

Japan's Policy on Nationwide Broadband Deployment

**ITU-MIC Forum on Wireless Broadband Networks
for Asia-Pacific Region (Tokyo, Japan)**

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Atsushi Ozu

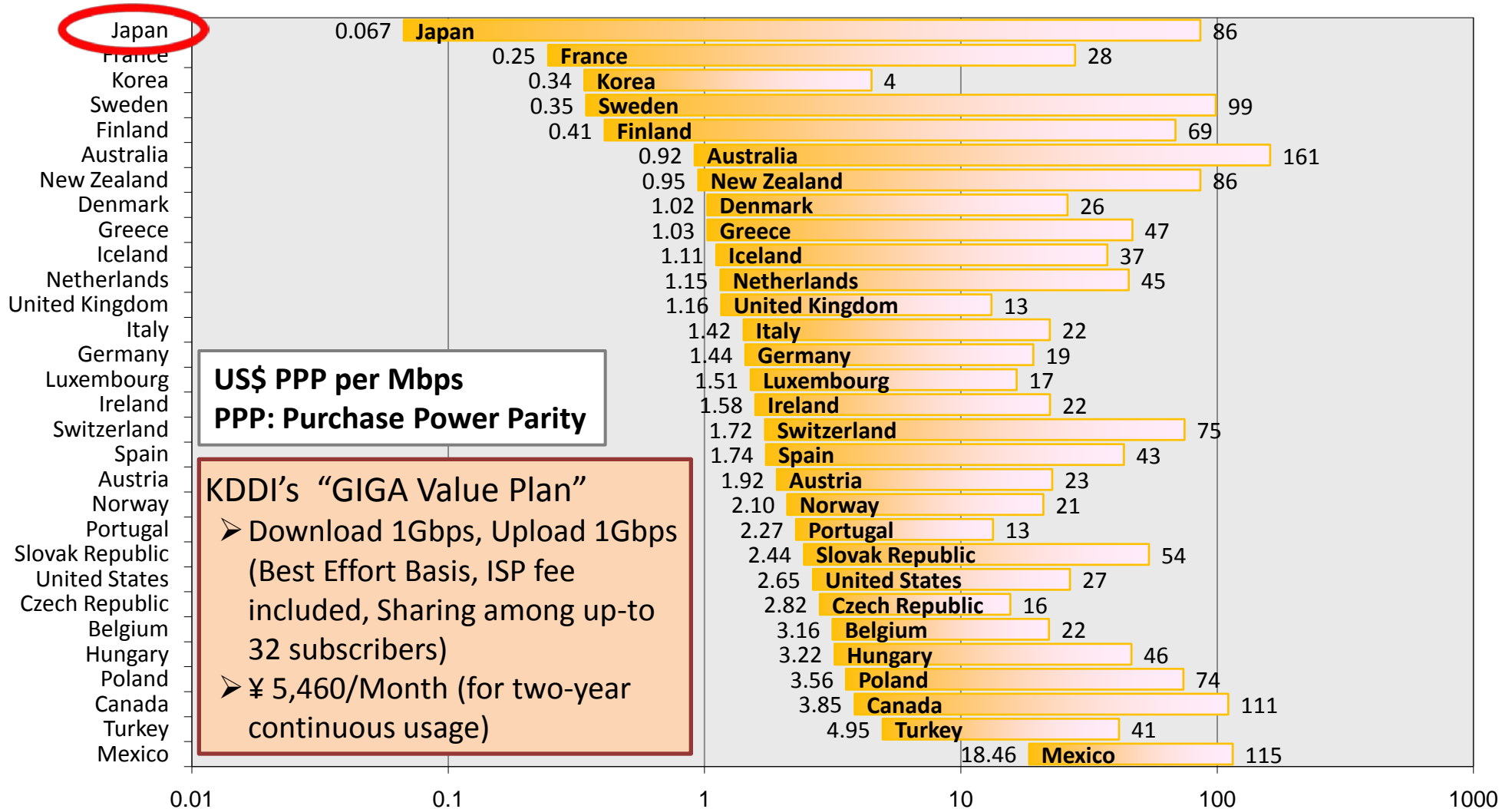
a.ozu@soumu.go.jp

**Director for Broadband Promotion
Telecommunications Bureau
Ministry of Internal Affairs and Communications (MIC), Japan**

