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Broadband Deployment in Japan

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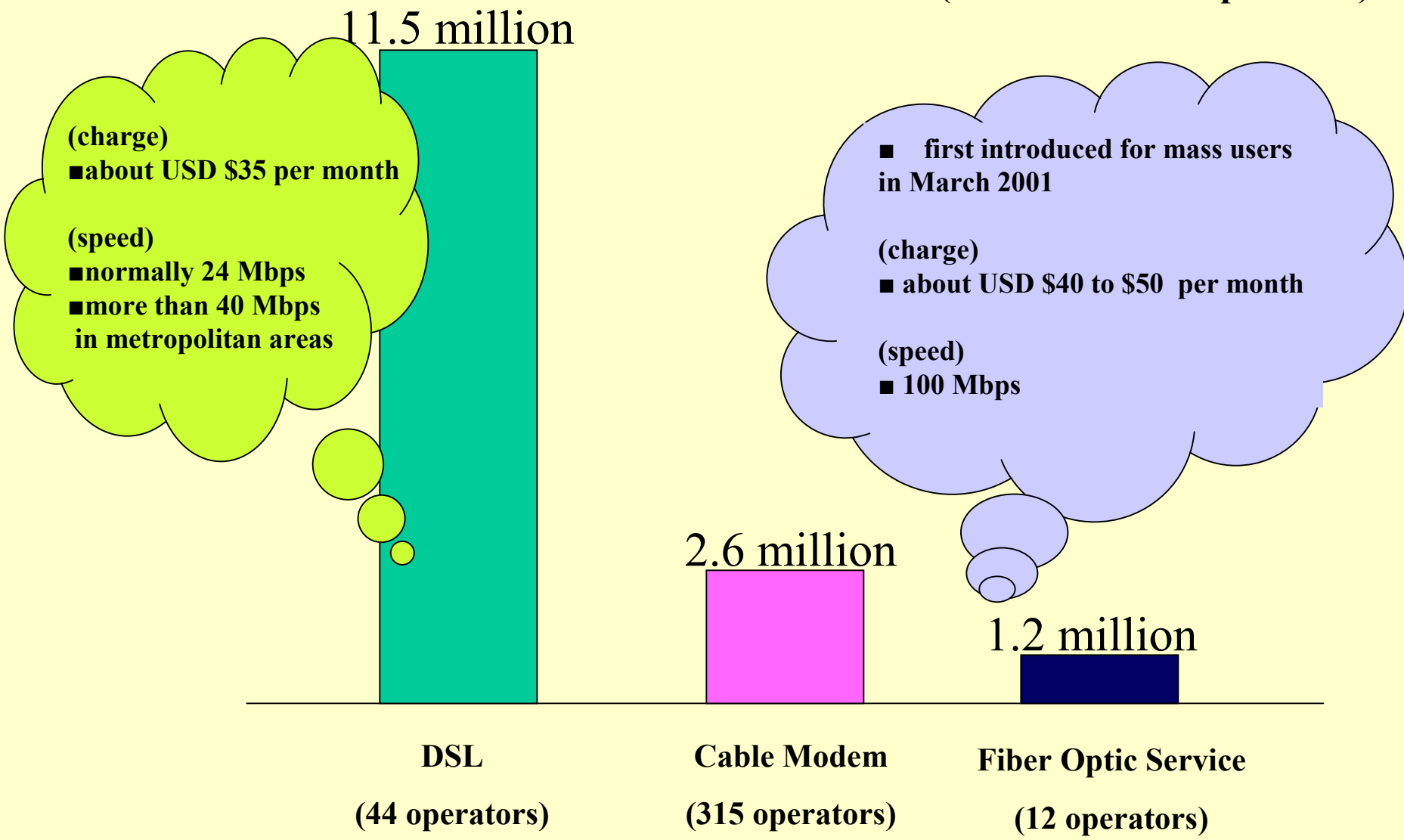
Broadband Deployment in Japan

- *Current Status of the Japanese Broadband Market*
- ***How to promote broadband network deployment***
- ***How to promote competition in the broadband market***

