



# Promoting Broadband The Case of Japan

Workshop on Promoting Broadband  
Geneva, Switzerland  
9 April 2003

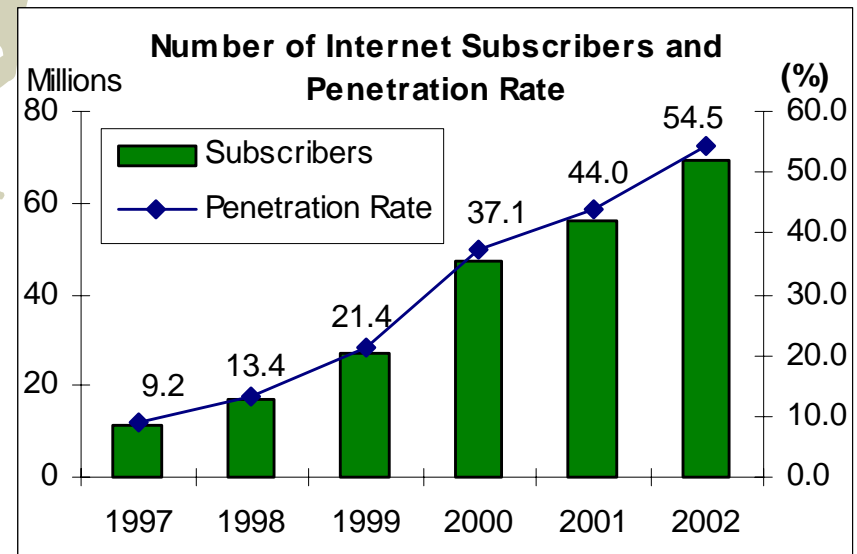
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# Agenda

- **Internet market**
- **Broadband market**  
Network, Terminal, Platform and Content/Application
- **e-Japan Strategy**
- **Broadband promotion –Successes**  
Pro-competitive environment, Lower charges and higher speeds
- **Broadband promotion –Challenges**  
Regional imbalance, Broadband to apartment buildings and Broadband content/application
- **Future implications - Ubiquitous network**

# Internet Market (1)

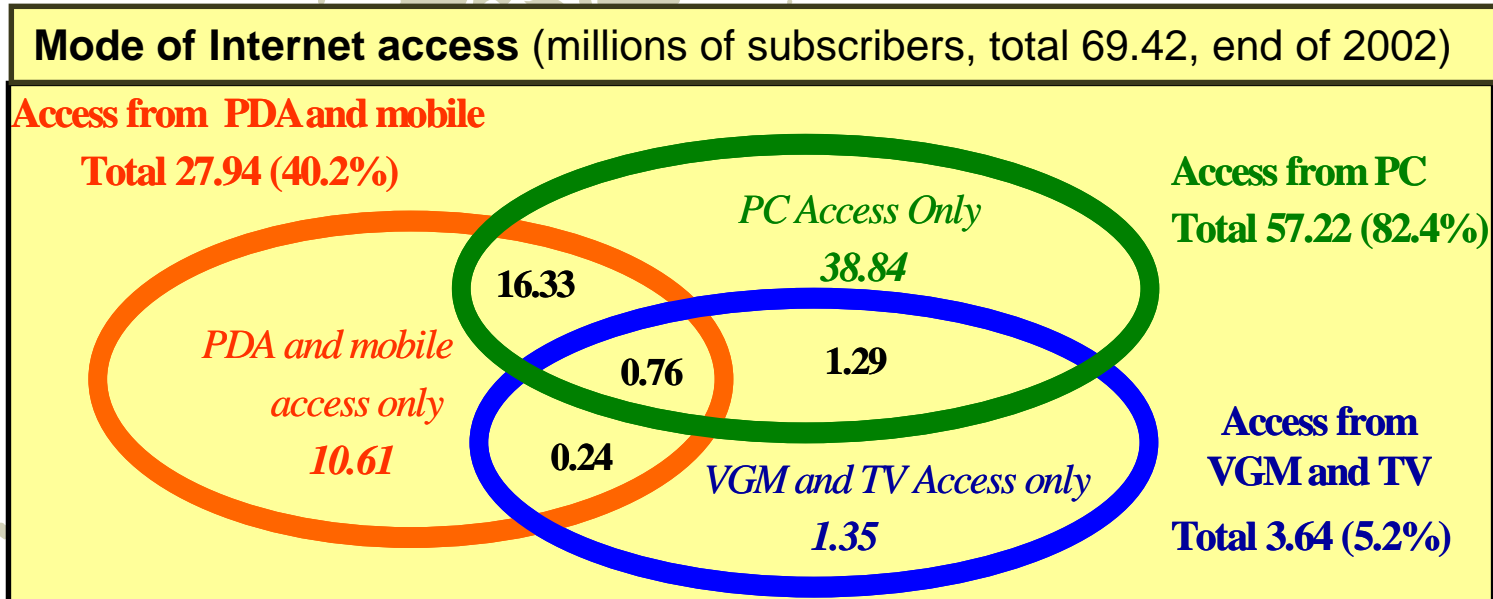
- Internet penetration rate is over 50%
- Since 2000, the rate has been increasing about 10% / year
- In 1999 and 2000, ISDN led penetration
- Since mid-2001, rate boosted by broadband



