

# Broadband Policies in Japan

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# Topics

- I Broadband Environment in Japan
- II Major Policies for Broadband Deployment
- III Current Agenda for Broadband Enhancement

# I Broadband environment in Japan

Japan in 1999 (before Dec.)

- There's **NO broadband** service in Japan. Highest residential Internet access at that time was ISDN dial-up (64kbps).

- Japan's internet access environment was said: **SLOW and EXPENSIVE.**

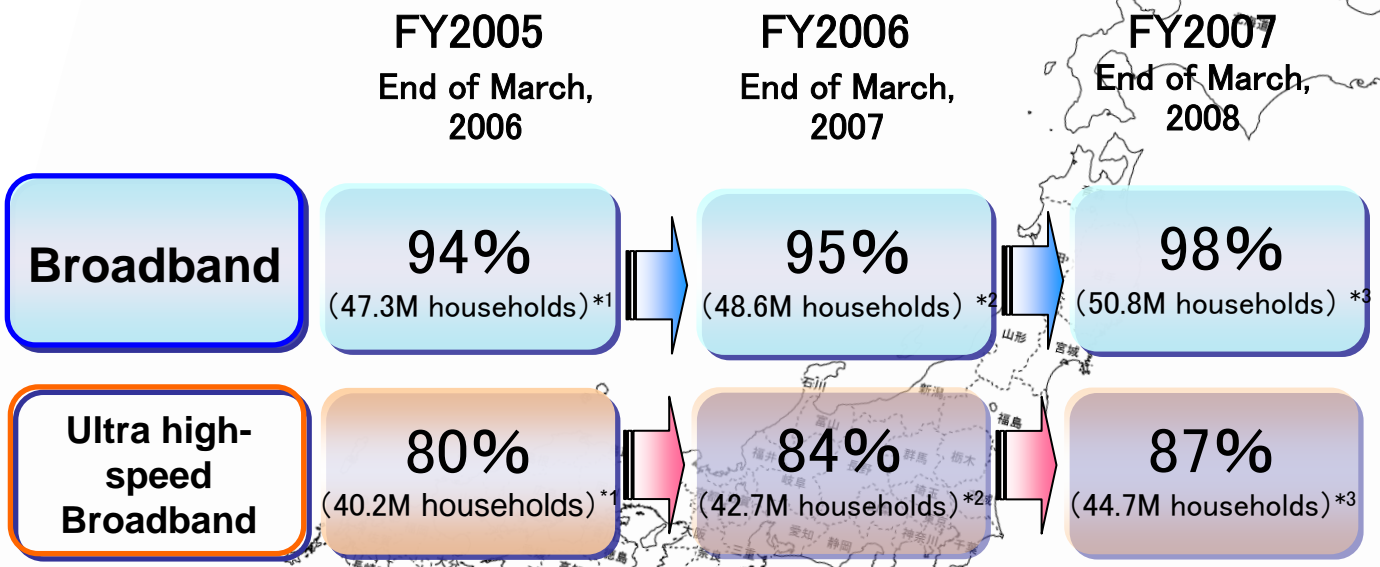


Japan NOW

- The Household Coverage of Broadband reached **98% (Availability)** and **67.6% (Usage)** (Mar. 2008).

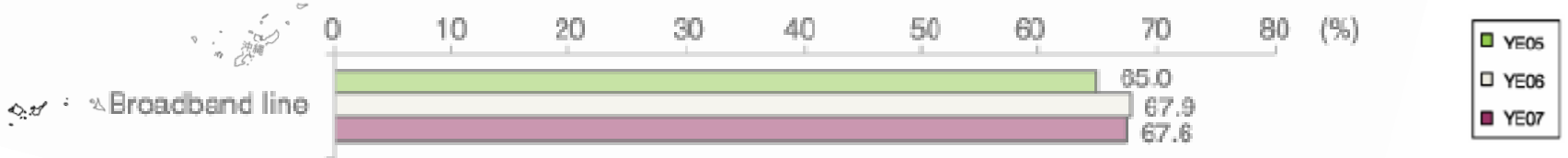
- Japan's households enjoy **50 Mbps DSL & 100Mbps/1Gbps FTTH** services with **competitive prices.**

