

Australia, NBN and Next Generation Access (NGA): International Experience

J. Scott Marcus, Department Manager

Sydney, 5 March 2009

Agenda

- Introduction: Australia at a critical juncture
- Competitive implications of fibre deployment
- Radical deregulation in the US
- Procompetitive regulation in the EU
- Implications for Australia and the NBN
 - Universal service
 - Industry structure and competition in Australia

Australia at a critical juncture

- Communications markets in Australia face unusually severe challenges.
 - *Highly* concentrated fixed market.
 - Fixed incumbent also has substantial bottleneck facilities in:
 - Mobile telephony
 - Cable television
 - Video content
- The migration to fibre potentially exacerbates competitive difficulties (VDSL, GPON).

Australia at a critical juncture: Migration to fibre

- WIK report on Next Generation Access for ECTA (2008)
- Sophisticated models of fibre roll-outs in France, Germany, Italy, Netherlands, Portugal, Spain
- No country likely to achieve full coverage without public stimulus/subsidy.
- Only limited prospect of replicating infrastructure.

Australia at a critical juncture: Migration to fibre

Investment per home connected (in Euro), market share 50%, urban cluster, stand alone first mover **

Network Type	Country [in €]					
	DE	FR	SE	PT	ES	IT
VDSL	457	n.v.	352	218	254	433
PON	2,039	1,580	1,238	1,411	1,771	1,110
P2P	2,111 (54%)	2,025	1,333	1,548	1,882	1,160

** Based on the investment of the urban cluster and a market share of 50%. If other market shares are used, it is mentioned in brackets.

Australia at a critical juncture: Migration to fibre

Viability of NGA roll-out for incumbents across countries and technologies

Network Type	Country					
	DE	FR	SE	PT	ES	IT
VDSL	71.5%	n.r.	18.3%	39.0%	67.4%	100.0%
PON	25.1%	25.2%	18.3%	19.2%	12.2%	17.6%
P2P	13.7%	18.6%	18.3%	19.2%	12.2%	12.6%

Australia at a critical juncture: Migration to fibre

Replicability of NGA roll-out for a second mover, 80 % access to existing ducts at current cost-based prices

Network Type	Country					
	DE	FR	SE	PT	ES	IT
VDSL	18.5%	n.r.	n.v.	39.0%	n.r.	17.6%
PON	0.3%	6.8%	n.v.	n.v.	n.v.	1.6%
P2P	0.0%	6.8%	n.v.	n.v.	n.v.	0.2%

Australia at a critical juncture: Migration to fibre

- Migration to FTTC/VDSL complicates competitive remedies, both for shared access and for Local Loop Unbundling (LLU).
- The street cabinet becomes the point of interconnection rather than the Main Distribution Frame (MDF).
 - More points for competitor to connect to.
 - Fewer customers per cabinet.
 - Only incumbent has ducts to cabinet.
 - Physical access, heat dissipation ...

Radical deregulation in the US

- Deregulation without regard to market power
- Hobbling new entrants
- Industry consolidation

Radical deregulation in the US

- No explicit integration of market power analysis in US regulation, but implicit recognition of market power.
- No over-arching technological neutrality.
- Competition law mutually exclusive with regulation.
- FCC white paper 2002 compared EU to US:
 - Different process
 - Similar objectives
 - Should generally reach similar conclusions
- Subsequent events do not support that assessment.

Deregulation without regard to market power

- FCC largely stopped enforcing rules circa 2002.
- Effective permanent exemption from market power remedies for cable modem service and for DSL when integrated with Internet access.
- Elimination of wholesale and non-discrimination obligations for wired broadband Internet access.
- No obligation to unbundle last mile fibre access.
- Elimination of shared access for DSL (even though highly successful by most measures).

Deregulation without regard to market power

- European broadband adoption very successful from 2002 – present.
 - Local loop unbundling (LLU)
 - Line sharing
 - Bitstream access
 - Resale
- Successive rungs on the “ladder of investment“
- U.S. policy is breaking one rung after another.
Access to LLU for copper loops is all that remains.

