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TITLE: Experience and Challenges in Collecting Mobile Broadband Statistics in Japan

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Experience and Challenges in Collecting Mobile Broadband Statistics in Japan

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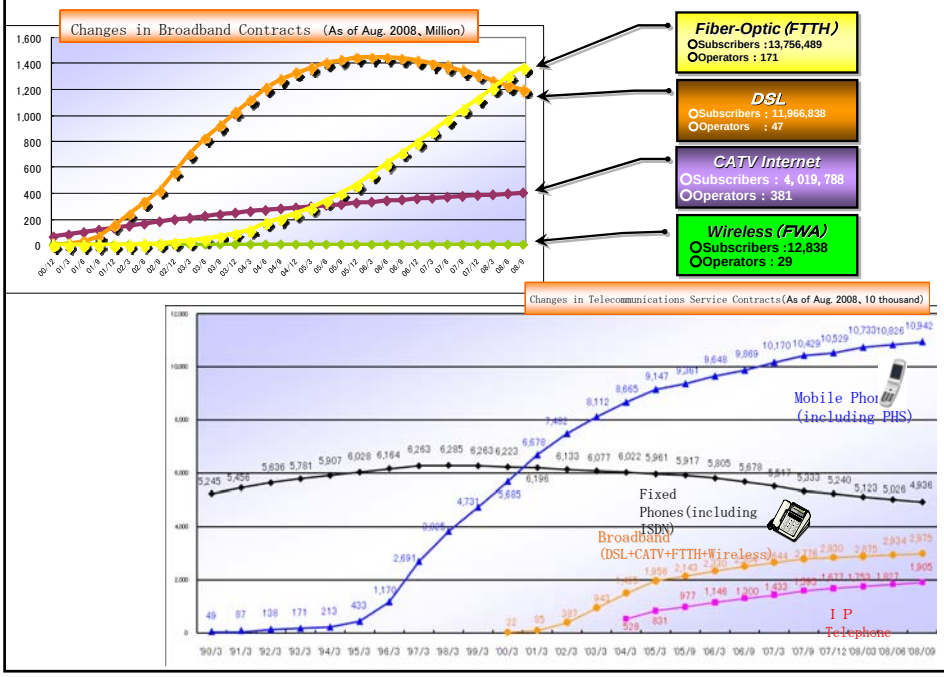
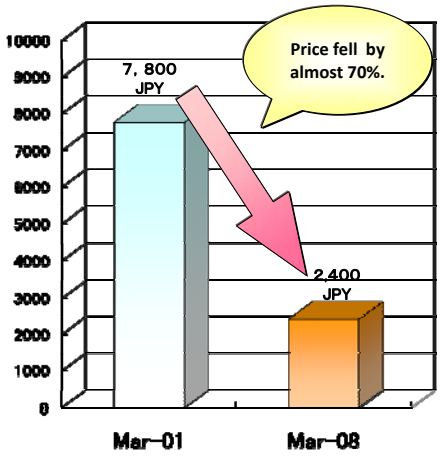
Progress in Broadband (Telecommunications) Services in Japan



Broadband Service in Global Comparison

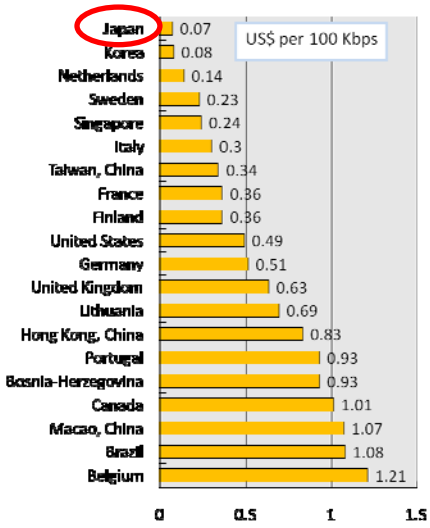
Change in DSL Price



(The lowest DSL Price per month)