## Household Coverage of Broadband Availability

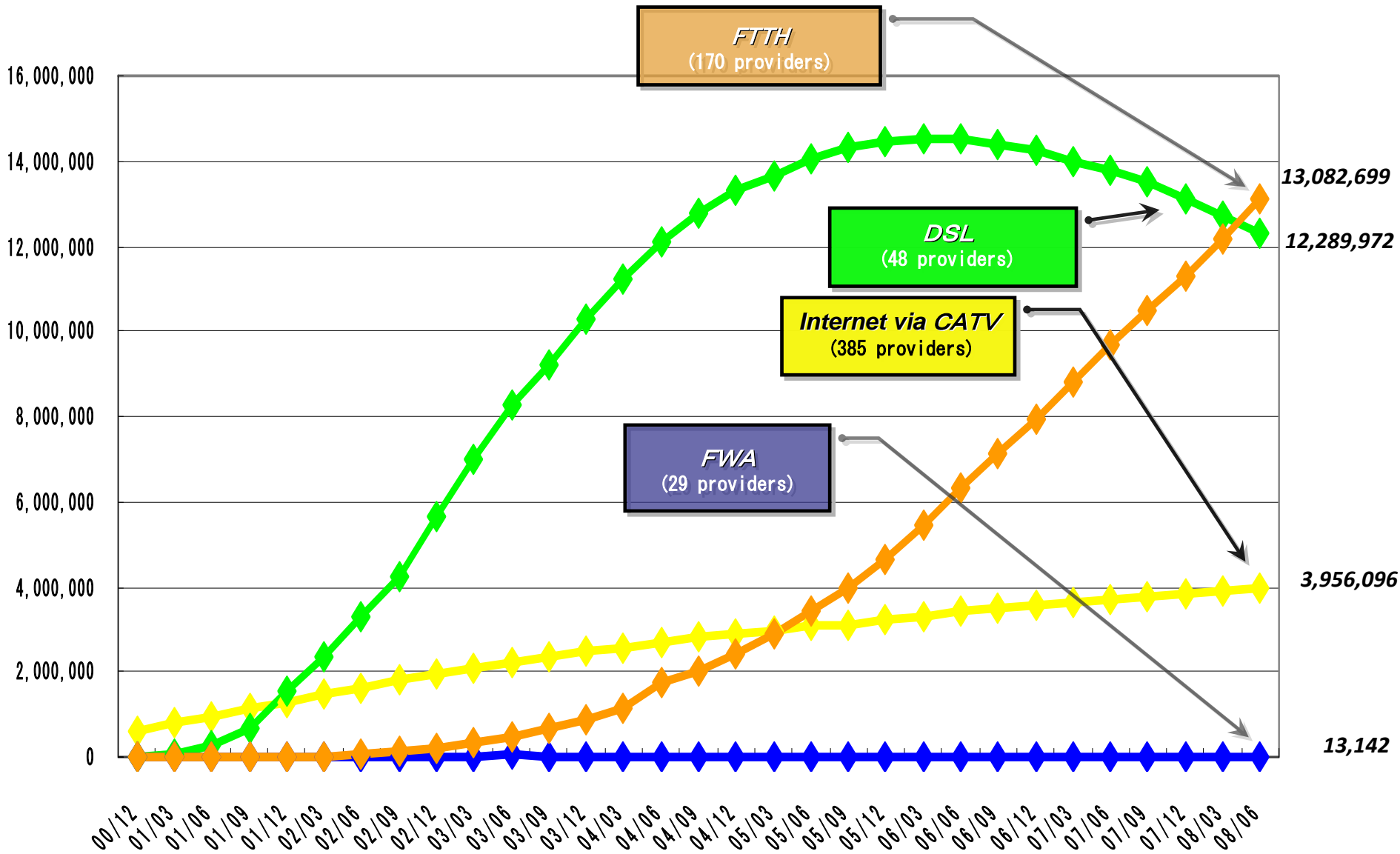


\*1 The total number of the households are based on Juki Net at the end of March, 2005 (50.4M households)  
 \*2 The total number of the households are based on Juki Net at the end of March, 2006 (51.1M households)  
 \*3 The total number of the households are based on Juki Net at the end of March, 2007 (51.7M households)

## Household Coverage of Broadband Usage



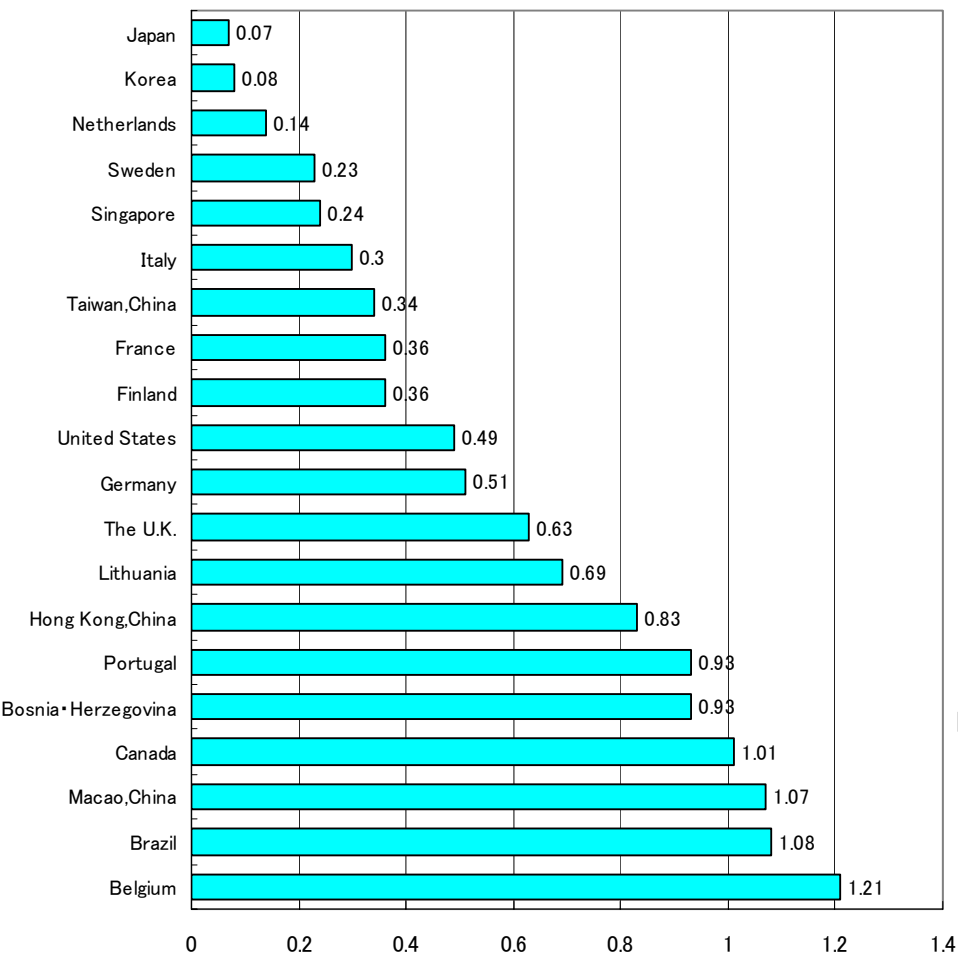
# The Number of Broadband Subscribers



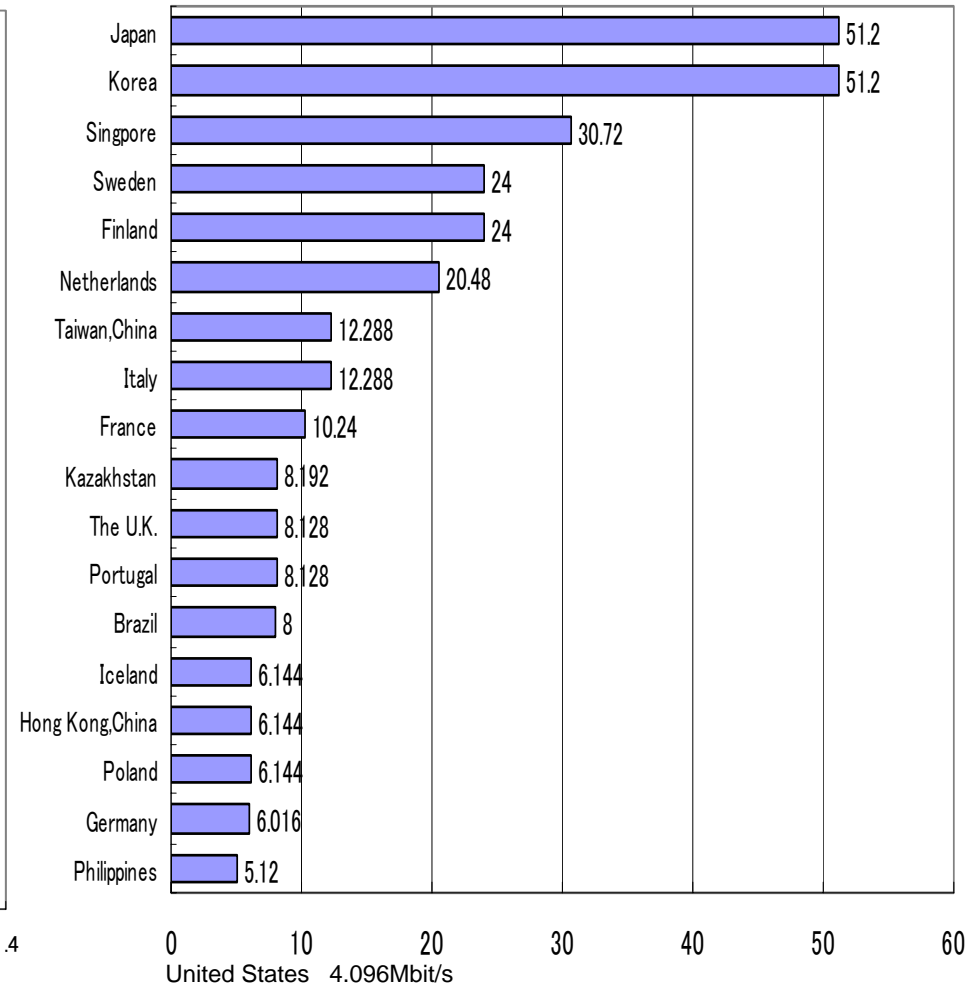
Source : Ministry of Internal Affairs and Communications