Global Comparison (1)

OECD "OECD Broadband Statistics" (Oct. 2008)

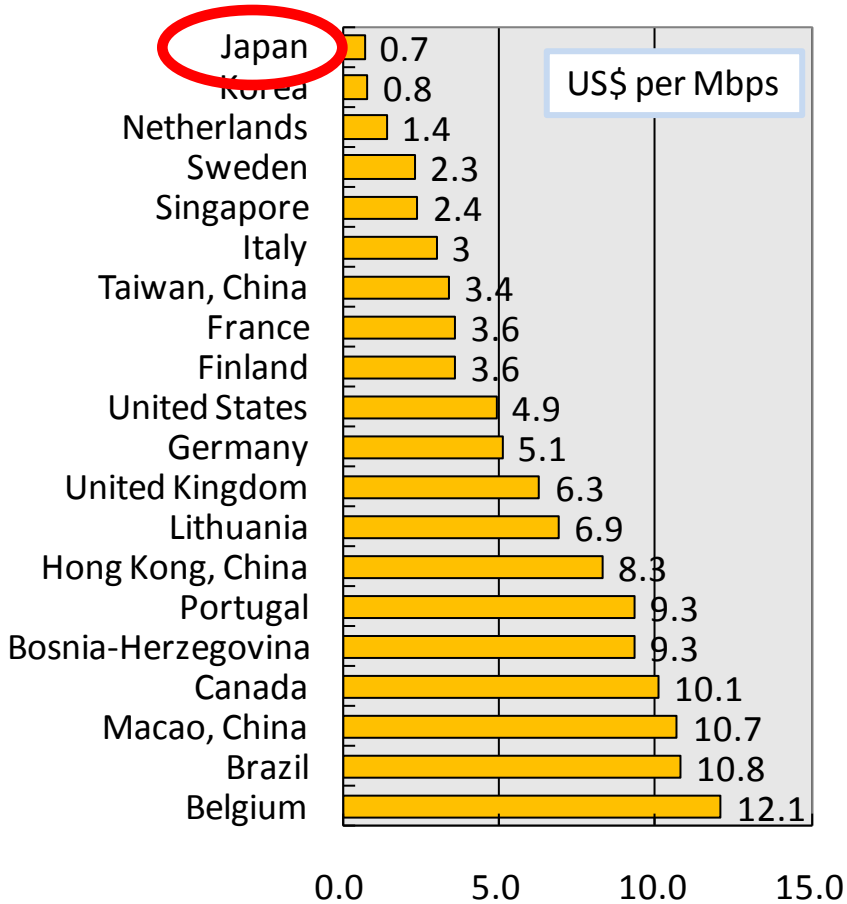
Range of Broadband Monthly Rates per Mbps (FTTH, DSL, CATV)



