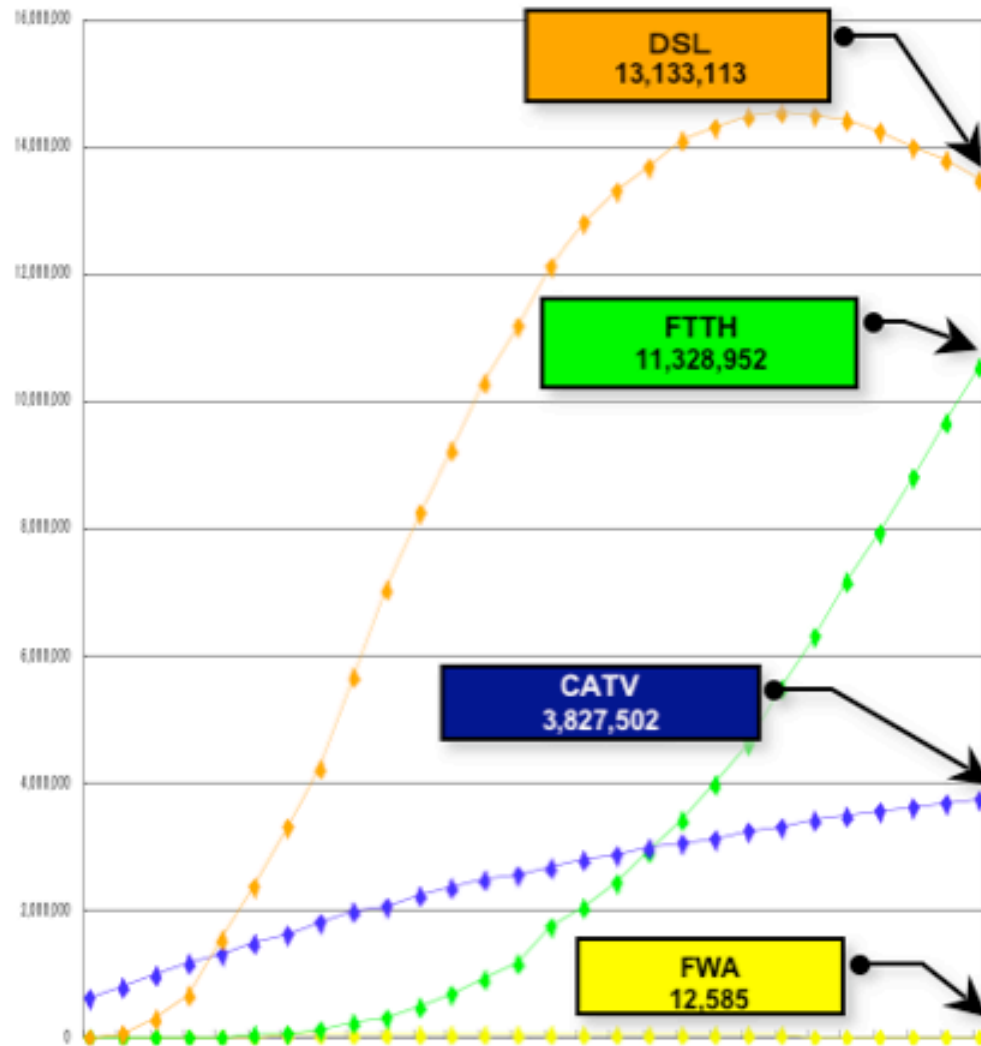


Network Neutrality: also matters in competitive markets

- November 2005 Edward Whitacre, then CEO of SBC (later CEO of the merged SBC/AT&T/Bell South) commented that he was considering charging companies like Google for gaining access to end users over his "broadband pipes".
- In Japan (and Europe) the reaction was "it's not an issue for us, our broadband's competitive". Wrong! At least in Japan. While Japan's competitive market means discrimination against content providers and traffic types is less likely (people have a choice of providers), network neutrality policies are important, they underpin competition rules as we look forward to "ubiquitous network society" (ubiquitous economy) and challenges of the changing broadband market.
- Network neutrality policies are essential to maintaining the Internet as an open and innovative platform.

【Number of Broadband Service Users】



Residential broadband (Dec 07)

Total: 28,289,567

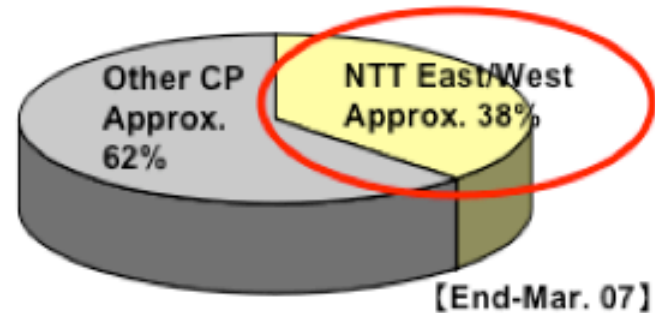
55% households

December 2000:

Cable: 625,000 DSL: 9,732

DSL peak, March 2006: 14,517,859

【Proportion of DSL Subscribers】



NTT 70%+ of FTTH mkt.

(NTT % increasing)

NTT total broadband 48%

- Population 127 million, 51 million households
- Mobile subscribers: 103,345,600 (May 08)
- 3G subscribers: 90,080,300
- Mobile Internet access contracts: 89,142,600
- 40 million contactless payment wallet phones
- 22 million "1seg" mobile terrestrial digital TV phones
- Mobile/fixed broadband integration

- RBB: 28,289,567 (55% hh)
- DSL: 13,133,113 (Dec 07)
- Fiber: 11,328,952
- Cable: 3,827,502
- Fiber will exceed DSL by mid 2008
- Average DSL/month \$40 inclusive of IP phone and equipment
- Average Fiber/month, apartment type \$40, single home including phone and equipment below \$70.

Network Neutrality Principles, Become Policy in November 2007

Introduced as an amendment to the "New Competition Policy Program 2010", November 2007 and are official policy:

- IP networks should be accessible to users and easy to use, allowing ready access to content and application layers
- IP based networks should be accessible and available to any terminal that meets relevant technical standards and should support terminal-to-terminal (or "end-to-end") communication
- Users should be provided with equality of access to telecommunications and platform layers at a reasonable price ("users" refers to end users and content providers and other companies conducting business using IP networks)

Network neutrality also includes the concept of utilizing IP networks with the proper allocation of costs, and without discrimination.

Network Neutrality Principles, then Guidelines on Packet Shaping

Guidelines created by a group of telecom business associations (ministry as an observer). Network neutrality principles first then guidelines for packet shaping based on those. Guidelines issued at the end of May 2008 provide conditions when packet shaping is permitted, they cover:

- Based on the underlying principle that ISPs should increase network capacity in line with increases in network traffic, i.e. packet shaping should only be allowed in exceptional situations.
- When implemented, packet shaping should be justified by objective criteria such as QoS of general users being degraded by traffic from other applications, e.g. P2P.
- Secrecy of communications should be maintained in accordance with the Telecom business law (i.e. deep packet inspection is unlikely).
- Users should be informed about their ISP's packet shaping policy in their contract terms and conditions.
- ISPs will also required to provide relevant information to content providers and other ISPs about any shaping.
- Arbitrary use of packet shaping must be avoided.

Network Neutrality Principles

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- Suggest these principles are globally relevant, and are important to ensuring the continued openness of the Internet.