst the best
- However, policy and regulatory framework should change to reflect changes in telecommunications technologies and markets
- Innovative ICT products and services coming onto the market can provide significant benefits to consumers and businesses
- Proposed changes to permit the telecommunications industry to respond more rapidly to new technology and market developments

http://www.telecomreview.ca/

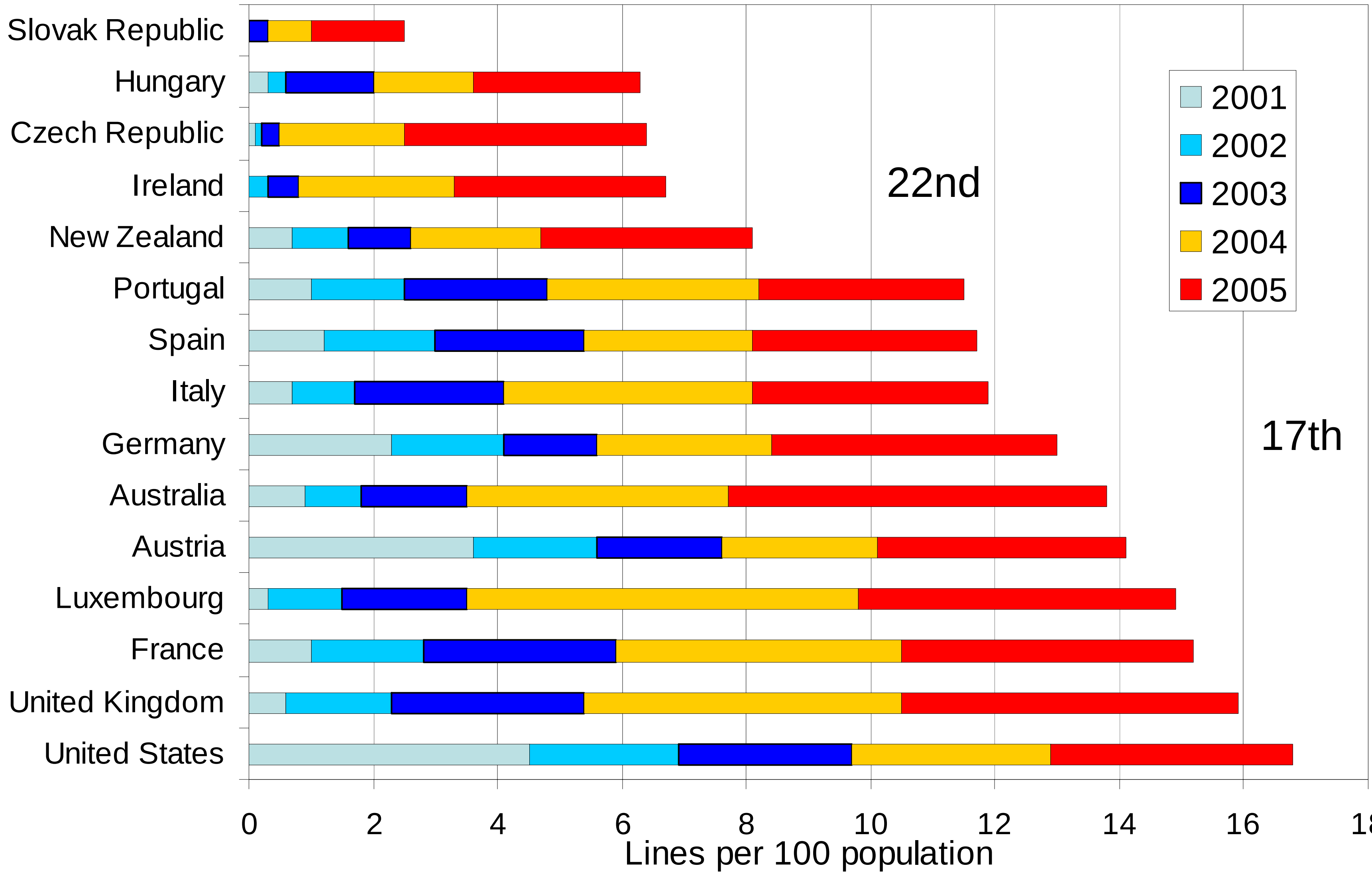
Goals and policy guidelines

- Three goals:
  - promoting affordable access to advanced telecommunications services in all regions of Canada, including urban, rural and remote areas
  - enhancing the efficiency of Canadian telecommunications markets and the productivity of the Canadian economy
  - enhancing the social well-being of Canadians and the inclusiveness of Canadian society by meeting the needs of the disabled, enhancing public safety and security, protecting personal privacy and limiting public nuisance through telecommunications networks.
- Guidelines for political and regulatory action:
  - Market forces should be relied upon to the maximum extent feasible as the means of achieving Canada's telecommunications policy objectives
  - Regulatory and other government measures should be adopted only where market forces are unlikely to achieve a telecommunications policy objective within a reasonable time frame, and only where the costs of regulation do not outweigh the benefits
  - Regulatory and other government measures should be efficient and proportionate to their purpose and should only minimally interfere with the operation of market forces to meet the objectives