Source: MPHPT

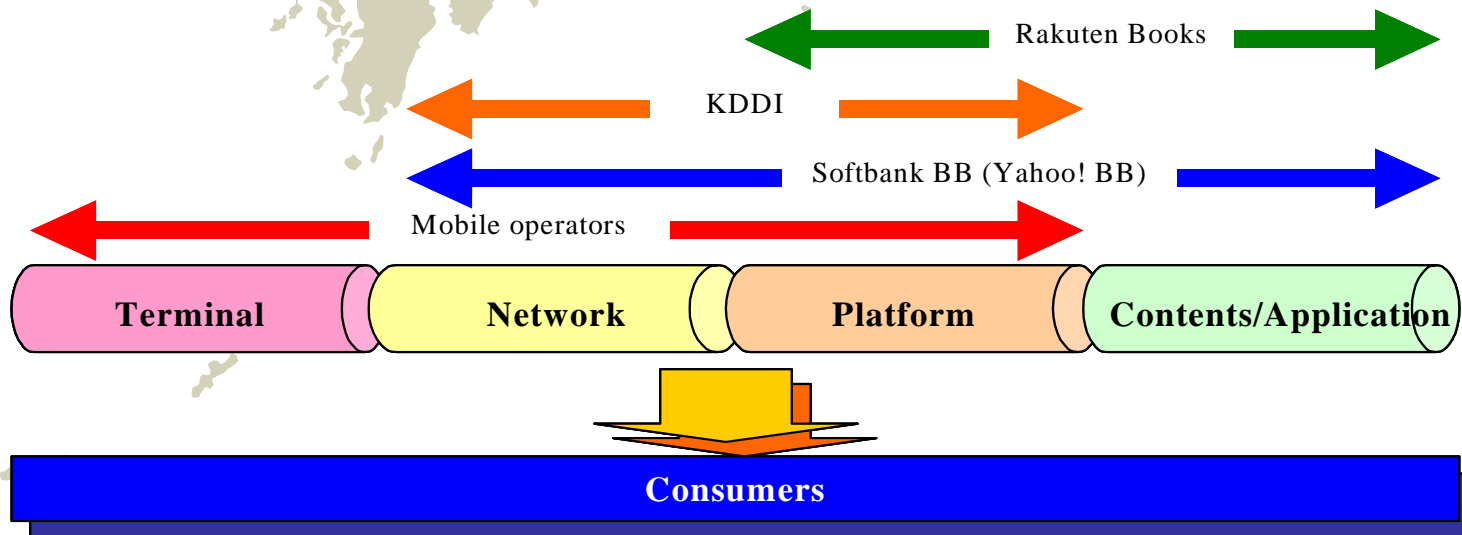
# Internet Market (2)

- Fixed Internet access is the major Internet access method
- 17 million out of total 69 million access Internet from both fixed and mobile.