# Broadband Services in Global Comparison

## Broadband prices (100kbit/s) (US dollar)



## Speed of DSL (Mbit/s)



## II Major Policies for Broadband Deployment

1. National Broadband Strategies (2001-)
2. Unbundling Policies (1999-)
3. Grant-in-Aid System (2006-)

# 1. National Broadband Strategies (2001-)

- IT Strategy Headquarters has made 3 ICT strategies since 2001. (MIC established u-Japan Policy in 2004.)

## IT Strategy Headquarters

(The Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society)

Director-General:

Prime Minister

Vice Director-Generals (as of Dec. 2008):

Minister of State for Science and Technology Policy

Chief Cabinet Secretary

Minister of Internal Affairs and Communications

Minister of Economy, Trade and Industry

Members:

Other State Ministers and Experts

- For the broadband deployment, all 3 strategies put an emphasis on competition policies. Last 2 and u-Japan mentions supports for non-profitable areas.



# Broadband policies & targets in National ICT Strategies

2001 ~2005 ~2010 2011

**e-Japan Strategy (January 2001)**  
 Broadband Infrastructure Deployment through Competition

**Target:** High-speed constant access networks to at least 30million households; Ultra high-speed constant access to 10million households by 2006

**e-Japan Strategy II (July 2003)**  
 Competition & special measures for not profitable areas

**Target:** Elimination of Broadband Zero Area by 2010 (+2006 target: Make 90% households to access Ultra high-speed interactive broadband by 2010)

**IT New Reform Strategy (January 2006)**  
 Fair Competition & private sector-incentives

**Target:** Elimination of areas where broadband remains unavailable by FY 2010

**MIC's "u-Japan" Policy (December 2004)**

\* Ultra high-speed (constant) access networks :  
 The Internet networks through which even large volume picture data such as movies can be smoothly downloaded. At present, the Internet access networks by optical fiber is the major example.  
 \* High-speed (constant) access networks :  
 The Internet networks through which music data and others can be smoothly downloaded. At present, the Internet networks by such lines as xDSL, Cable TV and Subscribers' Wireless Access System are the major examples.

## 2.Unbundling Policies (1999-)

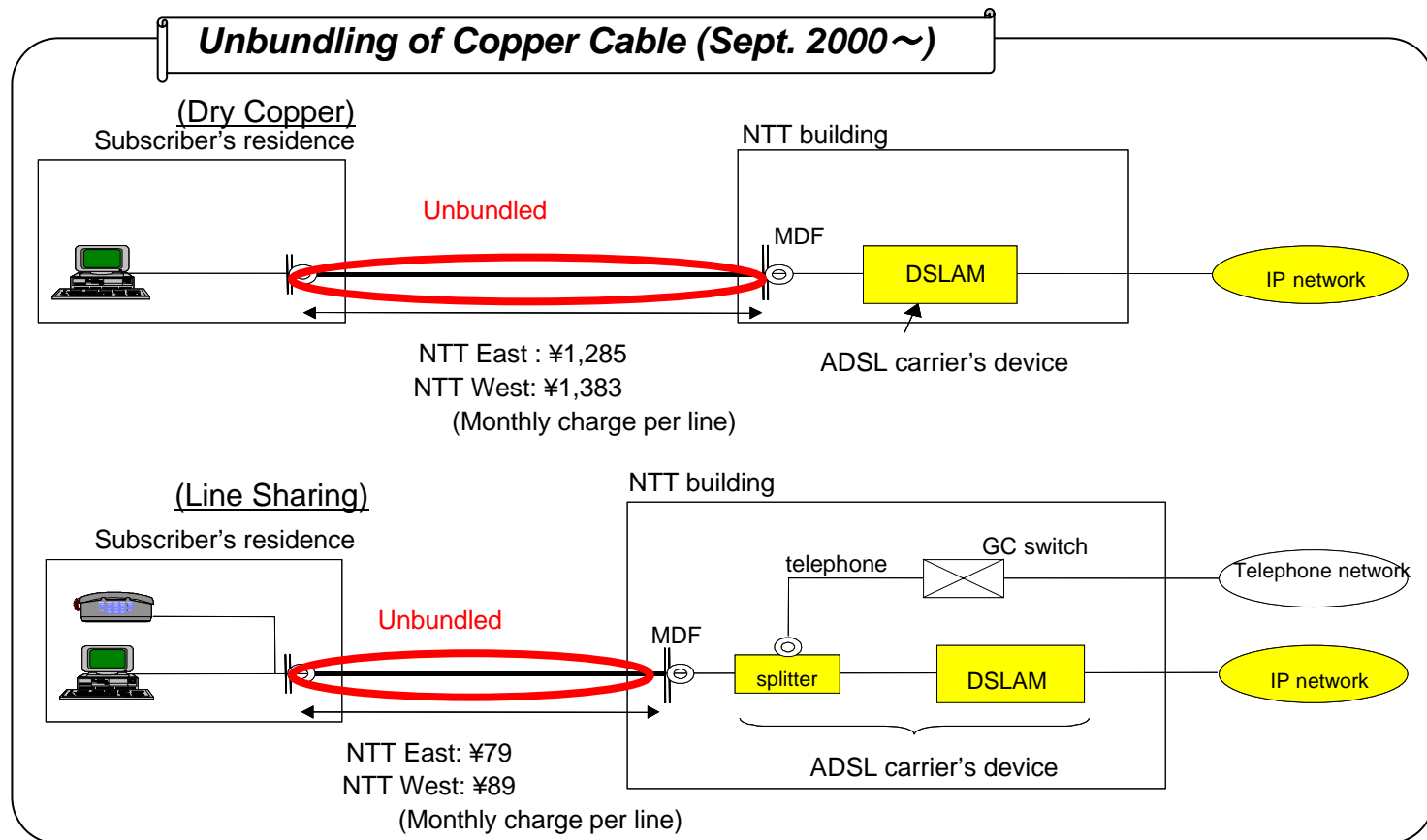
- Ministry of Communications (now MIC) introduced the 1<sup>st</sup> so-called UNBUNDLING policy in 1999 and the 1st ADSL service was realized in Dec. 1999.