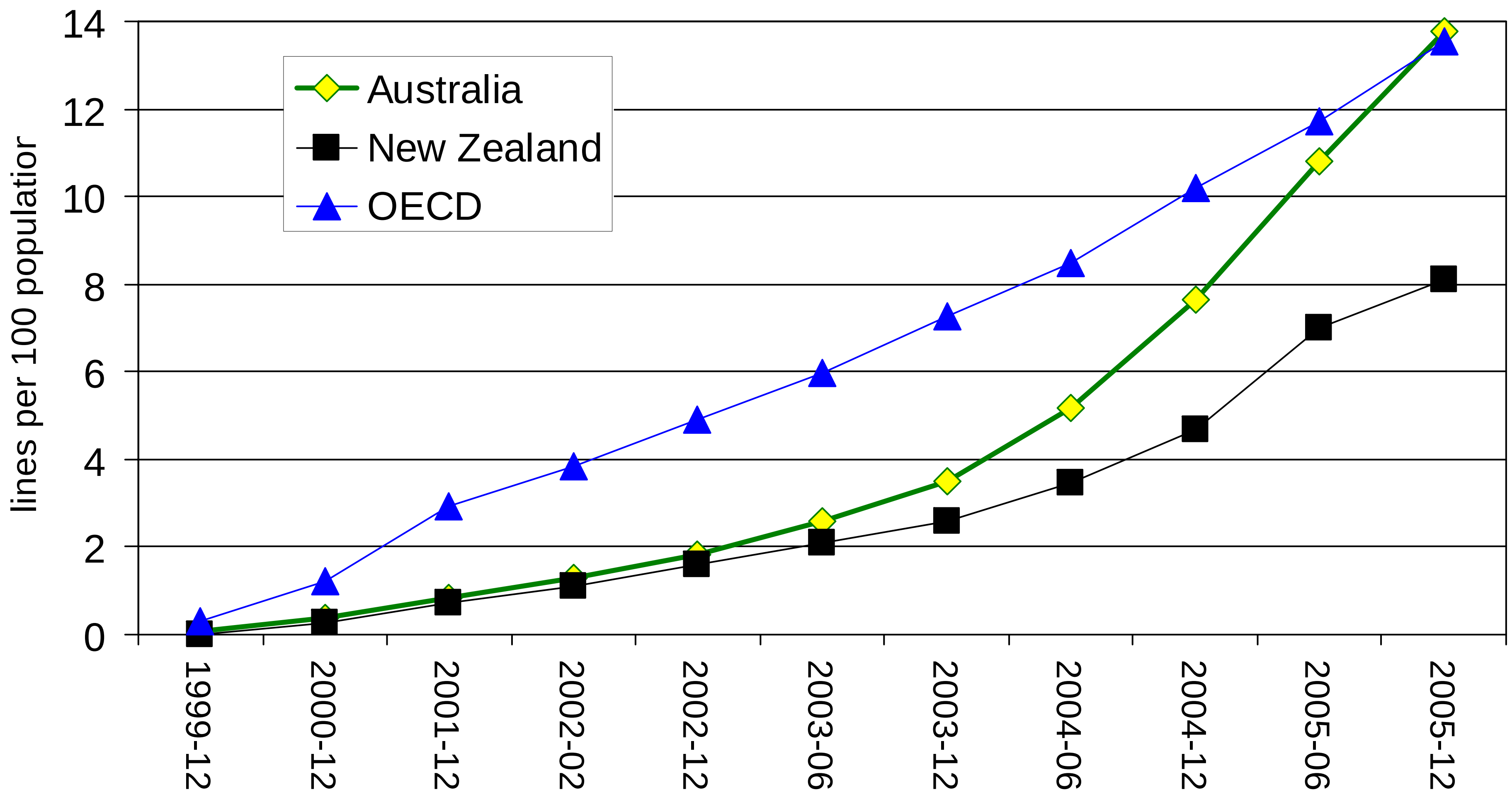
New Zealand

- Vertically integrated incumbent operator from the shores of Australia and the USA to the rural farmhouse
- Weak and unchallenging competitors
- Ineffective and slow politico-regulatory regime
- No evidence of competitive entrants, because:
  - there are no economies of scale for rivals
  - there are no neighbours
  - the market is small and remote
- The problem is not regulation or its absence, but uncompetitive market structures
- One (expensive) option would be to renationalise TCNZ
- Alternatively they could move to a regulated monopoly
- Local loop unbundling comes so late it could be irrelevant:
  - the only hope lies in quadruple play from Vodafone
- Without a dramatic change in the market the prospects of moving up the rankings are all bleak