Hobbling new entrants

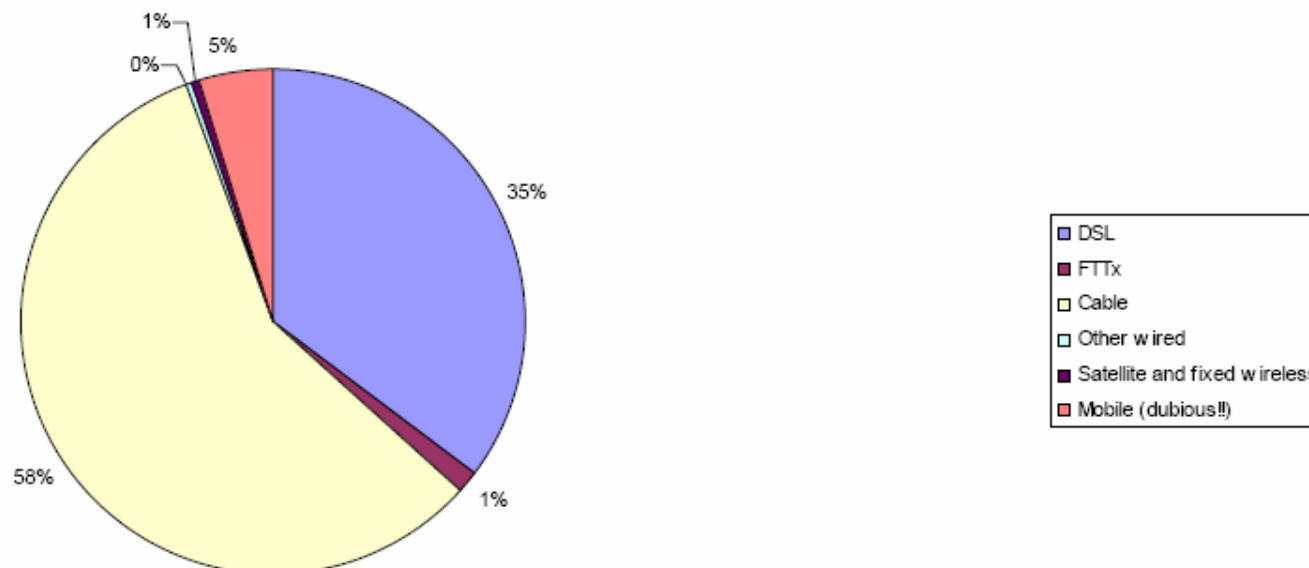
- FCC resists imposing new obligations on wired incumbents or cable operators.
- Two new regulations:
 - Lawful intercept (CALEA)
 - Emergency access for VoIP
 - Unrealistic implementation schedules.
 - Incomplete response to nomadic users.
 - Creates new market power for incumbents.
- Strong negative impact on competitive entrants.

Industry consolidation

- A series of mega-mergers:
 - Cingular / AT&T Wireless
 - SBC / AT&T
 - Verizon / MCI
- No significant undertakings required.
- Very few large firms left without wired last mile access (either telco or cable TV).
- Strong tendency toward local duopolies.
- Very few procompetitive lobbying dollars left.

Economic consequences

US Residential Broadband (at least 200Kbps both directions, December 2006)



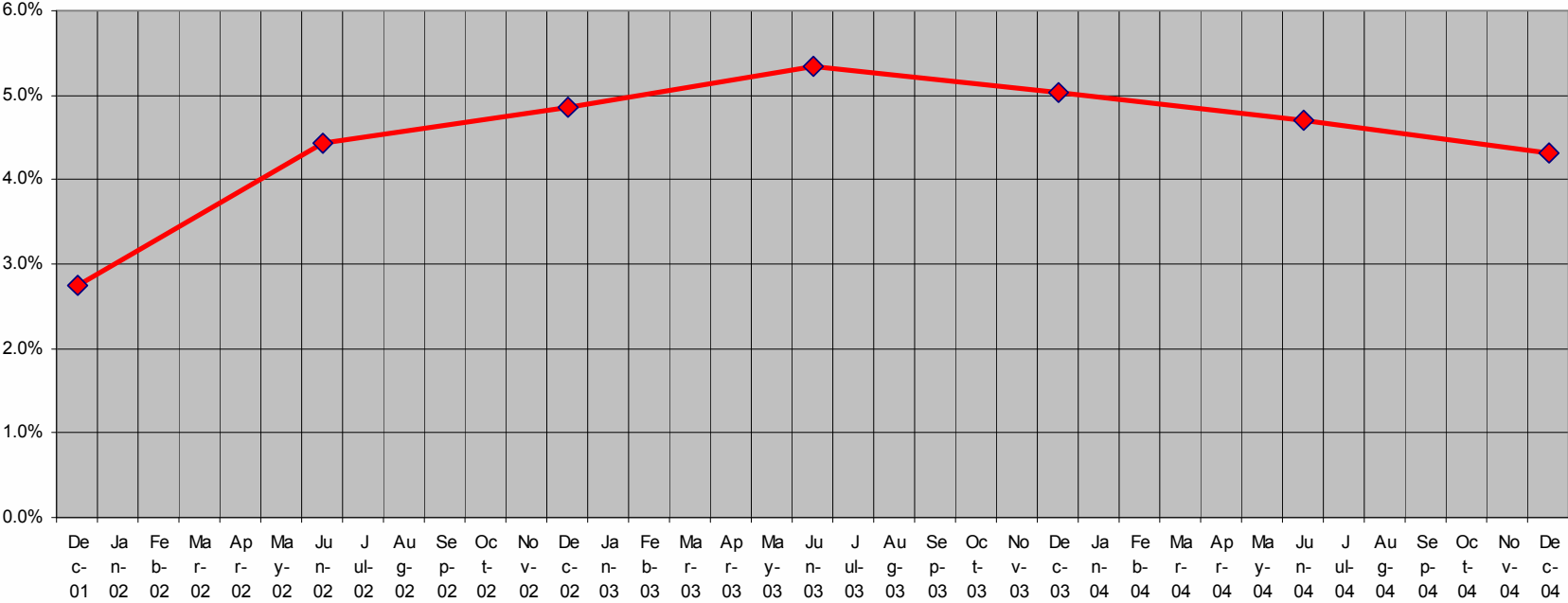
Source: FCC reports based on Form 477 carrier data