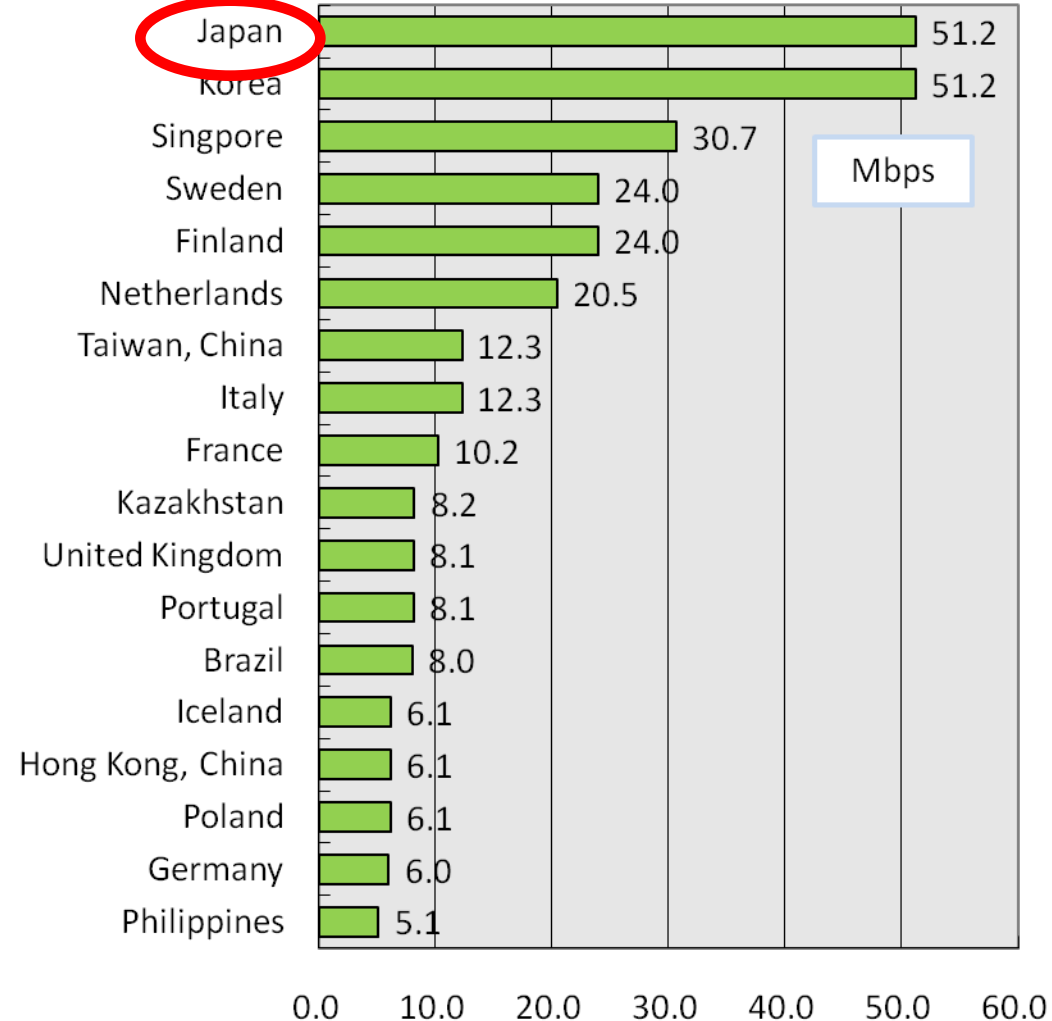
Global Comparison (2)

ITU Internet Report 2006 "digital.life" (Dec. 2006)