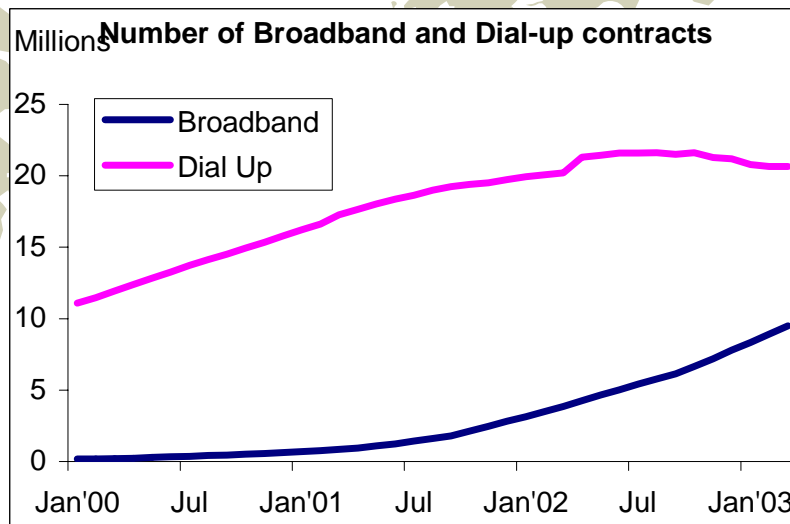
# Broadband Market

- Telecommunication business – Unbundled
- Operators can develop their business style – in each area or areas

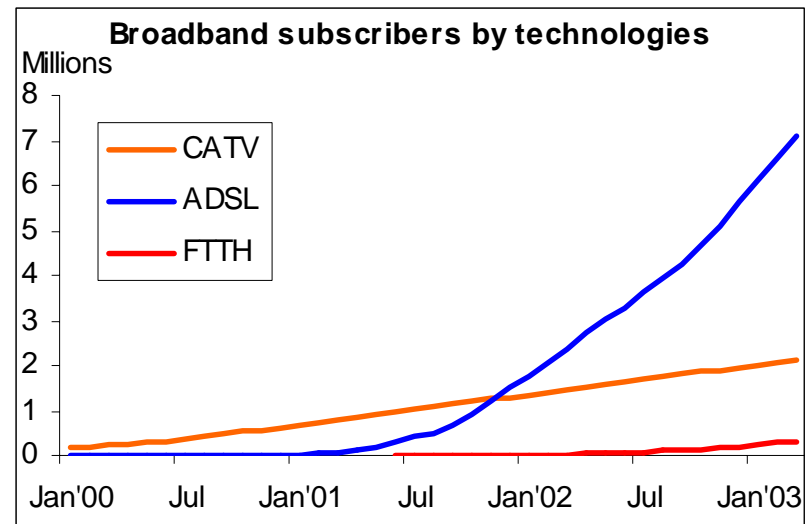


# Broadband Market (Network (1))

- **Total subscribers = about 8.8 million (7.0% of population, February 2003)**
- **Over half a million subscribe per month**
- **ADSL leads the broadband penetration**



Source: MPHPT



Source: MPHPT

# Broadband Market

## (Network (2))

- **ADSL (User 6.59M; Max 1.5, 8, 12Mbit/s)**
  - NTT East&West, Acca Networks and eAccess are wholesalers (47 operators/ June 2002)
  - Yahoo! BB offers Internet access line and ISP service
- **CATV (User 2.03M; Max 2–30Mbit/s)**
  - Small regional operators (about 290)
- **FTTH (User 0.26M; Max 100Mbit/s)**
  - NTT East&West and subsidiaries of electricity power companies are wholesalers
  - Usen provides access line and ISP service

# Broadband Market (Terminal)

- PC (Households penetration rate in 2002: 71.7%)
- Other types of terminal
  - At home
    1. Game console
    2. Internet TV
    3. STB
    4. Home server
  - PDA



Airboard (SONY)



Airboard (SONY)



STB (BB Cable TV)



Home server (Sharp)



High resolution PDA (Sharp)



High Resolution



VGA Resolution



# Broadband Market (Platform)

- **Platform: service enablers**
- **Secure payment for online purchase**
  - Need for e-commerce
- **Content delivery network**
  - Just emerging
- **ADSL or FTTH portals**
  - To attract more subscribers to ISPs

# Broadband Market (Content/Application)

- **Higher speed and higher broadband penetration, more new content**
  - **Online Games**
  - **Digital Photos**
  - **Electronic Publishing**
  - **Video over broadband**
  - **IP Telephony**

# e-Japan Strategy

- IT Head Quarter (led by PM) (Jan. 01)
- “e-Japan Strategy” (Jan. 01)