OECD broadband growth



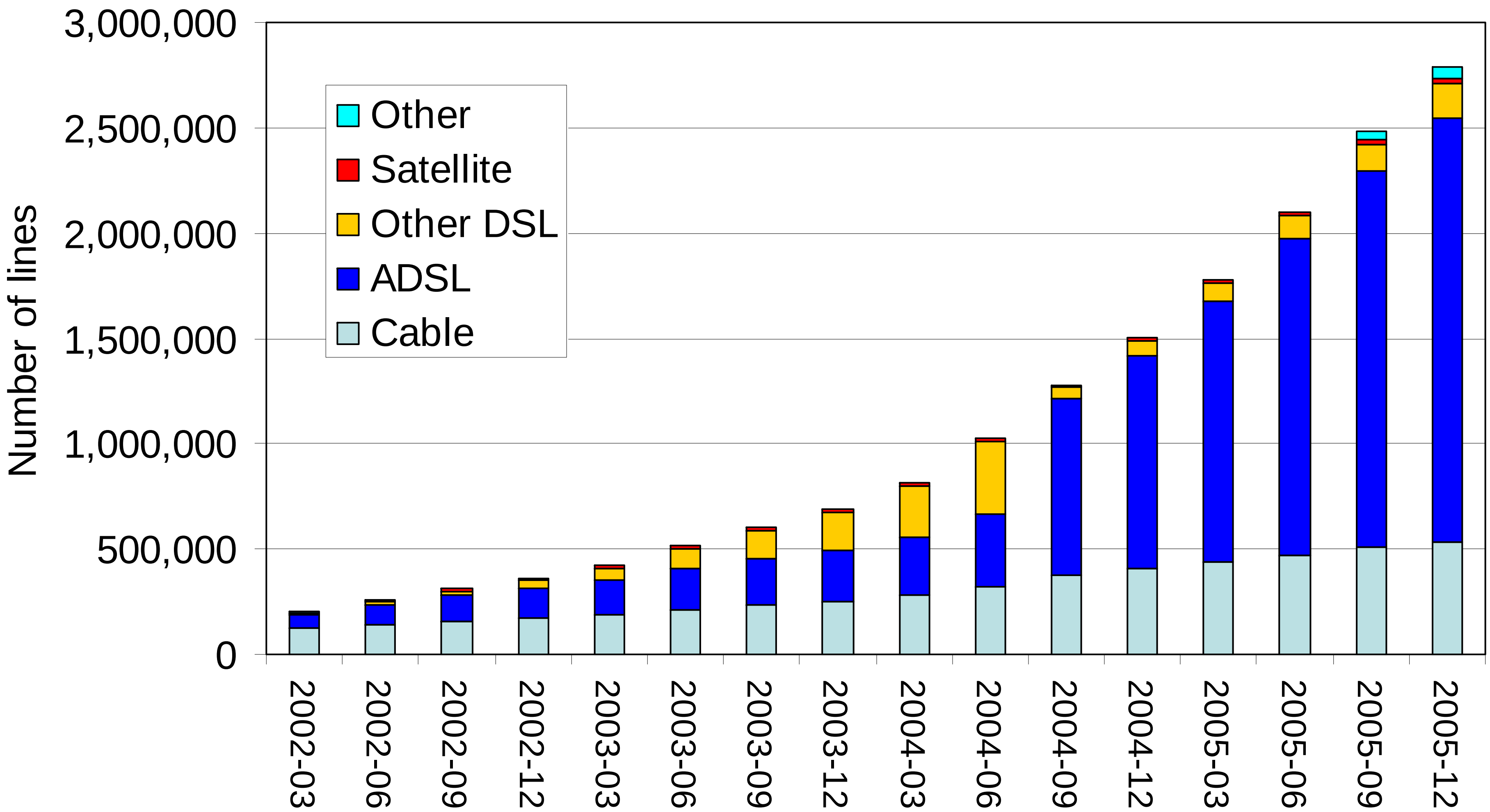
Trans-Tasman comparison



Australia

- The absolute number of lines is increasing
- However, the offers remain expensive, slow and capped
- Telstra:
  - dominates the market
  - wants to eliminate competitors
  - or to have the government do that for them
- Innovation comes from other players:
  - ADSL2+ from Internode, Adam and others