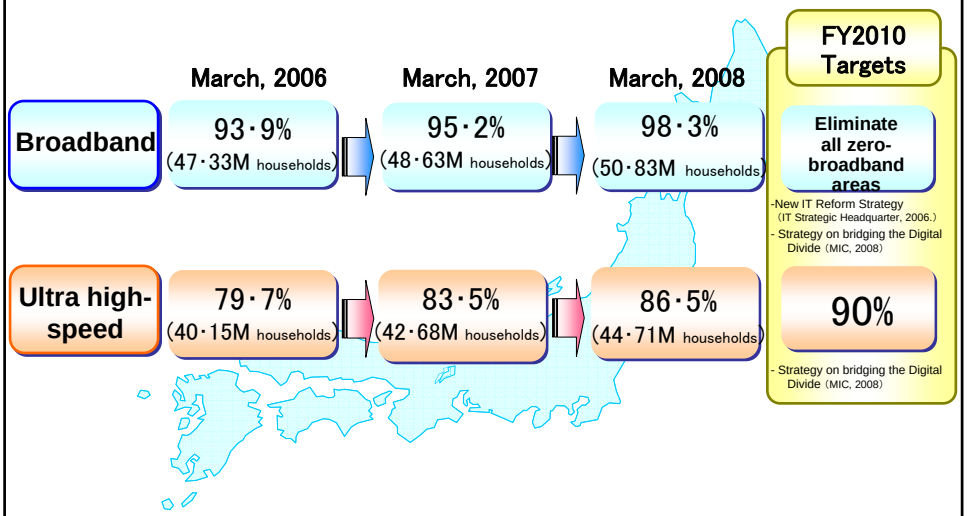
Sources: Respective company web sites

DSL Price

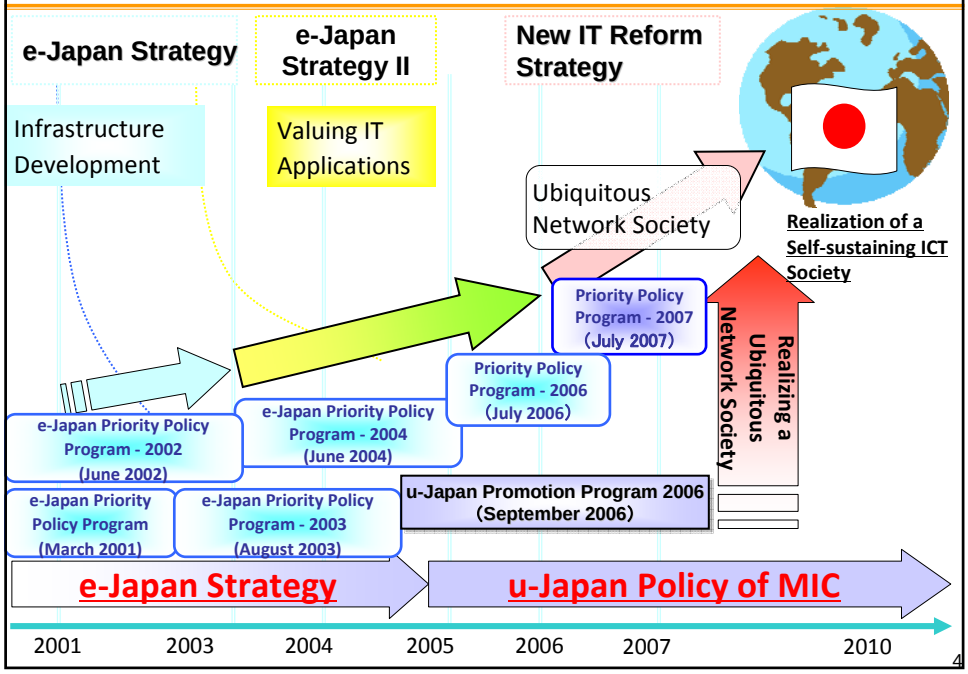


Source: ITU Internet Reports 2006 "digital.life" (Dec. 2006)