- UNBUNDLING rules were issued and expanded in 2000 and 2001. The COLOCATION rules were introduced in 2000.

- With the competition among the market players, prices were lowered, speeds were raised and subscribers were rapidly increased.

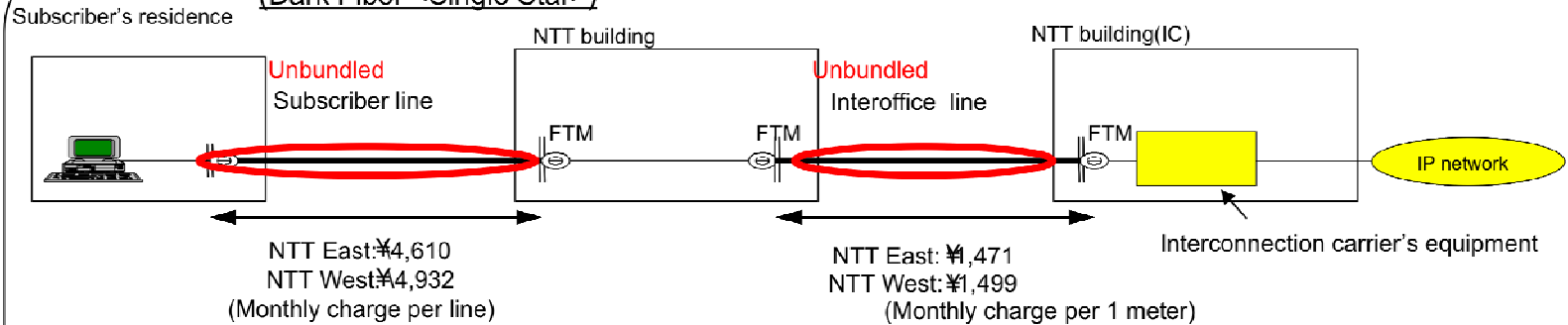
# What is UNBUNDLING?

- Unbundling is to set the interconnection charges per function. (You don't have to pay for the functions you don't need.)
- The subscriber lines (Copper Cable and Optical Fiber) and interoffice lines (Optical Fiber) were made to be unbundled for competitive carriers by Ministerial Ordinances in 2000 and 2001.

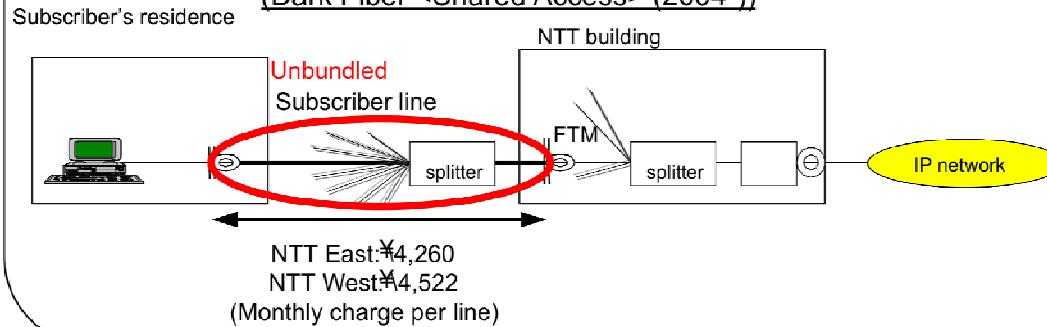


## Unbundling of Optical Fiber (Apr. 2001~)

### (Dark Fiber <Single Star>)



### (Dark Fiber <Shared Access> (2004-))



❑ To connect facilities with the unbundling of lines, COLOCATION rules were vital for competitive carriers to provide their services.

### Colocation Rules (Sept. 2000~)

- 1) Disclose information on open space
- 2) Set application procedures for construction and maintenance by interconnection carriers
- 3) Set up standard period (for survey application, reply, application of installation and starting construction)

1. The TRANSMISSION LINE FACILITIES (SUBSCRIBER LINES and other facilities) are essential for providing Telecommunications services.

**It is almost impossible for competitive carriers to reach houses or offices without ESSENTIAL FACILITIES.**

2. Transmission speed depends on transmitting devices connected to two ends of each transmission line.

**When you have new transmitting devices for broadband services, you need to get ESSENTIAL TRANSMISSION LINES to be connected with the devices for providing broadband services.**

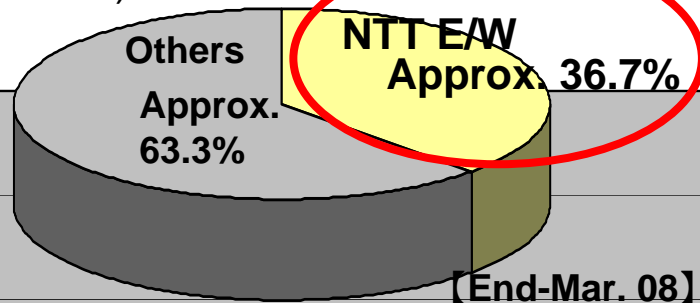
3. 60 million SUBSCRIBER LINES had been established by one century-long national monopoly.

**It is almost impossible for competitive carriers to reestablish nationwide subscriber lines and other ESSENTIAL FACILITIES to compete against NTT.**

**>>> Rules for Unbundling of ESSENTIAL TRANSMISSION LINES are vital to realize competitive environment for BROADBAND services.**