Economic consequences

- US statistics are difficult to interpret.
- The US counts services as “broadband” that no other country would consider to be broadband (e.g. 200 Kbps in one direction, less in the other).
- The FCC has been systematically “cooking the books” for years.
- The census data that could provide a cross check has been captured for years, but neither analysed nor reported.

Economic consequences

CLEC Percent of ADSL High-Speed Lines

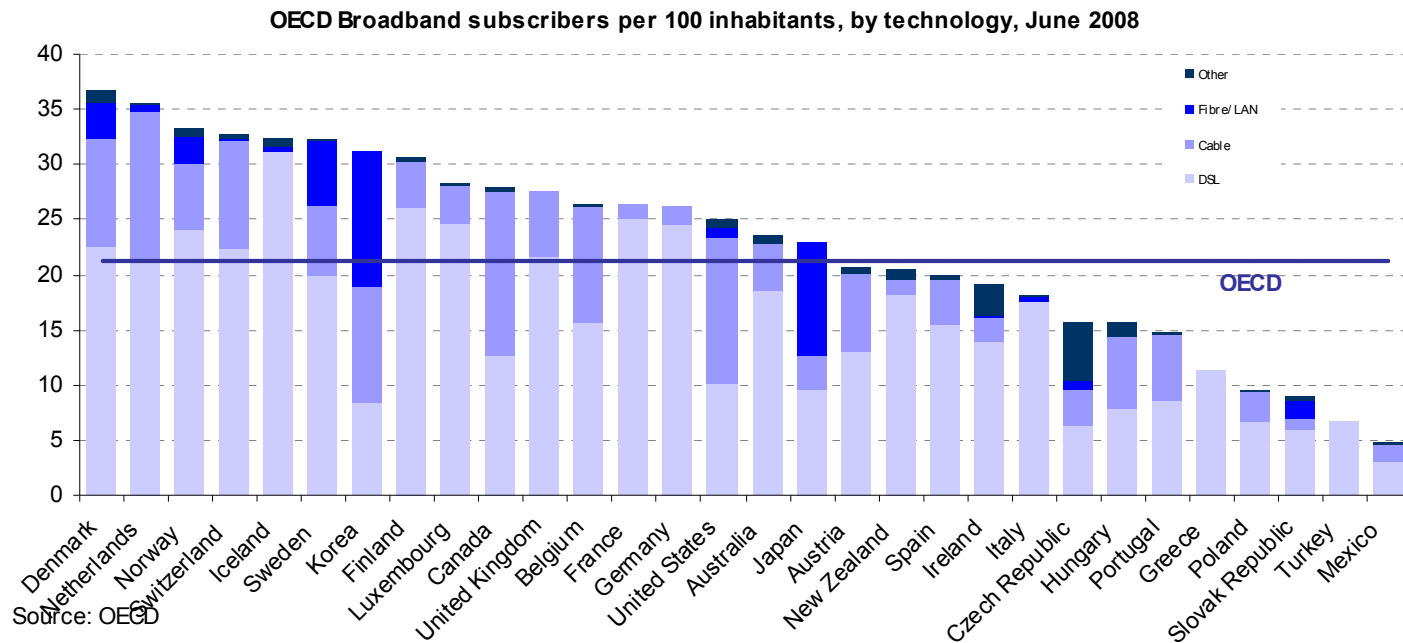


Source: FCC reports based on Form 477 carrier data

Economic consequences

- Slower-than-expected roll-out and adoption of broadband.
- Loss of consumer choice. (Higher retail prices?)
- Network neutrality problems that are likely to necessitate highly intrusive re-regulation.
- Possibly some acceleration of fibre deployment by incumbents, but at the cost of greatly impacted deployment by competitors.