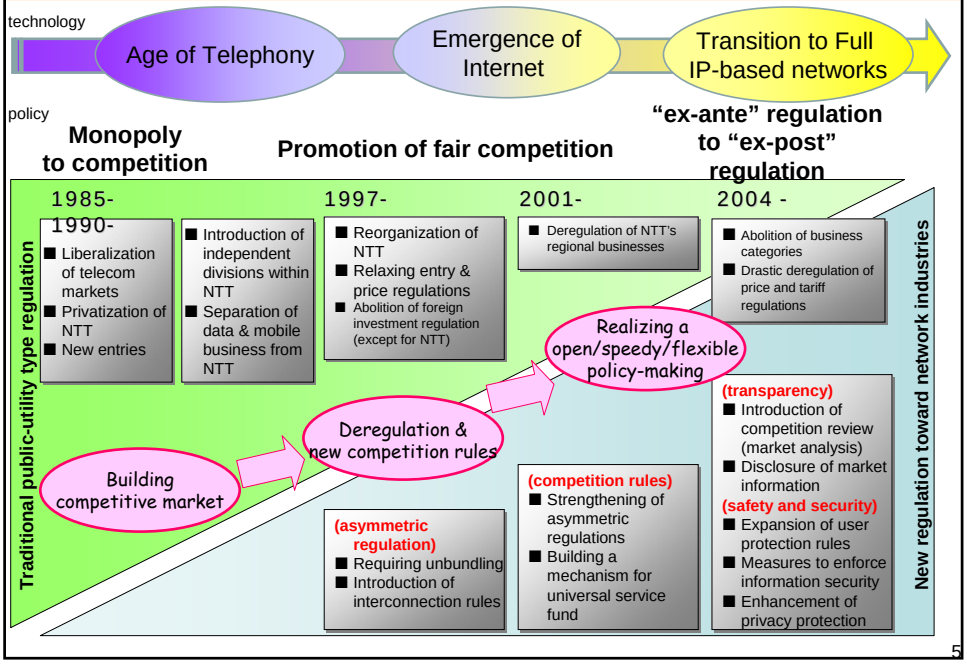
Broadband Service Area Coverage Rate of Households in Japan (Estimate)



Japan's National ICT Strategies



Transition in Competition Policy in the Broadband Market in Japan



Comprehensive Broadband Policies in Japan

Transition to IP Networks (Mainly Broadband Networks)

- Full Transition from PSTN to IP based networks (-> "Everything over IP")
- Emergence of a variety of new business models (-> review of vertically integrated business models)
- Transition to IP based networks means that the rationale for the concept of "distance" has become obsolete.

Direction of Implementing Policies

- Promotion of information & communication network usage as a base for support of the socio-economic system.
- Acceleration of effective interaction between communication networks and content/applications. ("Creation of Virtuous Cycle Related to Development of Markets").
- Development of a competitive environment which allows for a rapid, smooth response to rapidly changing market situations.

Development of Broadband Policies

Balanced development of infrastructure	Improvement of environment promoting competition	Promotion of protecting users	Innovation of new industries	International contribution
-Eliminating the Broadband-Zero Areas by FY2010 Strategy on bridging the DigitalDivide (June 2008)	-Fair Competition -Predictability of Competition Rules New Competition Promotion Program 2010 (September 2006*)	-Prevention of spam - Protecting private (personal) Information -Prevention of distribution illegal/harmful information -Protection against viruses -Protection from cyber attacks	-Establishment of a legal System capable of overseeing the convergence of telecom & broadcasting -R&D -Promotion of Standardization -Promotion of content markets	-Promotion of Asia Broadband Program -Contribution to Activities in international organizations (ITU,OECD,APEC) -Promotion of bilateral/multilateral policy consultations

*revised in October 2007

"Realization of u-Japan in FY2010 (World's fastest IT revolution)