DSL Monthly Rate per Mbps



DSL Speed

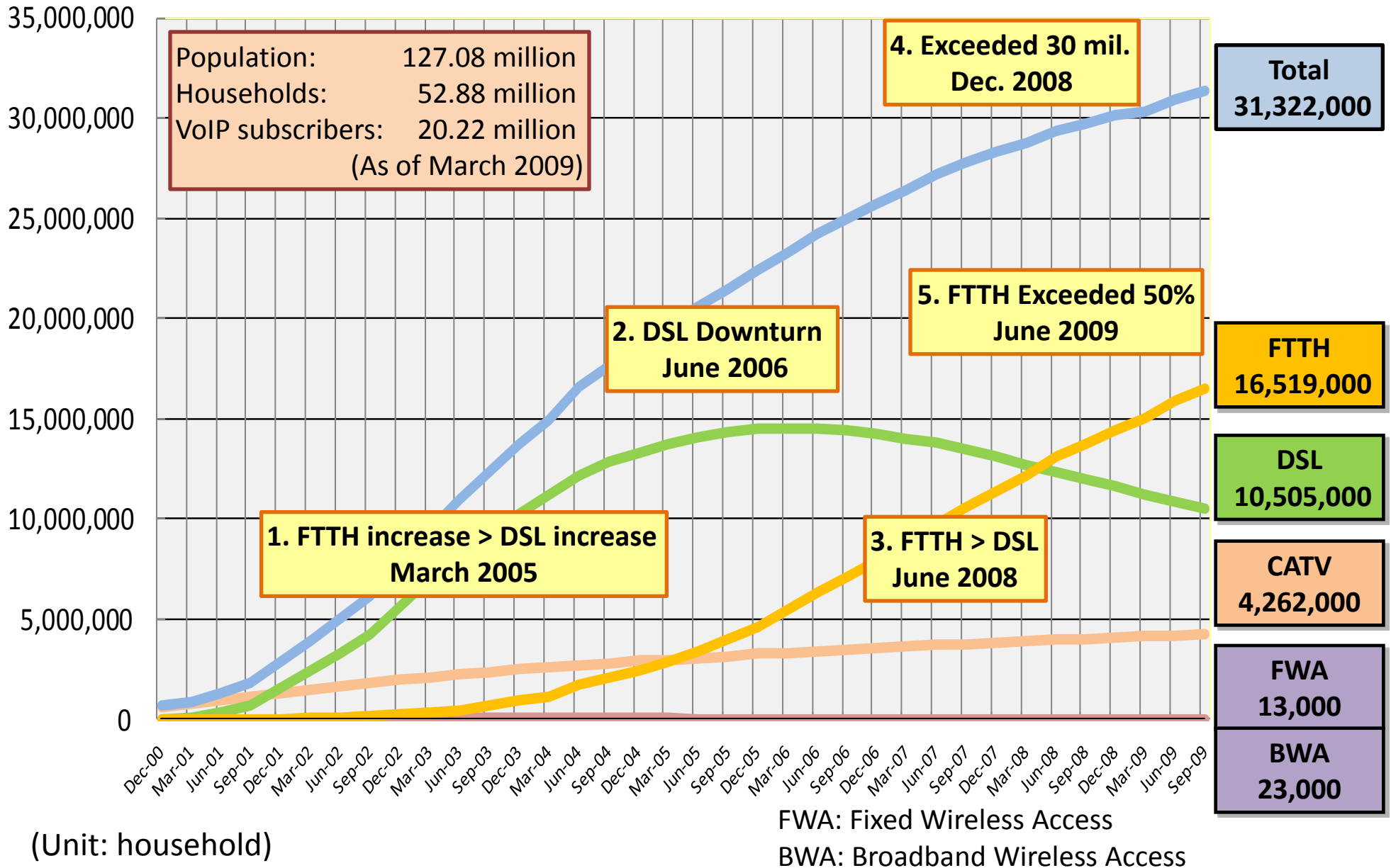


Broadband Subscriptions in OECD Countries:

DSL 60%, CATV 29%, FTTH 9%

OECD Communications Outlook 2009 (Jun. 2008)

Number of Broadband Subscribers in Japan



(Unit: household)

Key Drivers for Japan's Broadband Expansion

- 1. Clear mid/long-term Vision/Policy targets set by the Government**
- 2. Introduction of Competition Measures by MIC**
 - Unbundling Rule and Co-Location Rule
- 3. Demand-pull market expansion due to wide spread of broadband contents**
 - Large photo files, e-mail with attached files, YouTube, websites with Flash function, Peer-to-peer file sharing, etc.
- 4. A Monthly Flat Rate**
- 5. Introduction of attractive new price packages by competitors**
 - Yahoo! BB (¥2,280/month, Sep. 2001)
 - K-Opti.com (FTTH/VoIP Combo ¥5,200/month, Sep. 2004)
- 6. NTT's steady investment in optical fiber network that accommodates wide FTTH expansion**
 - Access Network Opticalization Ratio: 43%(FY2000), 91%(FY2008)

Chronology

Phase 2 (2004-present)

- Sep. 2004 K-Opti.com, a subsidiary of an electric power company, started a low-price combo service of FTTH & VoIP for ¥5,200/month, cheaper than the total price of DSL & ordinary phone of ¥5,547/month.

Phase 1 (1999-2004)