— Target –to be the most advanced IT State within five years

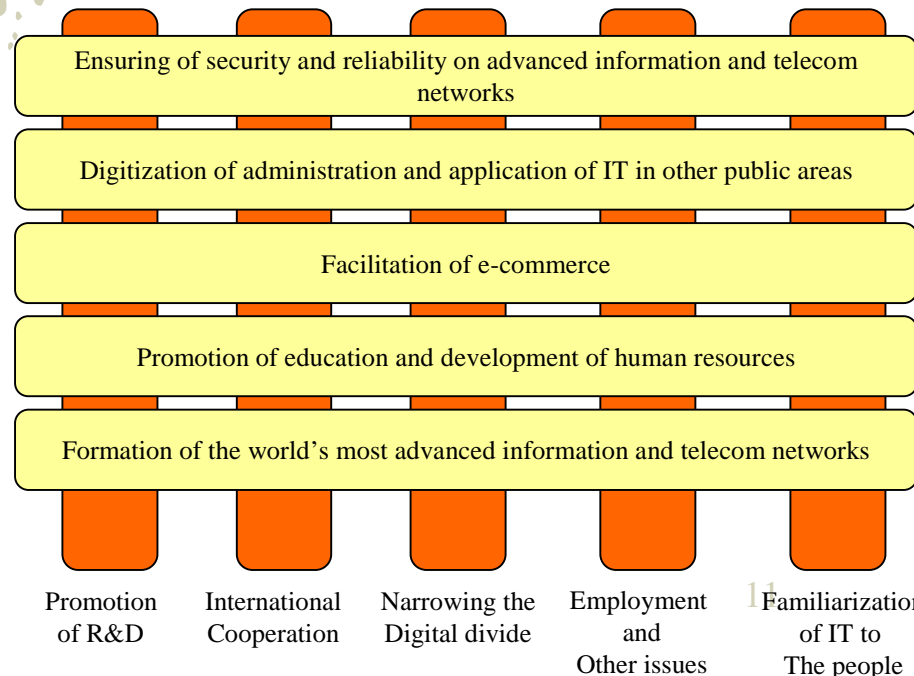
- 34 mil households within reach of high speed Internet access (June 02)
- 14 mil households within reach of ultra-high speed Internet access (June 02)

- “e-Japan Priority Policy Programme” (Mar.01)

— Policy focus areas

1. Infrastructure
2. Human resources development
3. E-commerce
4. E-government
5. Network security

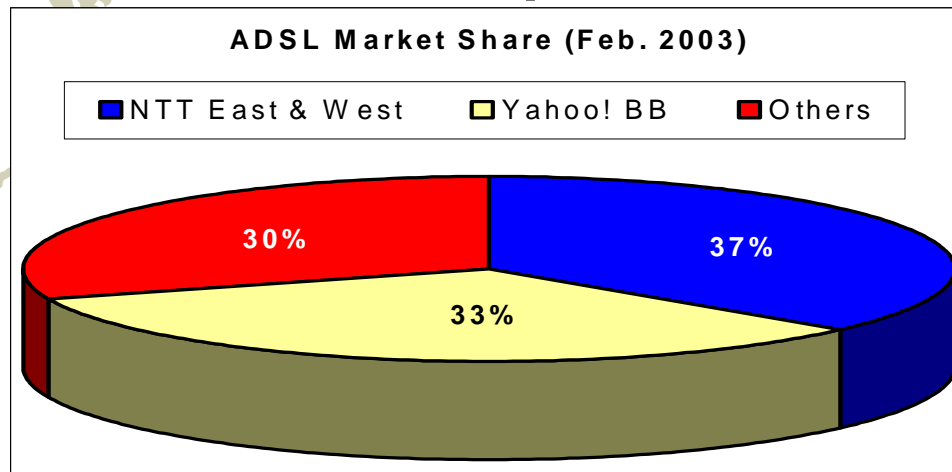
— The Private sector  
-lead IT introduction