"Mobile Broadband Statistics" in Japan

Mobile Phones

Number of subscribers: 106,094,200 (Jan. 2009)

IMT-2000

Number of subscribers: 96,878,100 (Jan. 2009)

Internet via Mobile Phones

Number of users: 72,870,000 (2007)

Wireless LANs

Number of subscriptions: 6,723,000 (Dec. 2007)

Number of base stations: 22,414 (Sep. 2007)

WiMAX

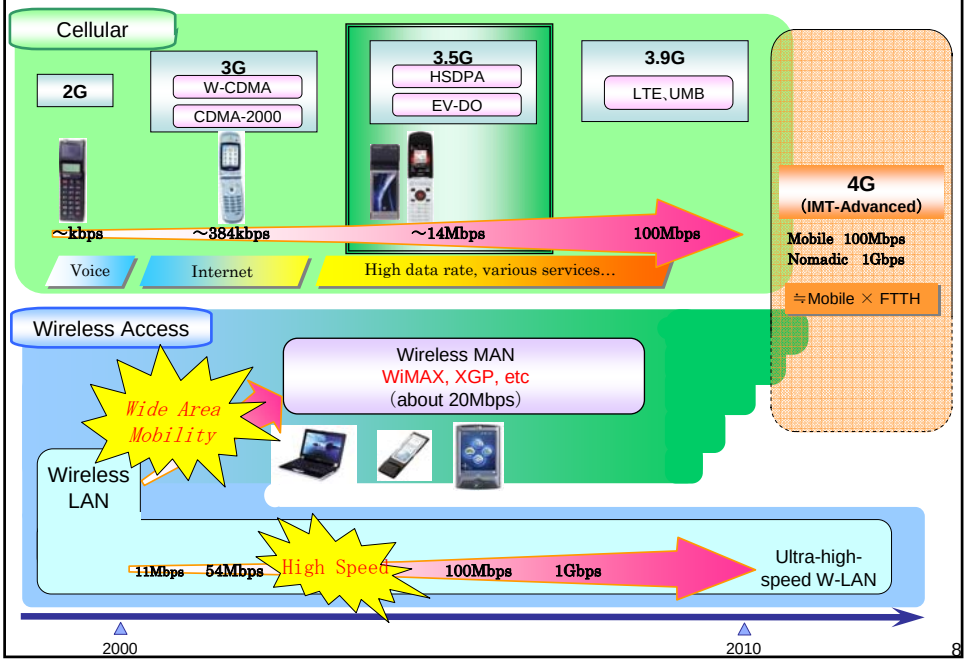
* Commercial service launched in Feb. 2009

XGP (Next Generation PHS)

* Commercial service to be launched in Apr. 2009

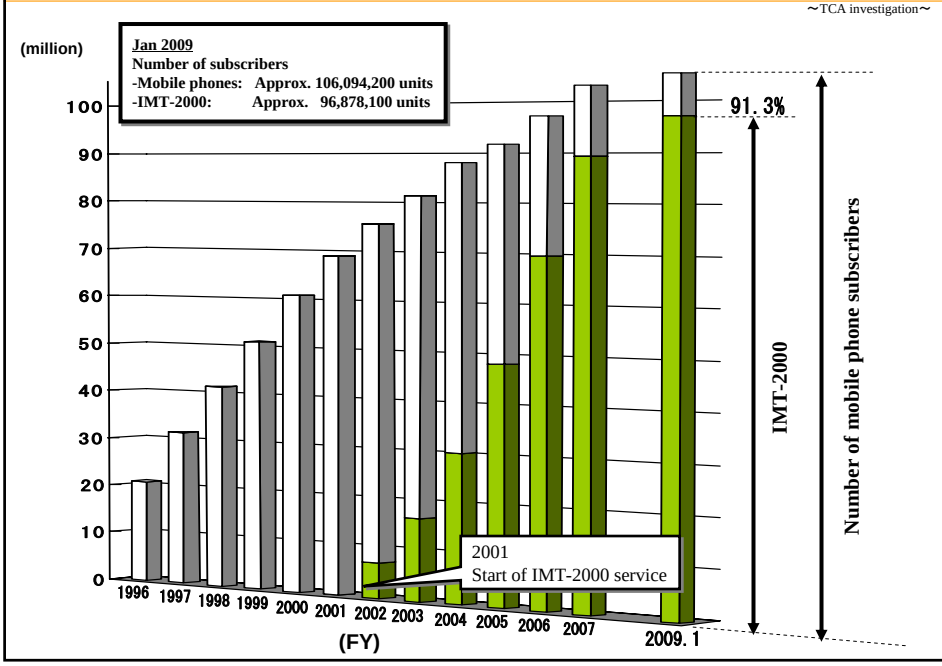
* Total Population in Japan is estimated 127,663 thousand persons as of September 2008.