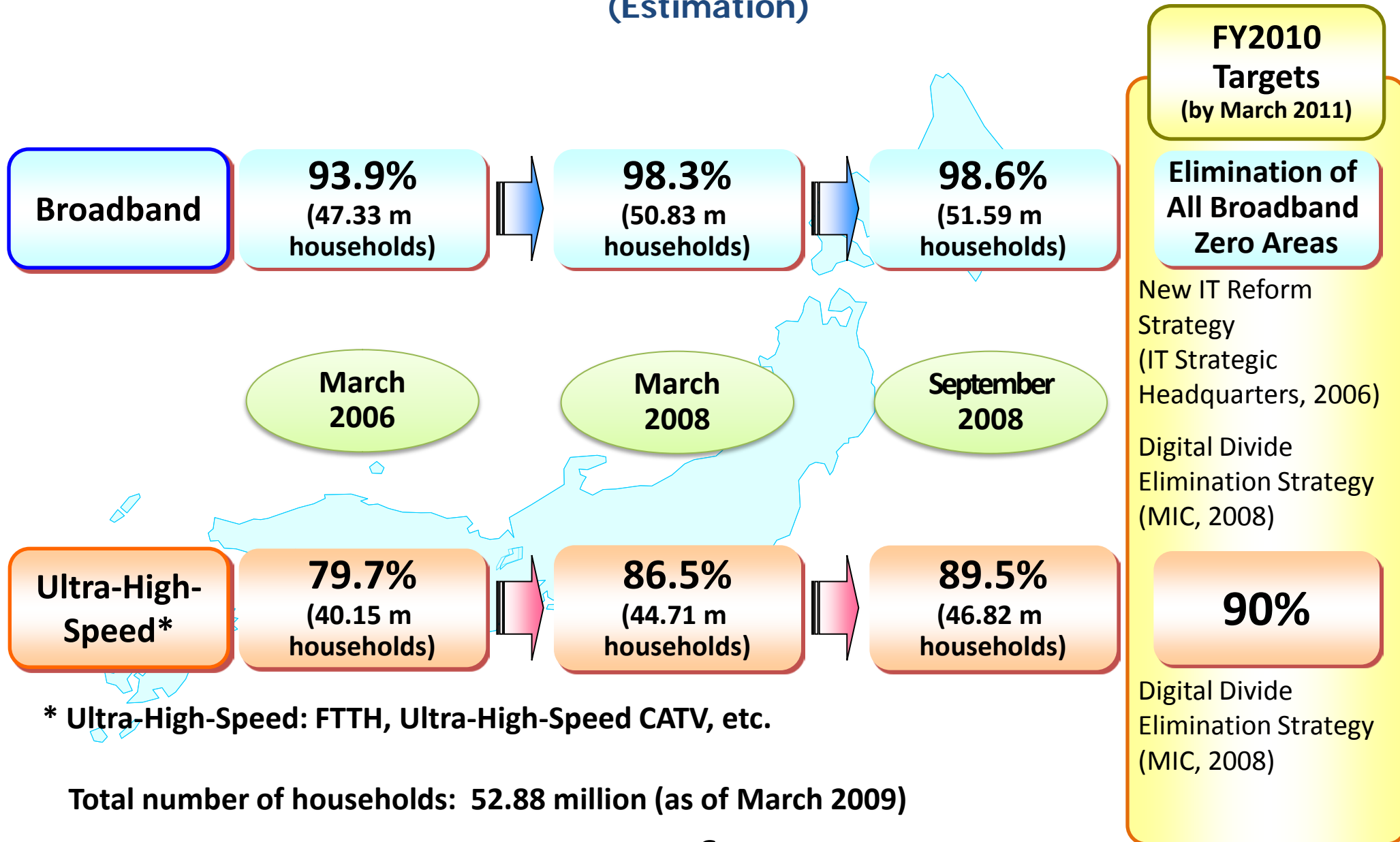
- Sep. 2001 Yahoo! BB started a low-price DSL service (8Mbps, ¥2,280/month)
- Apr. 2001 Unbundling Rules for Optical Fiber
- Sep. 2000 Unbundling Rules (line-sharing) for Copper Cable (¥97/month)
- Sep. 2000 Co-Location Rules
- Dec. 1999 Tokyo Metallic Com. started DSL commercial test (¥5,500, later transferred to commercial)

Phase 0 (1994-1999)

Government-led strategic target of optical fiber deployment and NTT's steady investment.

Ratio of Households Covered

(Estimation)



* Ultra-High-Speed: FTTH, Ultra-High-Speed CATV, etc.

Five Types of Broadband Service Provision

Five Types of Role-Sharing between Private and Public Sectors for Broadband Service Provision

Type	Building	Operation	Explanations
1	Private Sector	Private Sector	Correct Basic Model.
2	Private Sector	Private Sector	Neighborhood Community/Local Govt. provides a <u>Potential Subscriber List</u> to Telecom Operator.
3	Private Sector	Private Sector	Telecom Operator builds Broadband facilities based on the incentives prepared by Central/Local Govt. → <u>Need for Measures for Telecom Operators.</u> → <u>Need for Measures for Local Govt.</u>
4	Public Sector	Private Sector	Local Govt. builds Broadband facilities, and rents them to Telecom Operator. → <u>Need for Measures for Local Govt.</u>
5	Public Sector	Public Sector	

Promotion Schemes for Nationwide Broadband Deployment (1)

Measures for Telecommunications Operators

Interest Aid

National Institute of Information and Communications Technology (NICT) will grant a subsidy of interest aid with a maximum interest of 2% for a loan made by a telecommunications operator from a fund for building broadband facilities, including optical fiber and DSL, in order to provide telecommunications service.