# Successes (1)

## (Pro-competitive Environment)

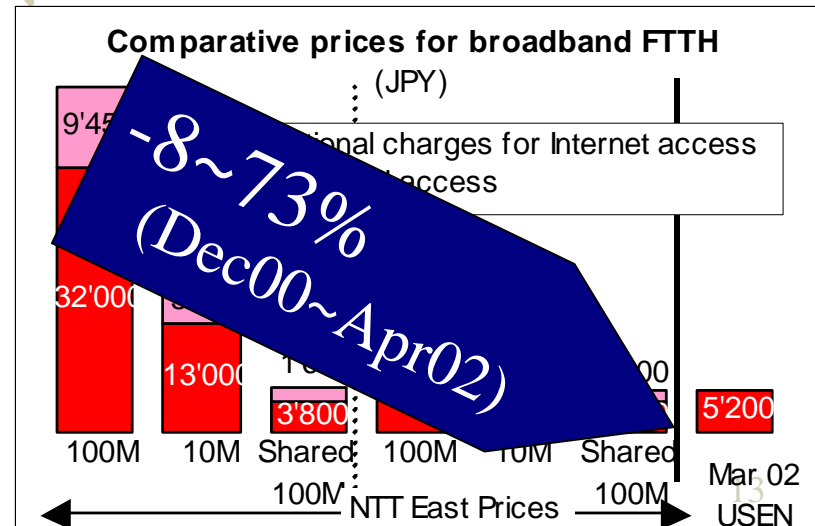
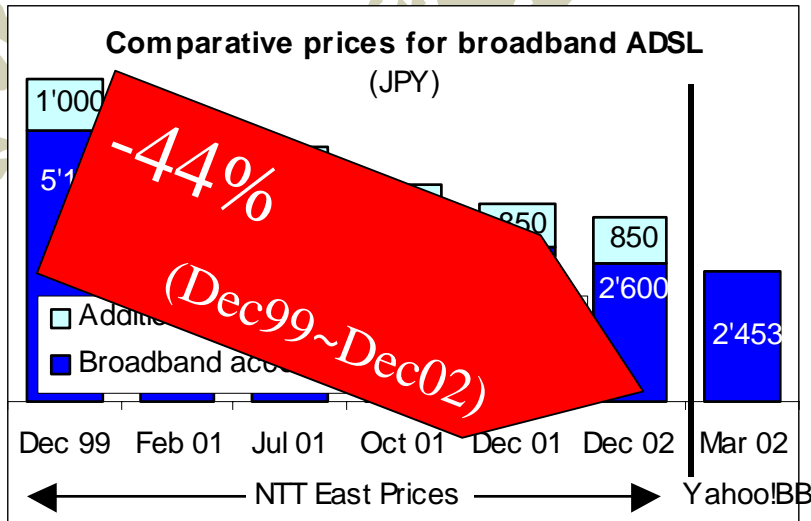
- **Local loop unbundling** (MPHPT introduced rules; ADSL: Sep. 2000, FTTH: Apr. 2001)
  - Costs (typical examples)
    - (1) Sub. Lines (not overlapped by tel.): JPY 1,829 (US\$15.24)
    - (2) Sub. Lines (overlapped by tel.) : JPY 168 (US\$ 1.40)
- **Collocation** (MPHPT introduced rules; September 2000)
- **New entries –47 ADSL operators in June 2002**



# Successes (2)

## (Cheap prices and higher speeds)

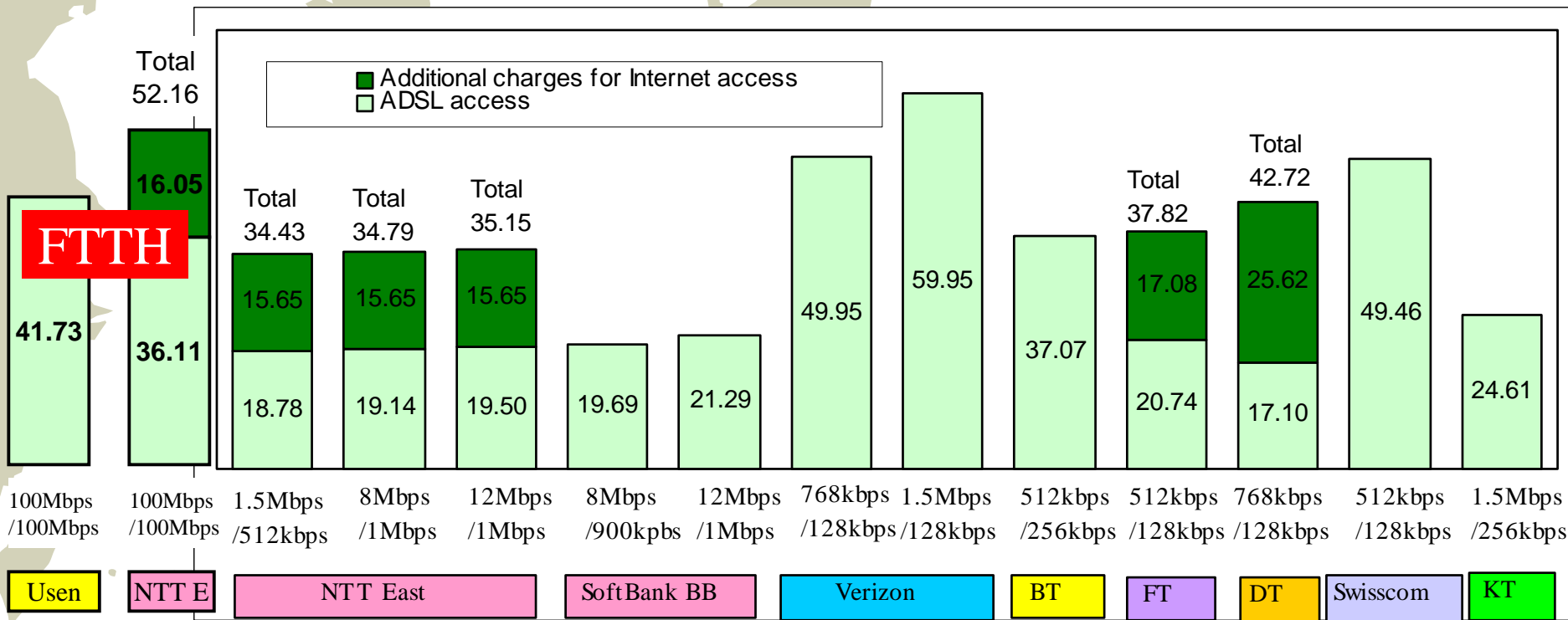
- Because of competition, ADSL subscription charges have been falling
- New business model – Earn profit from contents (e.g. Yahoo! BB)
- FTTH charges have also been falling