Mobile System Evolution Roadmap in Japan

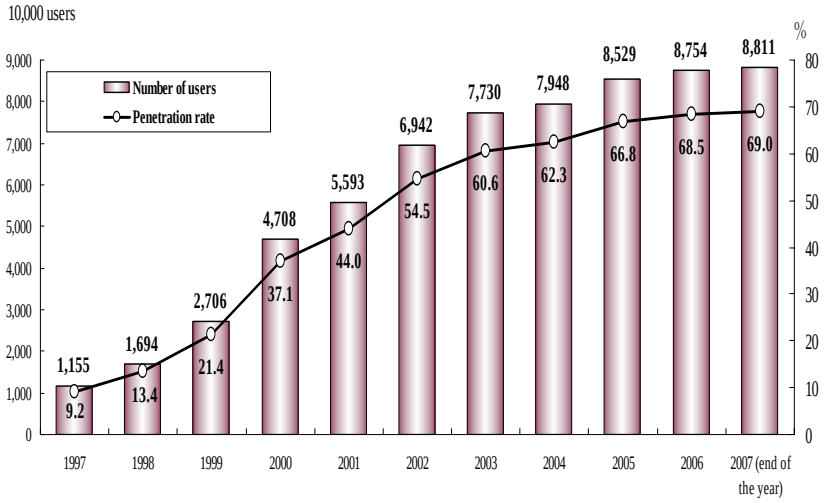


Changes in the Number of Mobile Phone Subscribers in Japan

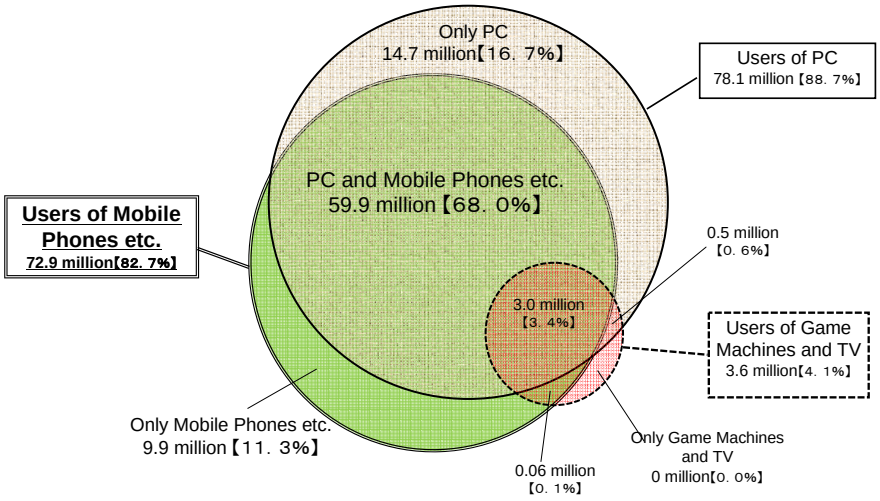
~TCA investigation~



Internet Users and Penetration Rate for Population in Japan