Debt Guarantee

NICT will guarantee 80% of a loan made by a private telecommunications operator from a fund for building broadband facilities, such as optical fiber and DSL, for providing telecommunications service.

Tax Breaks

1. Accelerated Tax Depreciation (National Tax)

Accelerated tax depreciation is allowed for telecommunications operators building broadband facilities, such as optical fiber and DSL, in order to provide telecommunications service.

2. Reduction of Tax Bases for Fixed Asset Taxes (Local Tax)

Partial reduction of the tax base for fixed asset taxes is allowed for telecommunications operators building broadband facilities, such as optical fiber and DSL, in order to provide telecommunications service.

Measures for Local Governments

Grants/Subsidies

1. Local Information and Communications Infrastructure Development Grants (ICT Grant)

- Grants equivalent to one third of total project cost will be provided to local governments that will build broadband facilities to address the digital divide.
- Budget: 7.9 billion yen (FY2009—April 2009 to March 2010)

2. Local Intranet Infrastructure Facility Development Promotion Grants

- Grants equivalent to one third of total project cost will be provided to local governments that will build broadband or ultra-high-speed local public networks connecting public facilities such as schools, libraries, and municipal offices.
- Budget: 2.2 billion yen (FY2009—April 2009 to March 2010)

Local Government Financial Measures

Local Governments are allowed to use **the Special Local Allocation Tax** and to issue local government bonds, such as **Depopulated Area Development Bonds**, for a variety of their policy needs, and they may utilize these schemes for building broadband facilities, including optical fiber and DSL.

Broadband Type Comparison

	Wired Broadband		Wireless Broadband	
	FTTH	DSL	Terrestrial (Wi-Fi, FWA, WiMAX)	Satellite
Speed (Best Effort)	100Mbps - 1Gbps	1Mbps - 50Mbps	10Mbps - 50Mbps	1Mbps - 10Mbps
Installation Cost	High	Very Low (Telephone copper cable can be used)	Moderate (Lower than FTTH)	High
Installation Unit	Area	Area	Area	Pin-point
Characteristics	<ul style="list-style-type: none"> ➤ <u>Very fast and stable connection</u> ➤ Last-one-mile wiring is needed ➤ Trunk line is needed 	<ul style="list-style-type: none"> ➤ Speed depends on the <u>distance from the telephone company's building</u> ➤ No need for last-one-mile wiring ➤ No need for a trunk line 	<ul style="list-style-type: none"> ➤ <u>No need for last-one-mile wiring</u> ➤ Trunk line is needed 	<ul style="list-style-type: none"> ➤ <u>The only practical broadband for certain areas</u> ➤ No need for last-one-mile wiring ➤ No need for a trunk line
Target Areas	Populated areas, such as urban areas and central areas of suburbs	Areas within a certain distance from the telephone company's building	Broad areas where users are scattered	Areas under severe geographic conditions, such as island and mountains

Efforts for Nationwide Broadband Deployment

As of March 2009, it is estimated that **about 640,000 households** do not to have access to Broadband.

- About 1% of households do not have access to Broadband.

The expansion of telecom operators' service area is the basic model of Nationwide Broadband Deployment. However, there are many areas where telecom operators are not likely to provide services. For those areas that Local Govt. wishes to have Broadband, Broadband, such as FTTH, is installed with support from the Public Promotion Schemes, such as the ICT Grant.



Under the Public Promotion Schemes, **about 340,000 households** will have access to Broadband.

- FY2009 Supplementary Budget.
- About 340 proposals was submitted by Local Govts.
- Total project cost is about JPY 230 billion.



For the **approximate 300,000 households** remaining:

- Many of them will have access to Broadband due to telecom operators' service area expansion.
- For those areas where Local Govt. did not submit a proposal and which still remain uncovered (about 10,000 households), they are expected to be dealt with by Satellite Broadband.



Elimination of Broadband Zero Areas is expected to be achieved earlier than targeted date of the end of FY2010 (March 2011)