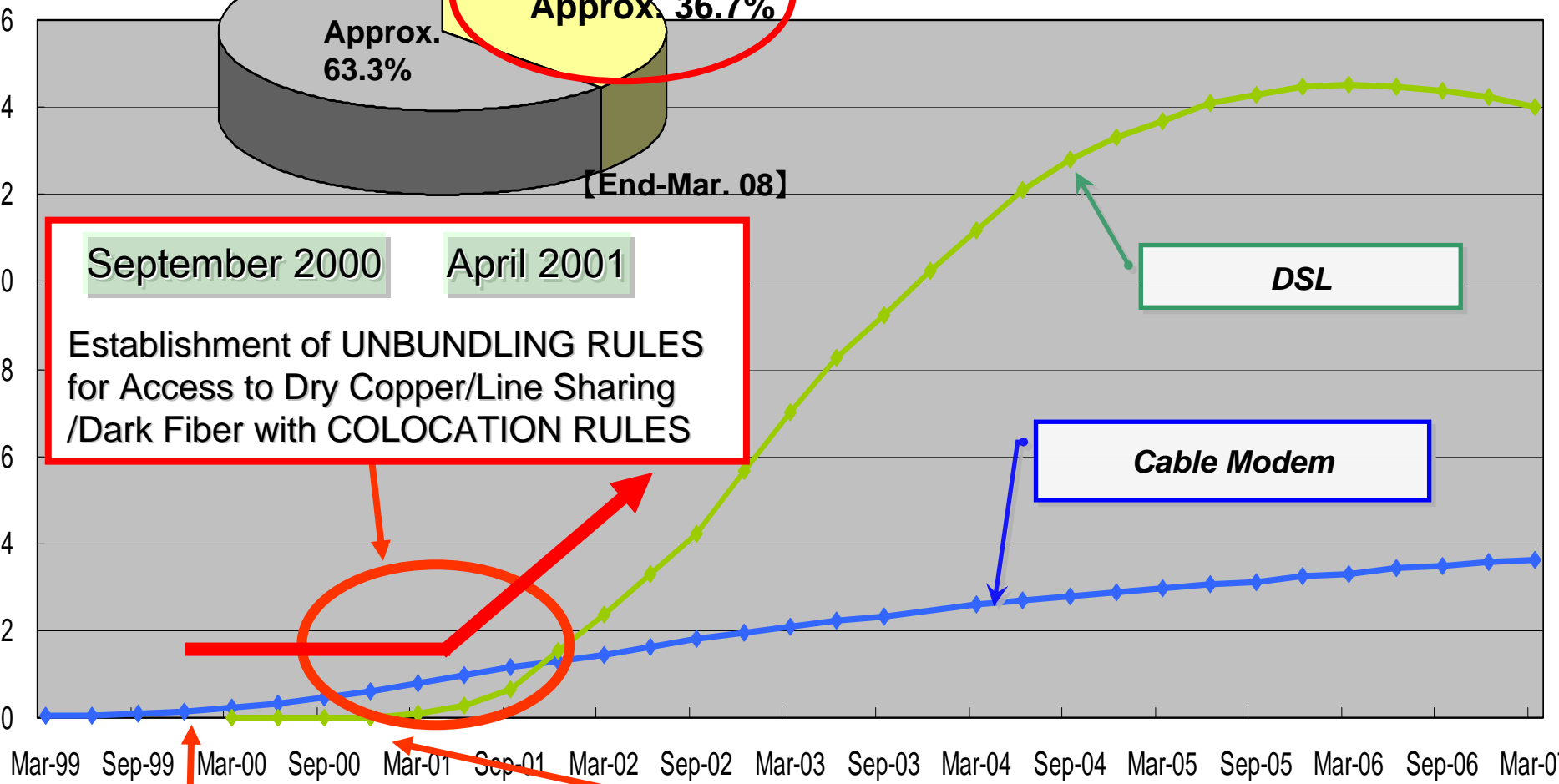
# Competition brought many subscribers to the market

(millions subscribers)



September 2000      April 2001

Establishment of UNBUNDLING RULES  
for Access to Dry Copper/Line Sharing  
/Dark Fiber with COLOCATION RULES