# Successes (2)

(Cheap prices and higher speeds)

- ADSL speed is fastest (8Mbit/s and 12Mbit/s)
- ADSL service fee per Mbit is the cheapest



Note:1) Fees are as of December 2002 (Tax is not included)  
 2) Foreign exchange rates were calculated on the basis of the TTS (Telegraphic Transfers Selling) rate on December 2,2002, which was JPY 124.61, GBP0.64, Euro 1.00, CHF 1.48 and KRW 1219 to US\$ : Source:MDHPT

# Challenges (1)

## (Regional imbalance)

- **70% territory: mountainous**
- **20% population: rural areas**
- **Local government open up networks to the private sectors**
  - Three examples
- **Central government's support system**
  - No/low interest finance
  - Tax reduction
  - Grant for FTTH networks

**Hyogo Prefecture**  
Information Highway  
+ cooperative venture  
in ADSL

**Okayama Prefecture**  
Information Highway

**Nankoku City**  
Community-based  
WLL network

# Challenges (2)

## (Broadband to apartment buildings)

- **37.7% live in apartments in Japan**
  - 66.2% in Tokyo, 52.3% in Osaka
  - (US: 26.9%, UK: 19.4%)
- **Installing broadband access lines -retrofitting**
- **How to install smoothly?**
  - Individually owned apartment – $\frac{3}{4}$  or  $\frac{1}{2}$  approval necessary:  $\frac{1}{2}$  is enough –clarified by MoJ
  - New business models
  - Technological innovation



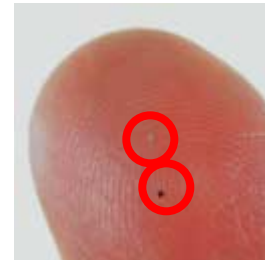
# Challenges (3)

## (Content/applications for broadband)

- **Content/applications for broadband are just emerging**
- **High quality video on demand**
  - 3Mbit/s for ADSL (BB Cable TV)
  - 5Mbit/s for FTTH (e.g. BBit-Japan)
- **IP Telephony**
  - Yahoo! BB: 1.8mil subscribers (Feb. 2003)
  - Major ISPs: launch in early 2003
- **Conditions for development in future**
  - Authorization platform
  - IPR protection
  - Network security
  - Charging system

# Ubiquitous Network

- **Next to broadband and mobile Internet**
- **Access to network everywhere at any time**
  - All information appliances to access the Internet
  - All appliances can be connected via IPv6
  - M2M communication –Radio frequency IDs (RFIDs), sensors, webcams and other devices



A light beige silhouette map of Japan, showing the four main islands: Hokkaido, Honshu, Shikoku, and Kyushu, set against a white background.

# **Thank You**

**Promoting Broadband**

**The Case of Japan**

**By**

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