Australia

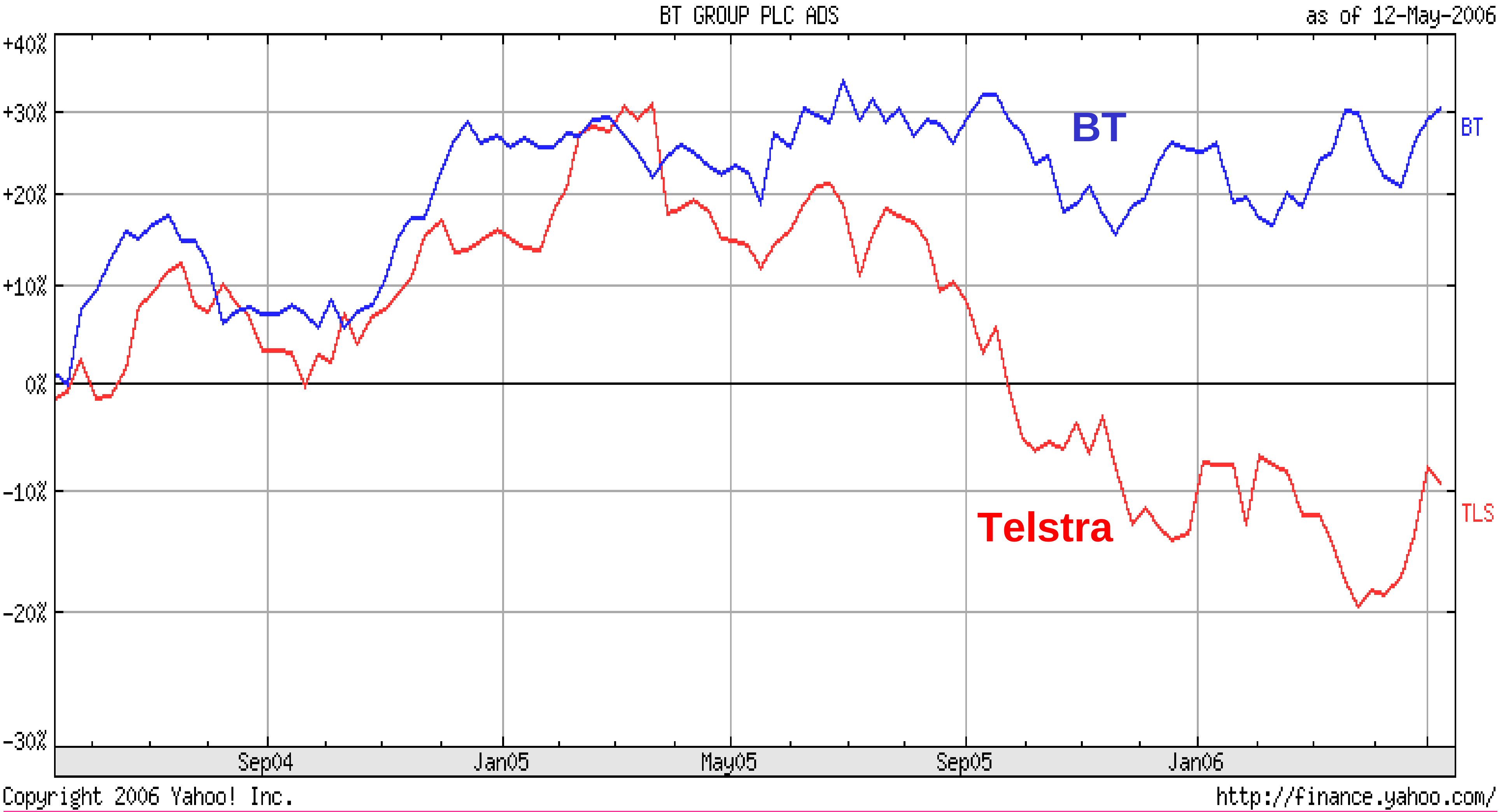


3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
Number of lines
Other
Satellite
Other DSL
ADSL
Cable
2002-03
2002-06
2002-09
2002-12
2003-03
2003-06
2003-09
2003-12
2004-03
2004-06
2004-09
2004-12
2005-03
2005-06
2005-09
2005-12

Telstra

- Trujillo has proved to be surprisingly antagonistic
- His pronouncements have attracted global attention
- No rational basis for Telstra's regulatory claims
- No evidence that what Telstra is requesting is effective public policy
- It appears to be talking down the share price in order to increase its bargaining power against the ACCC, leveraged by the government

BT and Telstra



Conclusions

- Countries continue to show wide variations in broadband performance
- Some are slipping back
- More competitive markets get faster speeds and more attractive bundles
- Fibre is being deployed near the home and is changing consumer behaviour
- Wireless broadband remains patchy but promising
- Incumbent operators are still trying cheap political games to wound, to maim and to kill their competitors

World class

- Cheap and affordable
- 1 Gbps to the home
- Wireless networks in the home
- WiMAX when nomadic
- 3G when on the move
- Flat rate Voice over IP
- RfID tags and ubiquitous sensor networks
- It is all of the above, not just one

Thank you

Ewan Sutherland

http://www.3wan.net/

3wan [@] 3wan.net

skype://sutherla

+44 141 416 0666