*DSL*

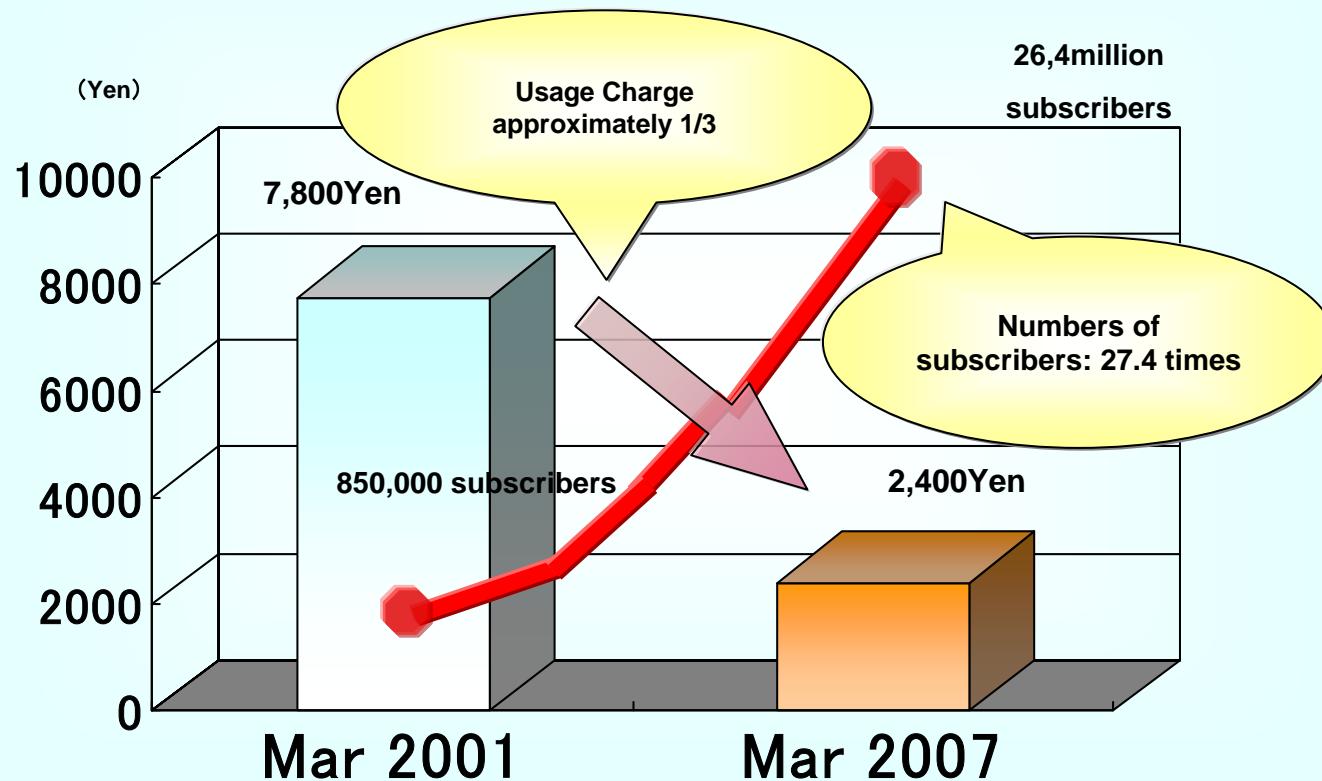
*Cable Modem*

Dec.1999 First Unbundling of  
Dry Copper/Line Sharing

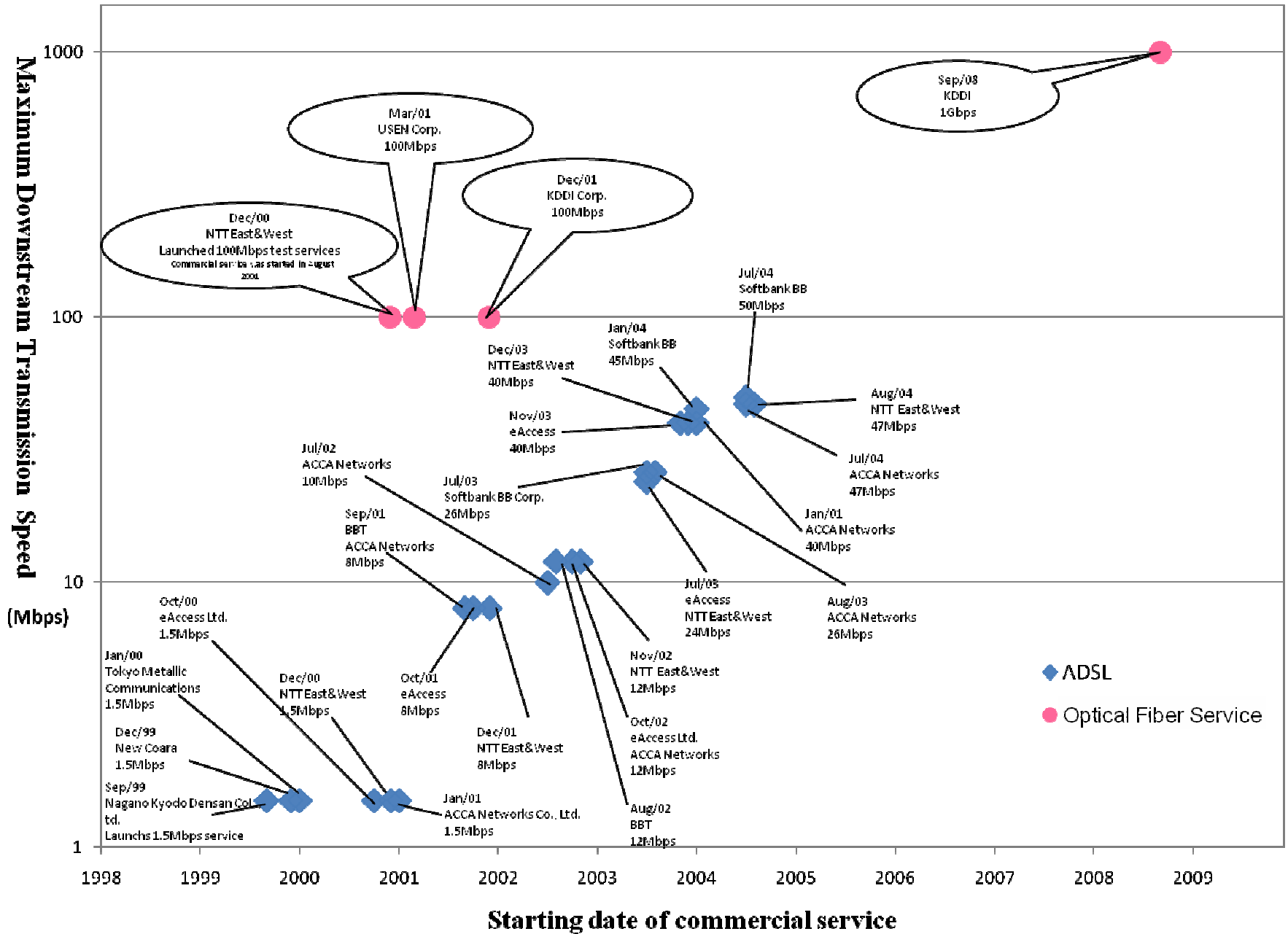
Dec.2000 First Unbundling of  
Dark Fiber

# OUTCOME 1: Usage Charges were lowered

## ◆ High-speed Internet usage charge and subscribers

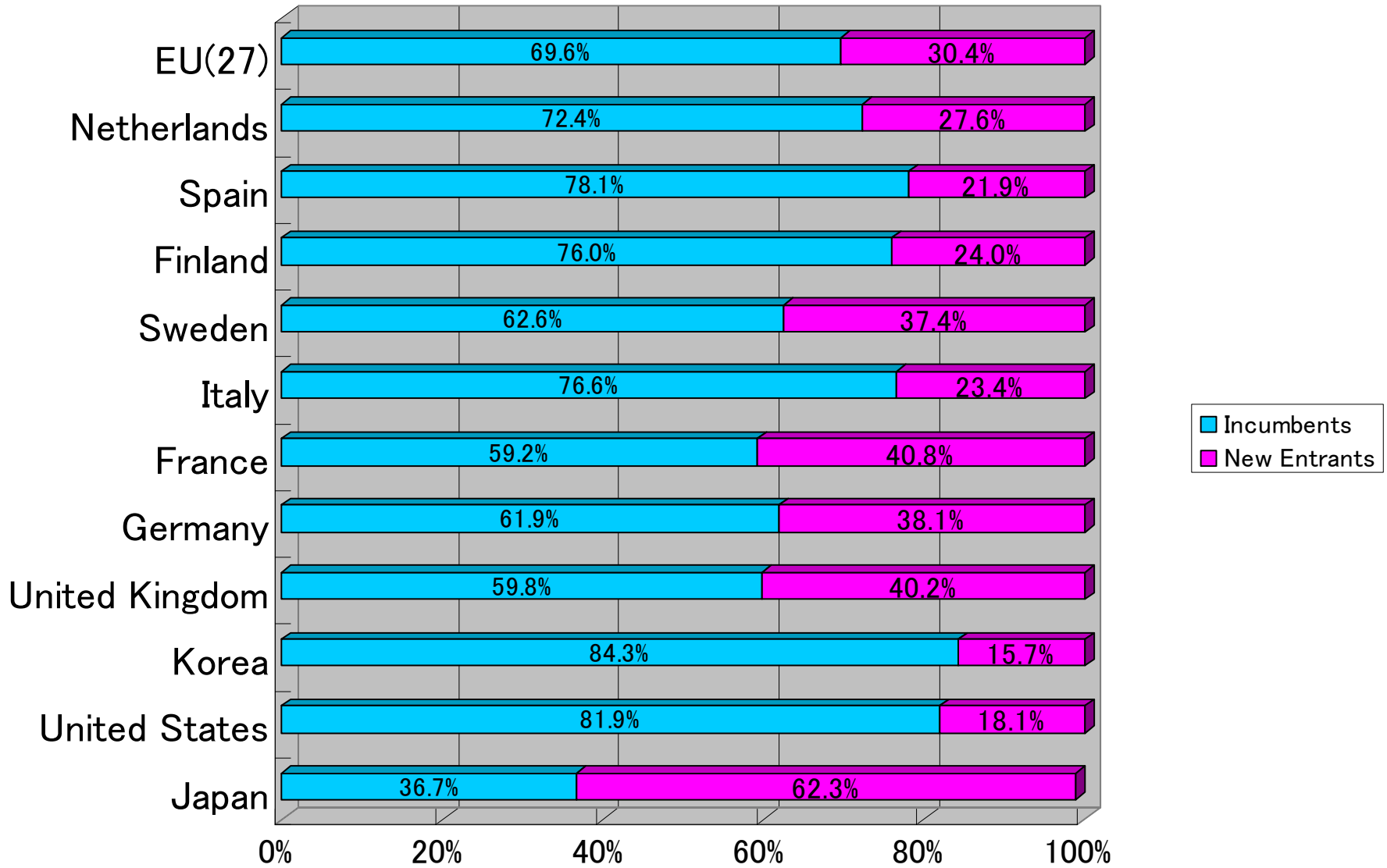


# OUTCOME 2: Transmission Speed became Higher





# Entrants to DSL Market in Global Comparison



【Source】

European Countries : Jun.2007(European Committee)