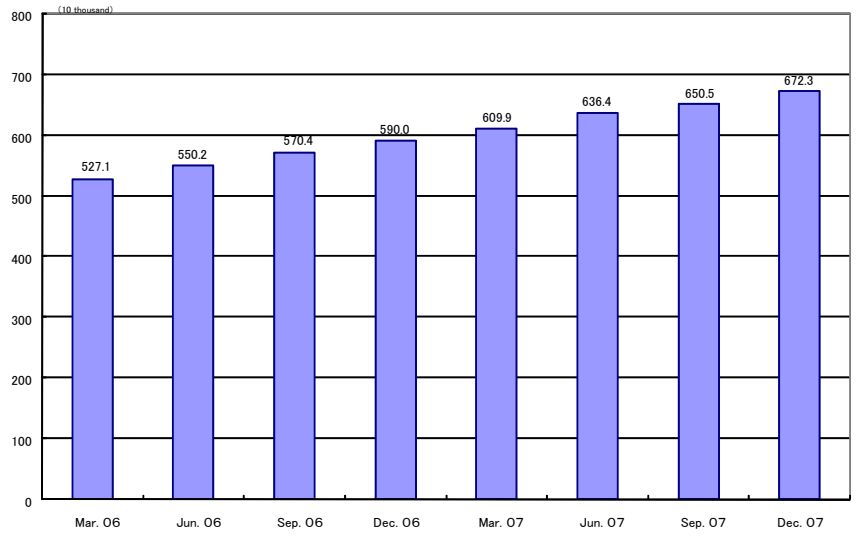


Mobile Internet (Terminals using Internet) in Japan (End of 2007)

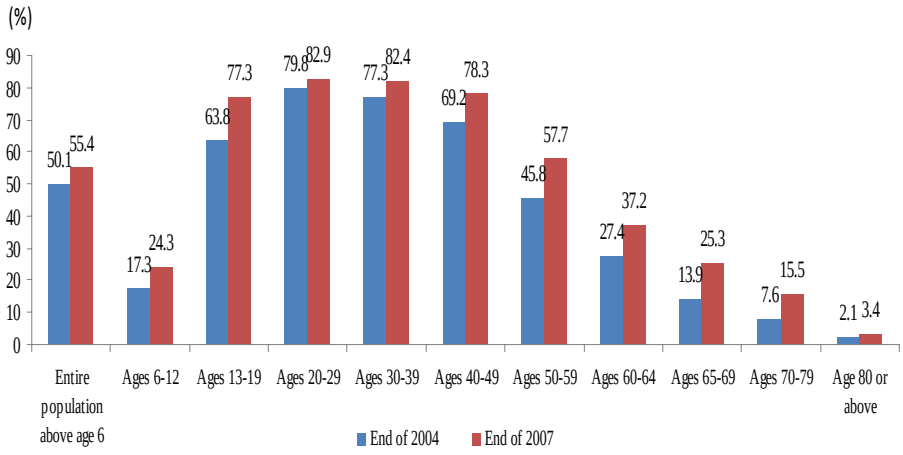


* "Mobile Phones etc." include PHS (Personal Handyphone System) and PDA (Personal Digital Assistance).