Economic consequences



- Apologists for US incumbents will say that the US is not doing all that badly.
- Possibly true but irrelevant. US performance is vastly inferior to what it *could have been*.

Economic consequences

- United States had an enormous head start on broadband deployment over everybody else.
- Ubiquitous cable television: A second pipe to nearly every home.
- High GDP, high disposable income.
- The US arguably should have been in the top 3 in the OECD in broadband adoption.
- The actual mediocre performance constitutes “snatching defeat from the jaws of victory”.

Economic consequences

- Competition in US broadband markets is no longer seen as adequate to prevent anticompetitive threats to Network Neutrality.
- In general, Americans have not more than two real fully competitive broadband options: one telephone incumbent and one cable operator.
- US regulatory institutions are ill equipped to distinguish harmful discrimination from appropriate procompetitive quality discrimination.
- Likely result: highly intrusive re-regulation.

Economic consequences

- Relatively few concrete Network Neutrality complaints:
 - Madison River
 - ComCast
- Case-by-case adjudications, but no rules whatsoever.
 - Consequences were not disproportionate, **but** ...
 - The process is hopelessly flawed.
 - No useful precedents were established.
 - Future judgments are likely to be arbitrary as the composition of the FCC changes.
 - Investment uncertainty.

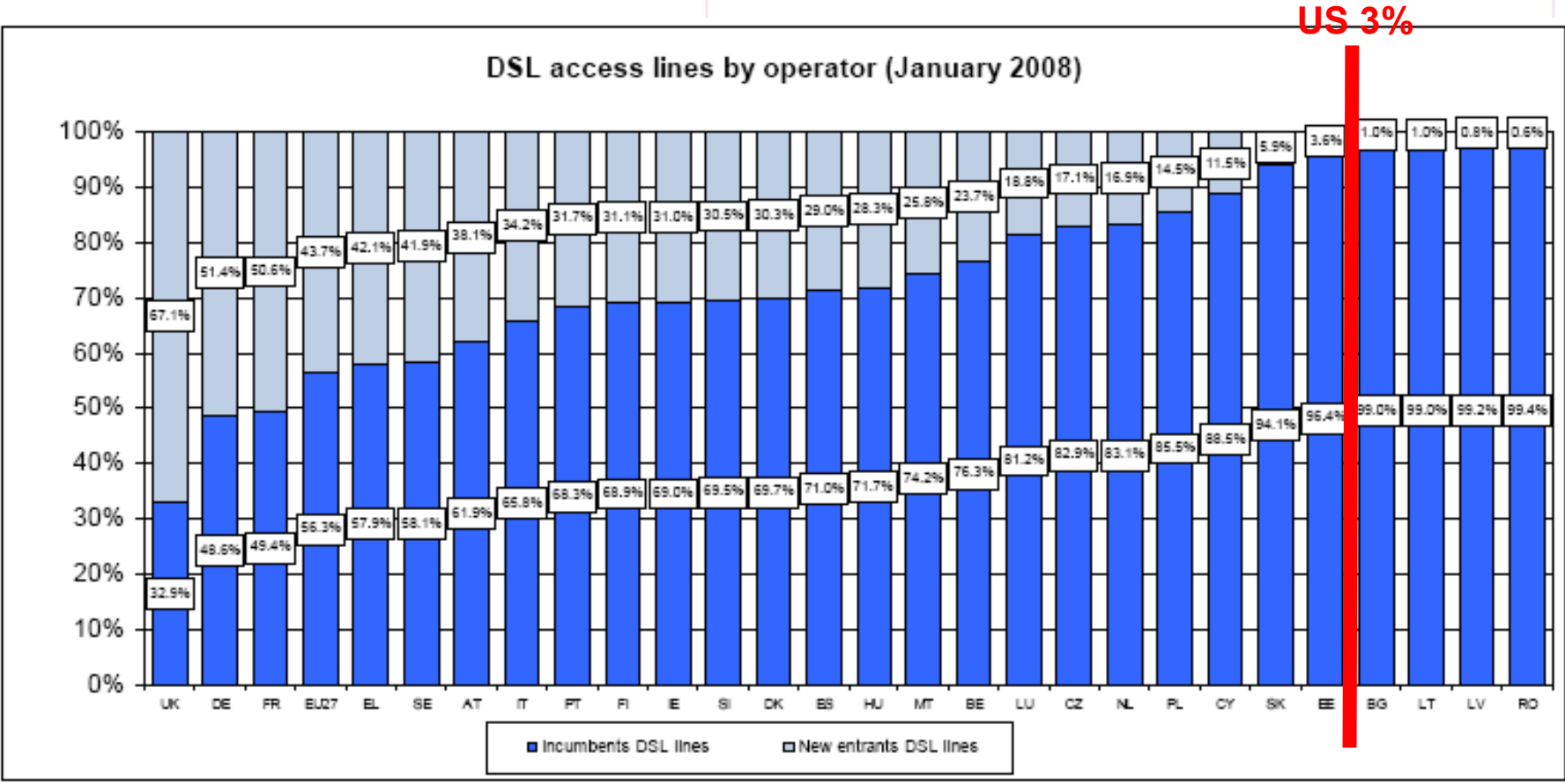
Next moves in the US

- Stimulus bill includes some \$7 billion US in (1) subsidies to rural areas (\$2.5B), and (2) subsidies to unserved and underserved areas (\$4.7B).
- For the US, this is a relatively small subsidy. Few companies were in a position to accelerate deployments over the next twelve months, which was the target time frame for the stimulus package.
- Firms that accept subsidies must also accept “non-discrimination and network interconnection obligations” including the FCC’s “broadband policy statement”.

Procompetitive regulation in the EU

- Core mechanisms
 - Identification of markets susceptible to *ex ante* regulation.
 - Identification of market power (SMP).
 - Imposition of proportionate remedies for SMP.
 - Elimination of remedies absent SMP.
- Technological neutrality.
- Competition law as an *ex post* complement.
- Focus remedies at wholesale level so as to avoid the need for remedies at the retail level.

Procompetitive regulation in the EU



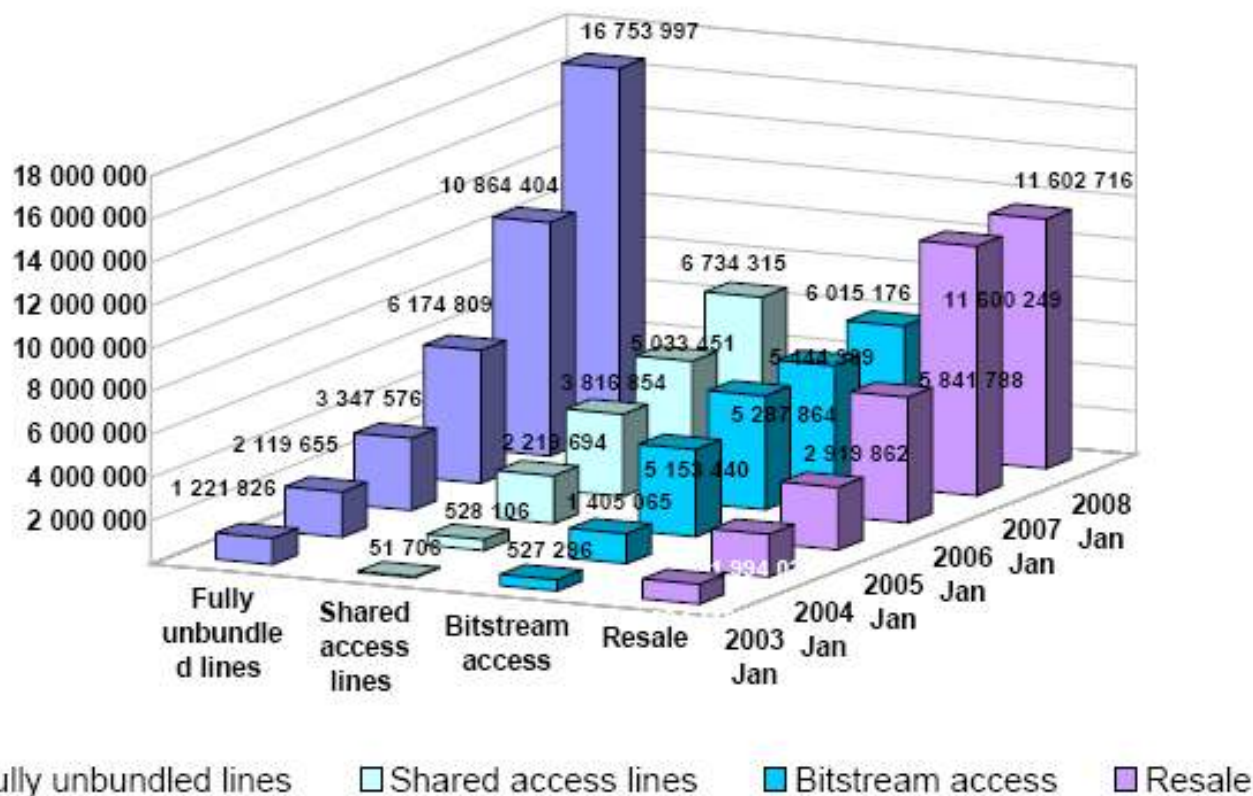
Source: European Commission 13th Implementation Report