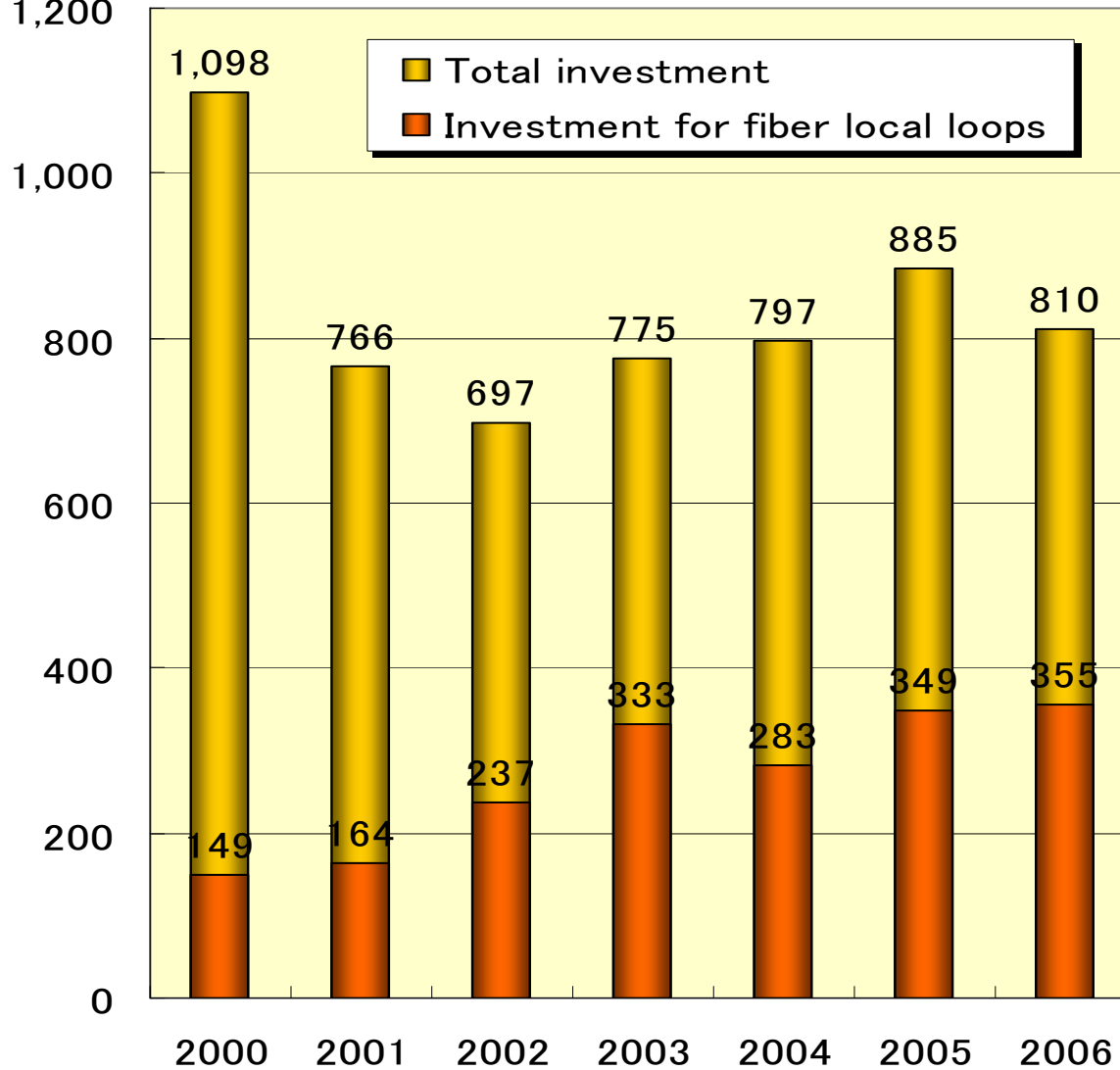
Japan : Mar.2008(MIC)

USA : Jun.2006 (FCC)

Korea : Jan.2006 (MIC)

# NTT Regional Companies' Investment

Billion  
Yen



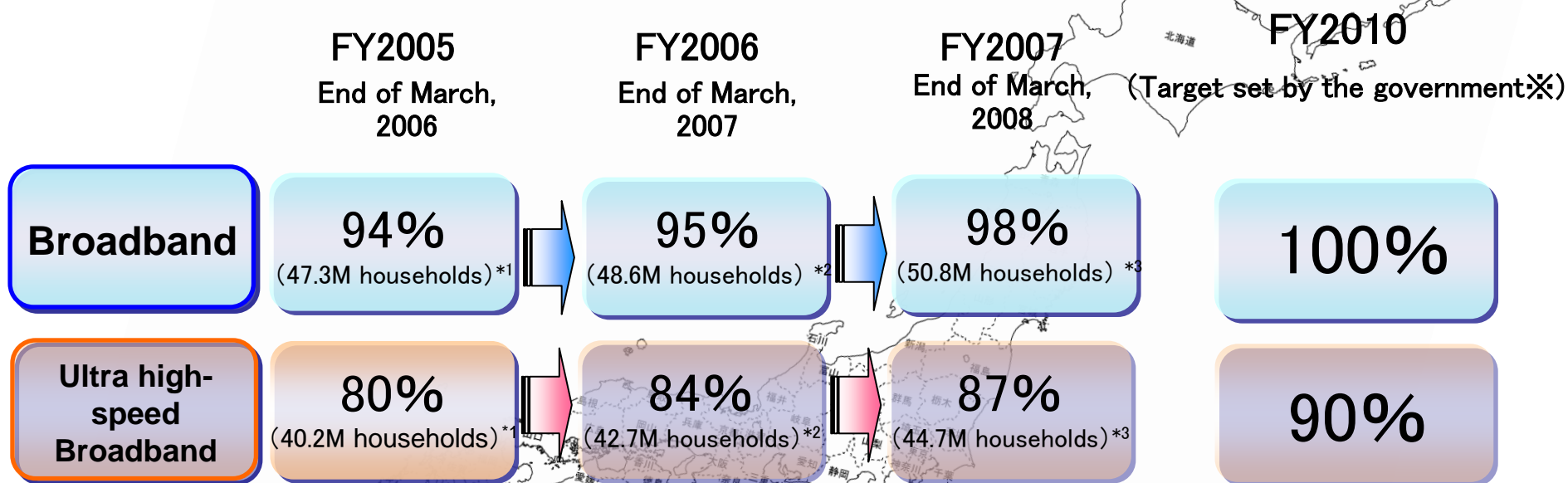
## 3. Grant-in-Aid System (2006-)

- IT New Reform Strategy (Jan. 2006) set the target of elimination of areas where broadband remains unavailable, FY 2010.