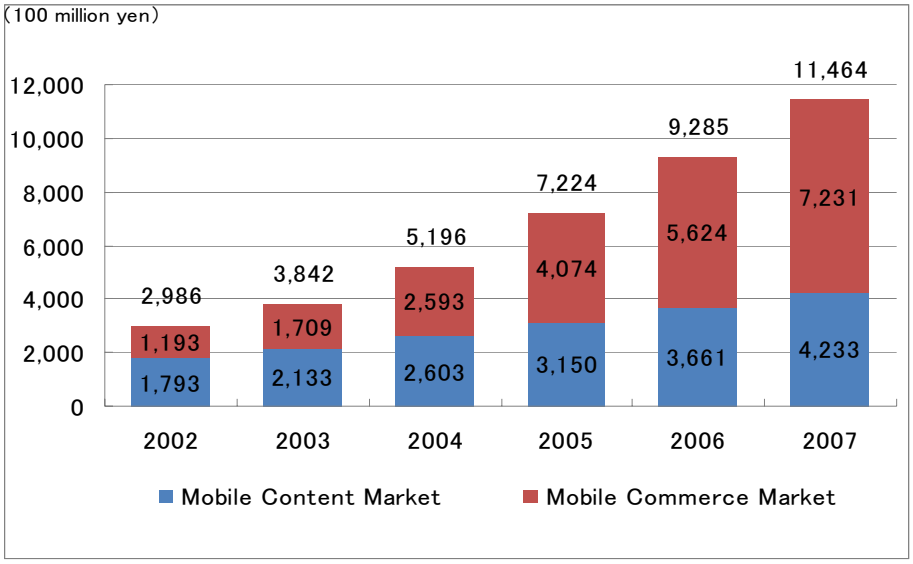
Changes in the Number of Wireless LAN Subscriptions in Japan



Mobile Internet Users by Ages in Japan



Mobile Content Market in Japan



Challenges in ICT (including Mobile) International Benchmarking

1. How should we evaluate new technologies such as mobile broadband and set relevant indices in light of the rapid progress of technological innovation in the ICT field?

→While data on new technologies can only be obtained for a limited number of countries, would it be appropriate to use the indicators that are generally associated with conventional technologies, which are on the decrease?

【Examples of Conventional Technologies】 Fixed-line phone、Payphone etc.

【Examples of New technologies】 Fiber-optic network (FTTH)、3G (and beyond)、WiMAX etc.

2. Which indicators should be used to measure data on non-infrastructure areas of ICT, such as ICT usage and safety & security?

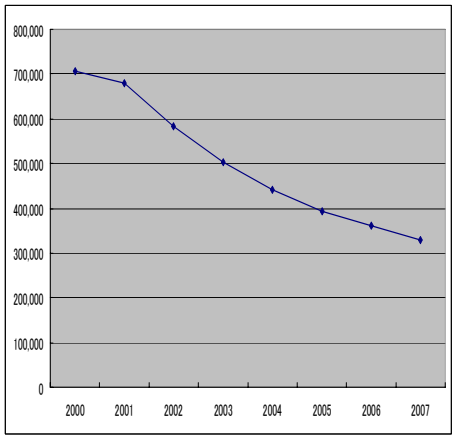
【Examples of Data on ICT Utilization】 Proportion of Electronic Prescriptions, LAN Penetration Rate into Schools and Percentage of Administrative Procedures Available On-line etc.

【Examples of Data on Safety & Security of ICT】 Number of Secure Servers and "Bot-Infected" PCs etc.

Relevant Data on Benchmarking

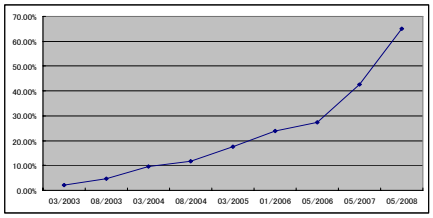
■Number of Payphone Installed by NTT

→The number more than halved in seven years



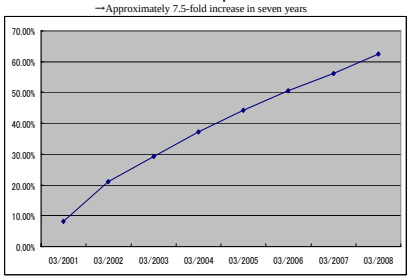
■Penetration Rate of Computer Processing Systems for Statements of Medical Expenses into Hospitals in Japan

→Approximately thirty-fold increase in five years



■LAN Penetration Rate in Regular Classes at Schools in Japan

→Approximately 7.5-fold increase in seven years



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Methods of International Comparison and Evaluation

1. Setting forth 12 indicators in six fields related to ICT infrastructure, thereby comparing those indicators of 23 major countries/regions.