Procompetitive regulation in the EU

- Europe has focused on a “ladder of investment”:
 - Resale
 - Bitstream access
 - Share access (line sharing)
 - Full Local Loop Unbundling
- From top to bottom:
 - Higher investments required
 - Greater customer density required
 - More ability to differentiate services
 - Probably greater profitability

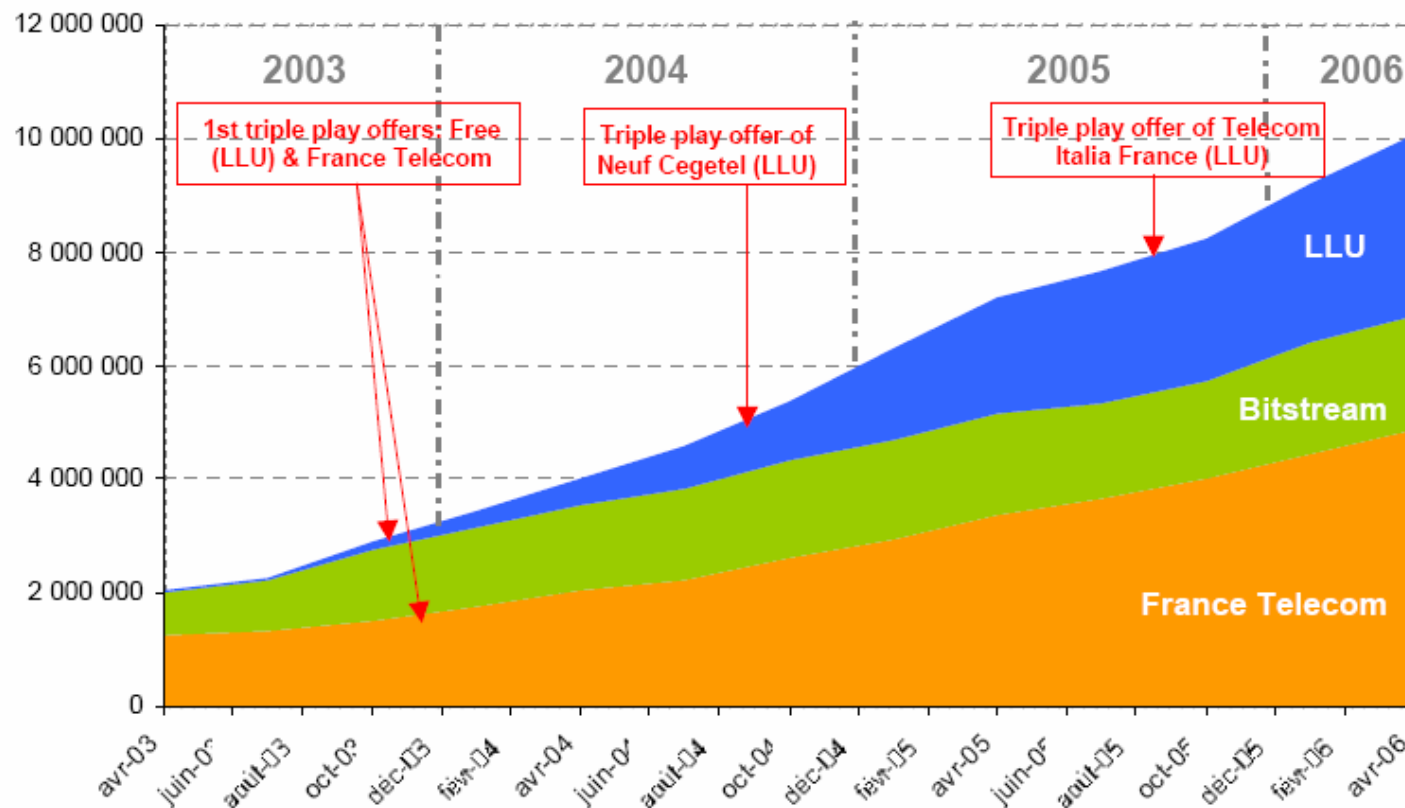
Procompetitive regulation in the EU

Availability of wholesale access in the EU
 Incumbent's PSTN activated main lines (million): 183 577 987
 TOTAL: 41 106 204