- To support areas under disadvantageous conditions to establish communications infrastructure, a grant-in-aid system for promoting the local telecom infrastructure was created in 2006.

(Before 2006, there have been several schemes for subsidies for the broadband deployment but many of them were abolished at the end of FY 2005.)

## Household Coverage of Broadband Availability



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※ IT New Reform Strategy (IT Strategic Headquarters, 2006)

※ u-Japan (MIC, 2004)

A grant-in-aid for promoting the local telecommunications infrastructure (2006-)

- A grant-in-aid will be provided for a wide field of activities to be performed by a local self-governing body that will establish an information and communications infrastructure (for ADSL, FTTH, cable services, FWA, internet via satellite etc.) in accordance with its characteristics to bridge the information gap.
- Budget amount: FY2008: ¥6.2 billion + ¥9.5 billion (supplimentary) (\$170 mil.)  
FY2007: ¥5.7 billion  
FY2006: ¥5.3 billion
- Granting rate:
  - ① Cities, towns, and villages falling in areas under disadvantageous conditions: 1/3
  - ② Merged cities, towns, and villages including ①, or alliance cores: 1/3
  - ③ Third-sector corporations: 1/4

\*For support of local infrastructure establishment, we also have local intranet infrastructure subsidiary system. (FY2008: ¥3.4 billion (\$38 mil.), FY2007: ¥3.6 billion, FY2006: ¥3.7 billion)

## The Association for Promotion of Public Local Information and Communication (APPLIC) (est. 2005)

- ◆ **Chairperson: Kazuo Furukawa (Hitachi, Ltd.), Vice-Chairpersons: Comeon Iizumi (Tokushima prefecture) and Shinichi Ootake (NTT West)**
- ◆ **Structure: Enterprises (telecommunications operator, manufacturer, etc.), municipal public organizations (prefecture, city, town, and village), etc. 108 entities (June 2<sup>nd</sup>, 2007)**

- Sharing of information related to infrastructure development status
- Creation of a roadmap
- Creation and delivery of manuals, etc.
- Sharing of information related to case examples of activities
- Promotion of sharing of regional public networks (optical fibers), etc.

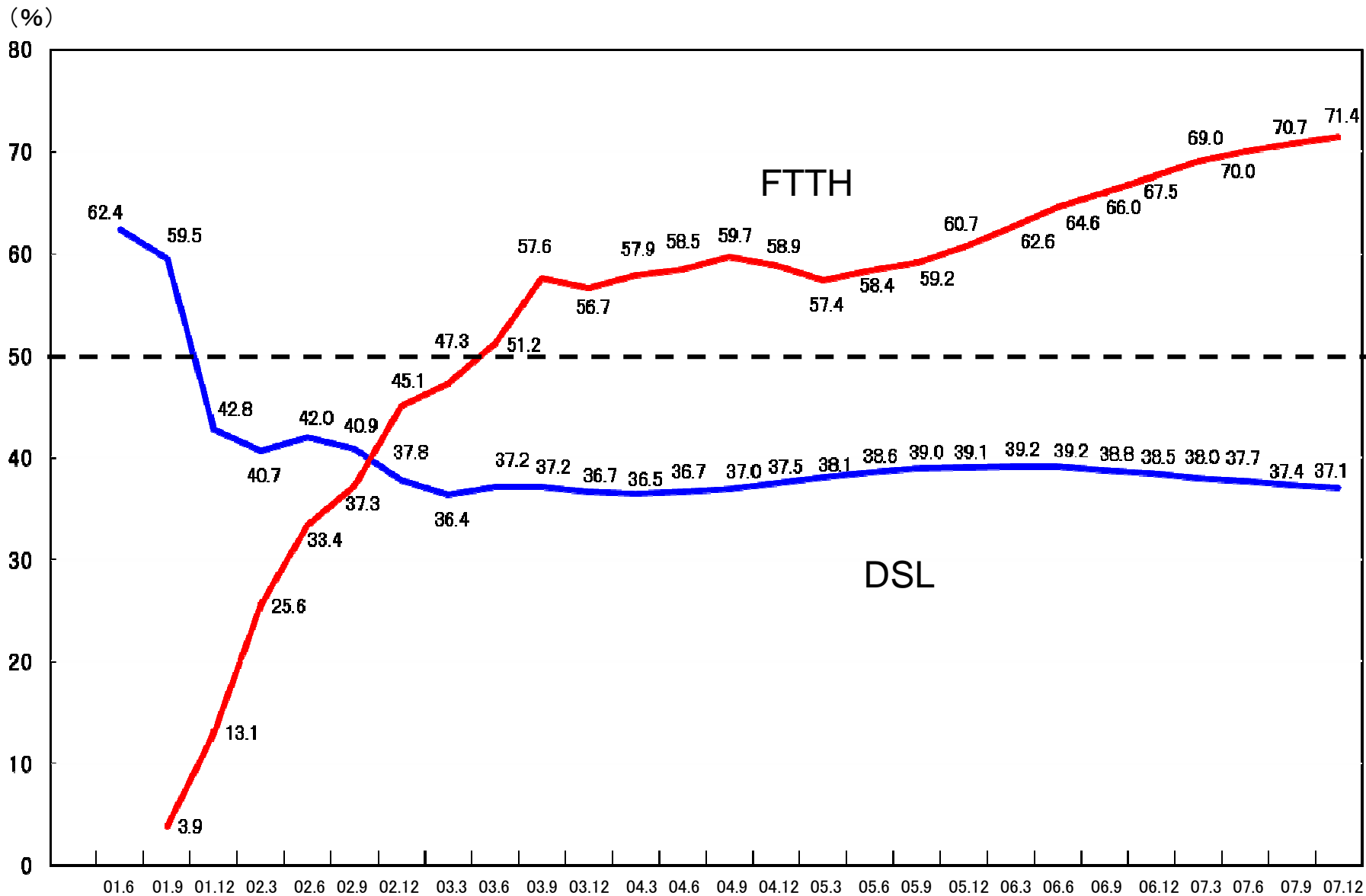
# III Current Agenda for Broadband Enhancement

- We are developing another National ICT Strategy. (expected in June)

- Competition rules should be reconsidered. The review session will start in Feb. at the Information & Communications Council.  
... Another unbundling rules? Open up of platform functions?

- We should achieve the target of elimination of areas where broadband remains unavailable by FY2010.

# Share of NTT East and West in DSL and FTTH Market





*Thank you!*