※Two new indices, Ratio of optical fiber use, and Number of bot-infected PCs, have been added to previous evaluation indices (May 2005).

2. Evaluation methods are as follows:

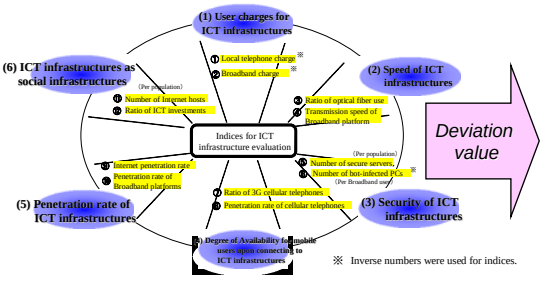
①Obtain deviation values using data for each indicator (Data used is quantitative data released from international ranking organizations, etc.)

②As a comprehensive evaluation, establish international ranking by comparing mean deviation values for each indicator

③Plot deviation values of each country/region on radar charts

Twelve indicators in six fields for ICT infrastructure evaluation

(Quantitative data released from international organizations, etc. are adopted in a well-balanced manner.)



◇ *Evaluation targets (23 major countries/regions)*

Asia	: Japan, South Korea, China, Singapore, Taiwan, Hong Kong	North America	: U.S., Canada
Oceania	: Australia, New Zealand	Europe	: Switzerland, France, Portugal, U.K., Germany, Spain, Belgium, Italy, Austria
Scandinavia	: Finland, Netherlands, Denmark, Sweden		

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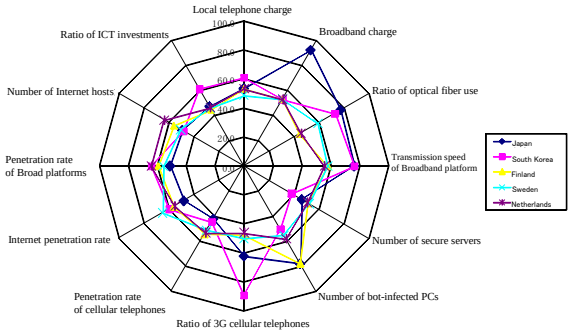
Examples in International Rankings

◇ *Features of some countries exemplified as achieving world's leading edge results in each field are as shown below. The fields differ by country.*

- *South Korea:No.1 in "Broadband speed," "Ratio of 3G cellular telephones," "Penetration rate of Broadband platform."*
- *Finland:No.1 in "Number of bot-infected PCs," No.2 in "Broadband charge."*
- *Sweden:No.2 in "Broadband charge" and "Internet penetration rate."*
- *Netherlands:No.1 in "Penetration rate of Broadband platform," No.2 in "Broadband charge" and "Number of Internet hosts."*

【Rader Chart of Some Countries in International Ranking】



Name of country	Local telephone charge	Broadband charge	Ratio of optical fiber use	Transmission speed of Broadband platform	Number of secure servers	Number of bot-infected PCs	Ratio of 3G cellular telephones	Penetration rate of cellular telephones	Internet penetration rate	Penetration rate of Broad platforms	Number of Internet hosts	Ratio of ICT investments
Japan	53.4	92.1	77.1	76.1	46.1	77.6	62.0	42.0	47.9	51.0	49.1	47.4
South Korea	61.0	53.1	72.5	76.1	37.9	50.2	89.2	44.6	59.4	63.9	48.0	61.4
Finland	53.4	53.1	44.4	57.7	51.1	77.6	47.9	54.3	56.0	59.2	55.7	45.0
Sweden	48.8	53.1	58.9	57.7	52.1	55.2	50.1	51.2	64.6	55.6	50.4	46.2
Netherlands	53.4	53.1	45.3	55.4	50.4	58.0	46.0	53.1	55.1	63.9	63.7	46.6