Procompetitive regulation in the EU: France

Retail DSL market

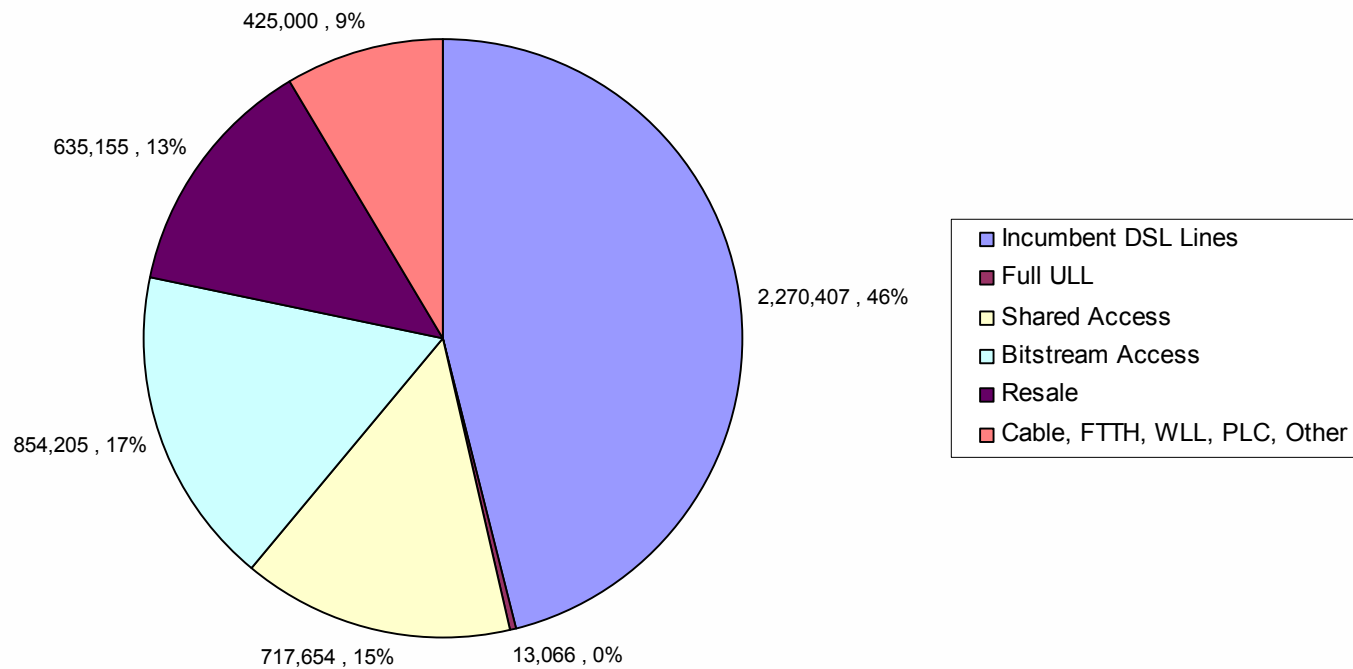


Source: European Regulators' Group (2006)

Broadband market competition report - French Case Study

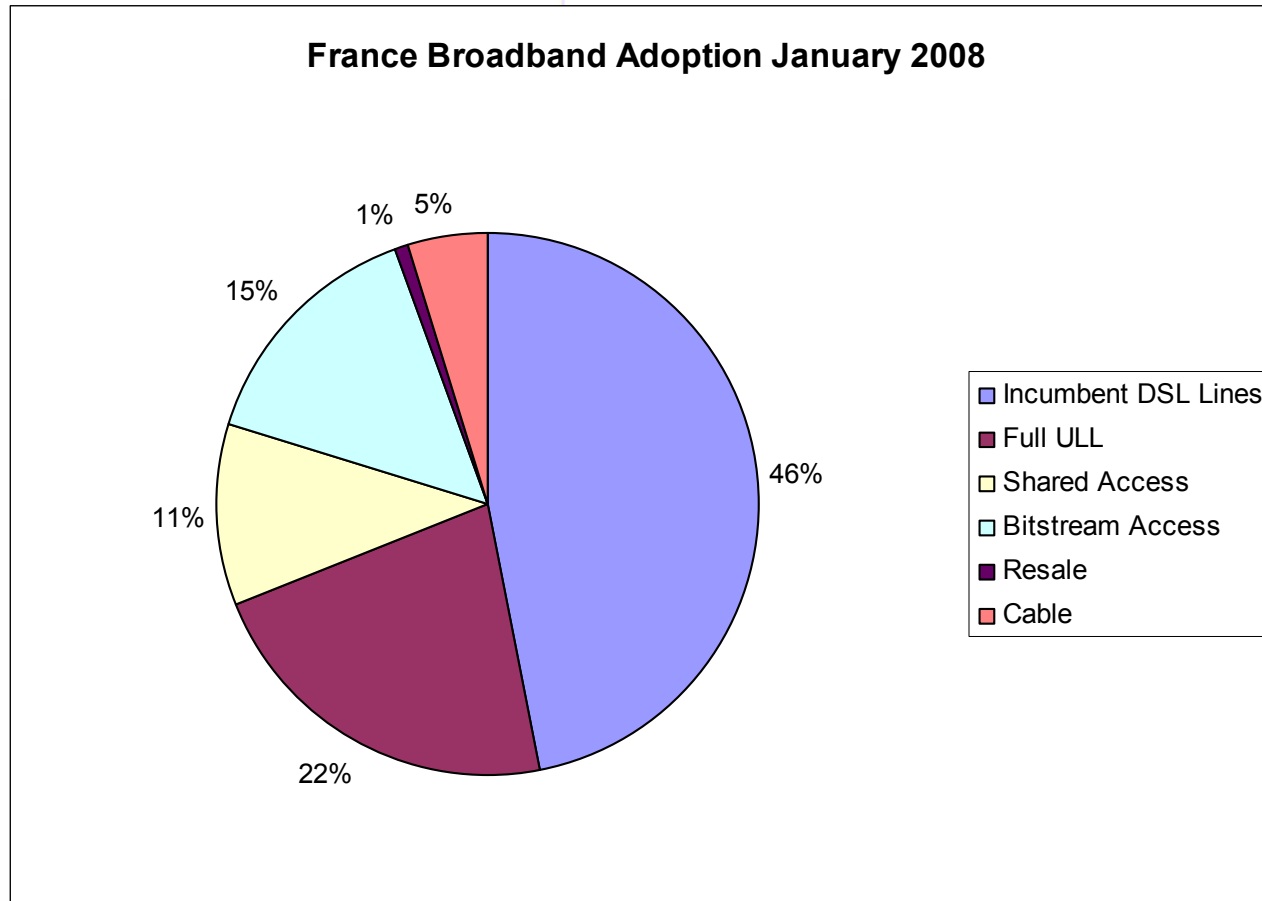
Procompetitive regulation in the EU: France

France Broadband Adoption 7/2004



Source data: European Commission, *10th Implementation Report*

Procompetitive regulation in the EU: France



Source data: European Commission, *13th Implementation Report*

Procompetitive regulation in the EU

- Network Neutrality only a minor concern in the EU.
 - The more robustly competitive environment discourages anticompetitive discrimination.
 - Richer palette of regulatory tools.
- Most Europeans have access to multiple broadband providers (not all of which are fully facilities-based).
- EU regulatory reform seeks minor changes to ensure e.g. that consumers are informed.

Universal Service

- Concepts of best practice emerge in studies by the ITU and by the World Bank (cf. Bjorn Wellenius)
- The national territory can be viewed as consisting of three kinds of areas:
 - Those where commercial incentives are sufficient to ensure deployment and ongoing viability of services.
 - Those that require subsidy indefinitely.
 - Those that could be self-sustaining once initially “jump started”.

Universal Service

- Important to avoid needless subsidies to services that could sustain themselves. Not only is it wasteful, but it also distorts competition.
- “Reverse auctions” are a best practice means of providing no more subsidy than necessary.
- Reverse auctions are not trouble free:
 - The winner may be unwilling or unable to actually complete the build-out at the agree-on price. Encourages “bid to win”.
 - Does not automatically adjust to changing circumstances.

Industry structure and competition in Australia

- No matter who builds the NBN, it is important to ensure appropriate competitive structure.
- Nondiscriminatory wholesale NBN access is crucial.
- Likely to entail some combination of functional or structural separation, or a prohibition on the NBN operator offering retail services.

Industry structure and competition in Australia

- These issues are intertwined with the overall competitive landscape in Australia, which is ripe for serious re-thinking.
- European regulatory models are far more appropriate and helpful than those of the United States.



wik-Consult GmbH
Postfach 2000
53588 Bad Honnef
Tel 02224-9225-0
Fax 02224-9225-68
eMail info@wik-consult.com
[www. wik-consult.com](http://www.wik-consult.com)