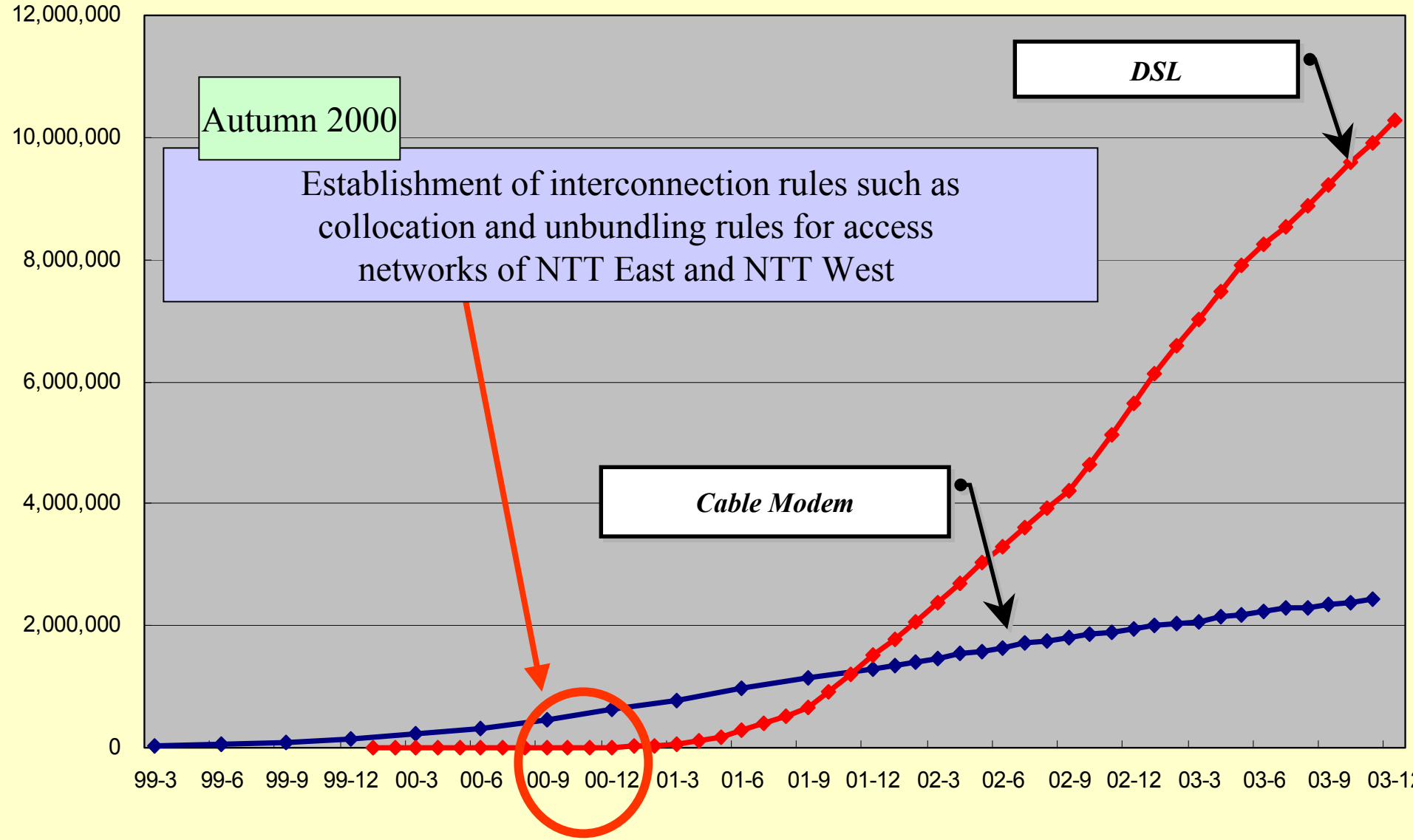
Broadband Penetration in Japan (Number of Subscribers)

Number of broadband subscribers in Japan is about 15 million.

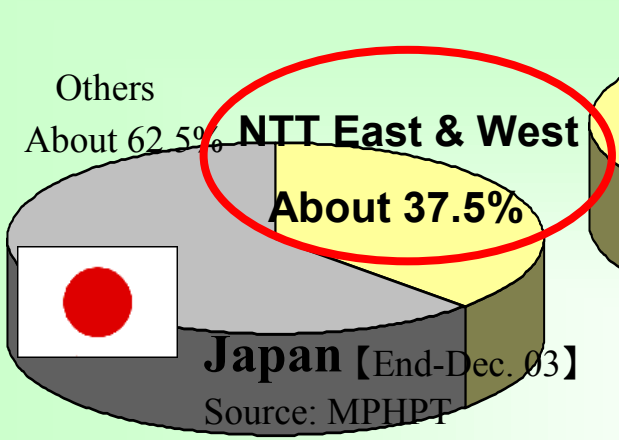
(as of the end of April 2004)



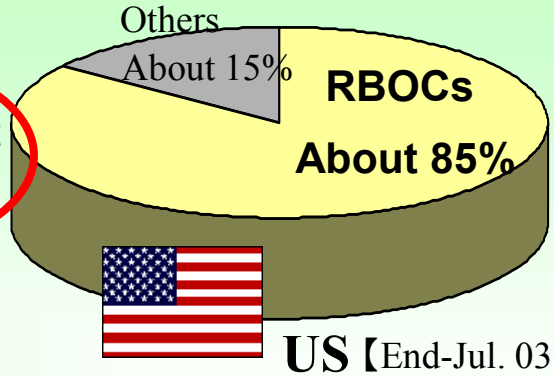
Development of DSL Service Market



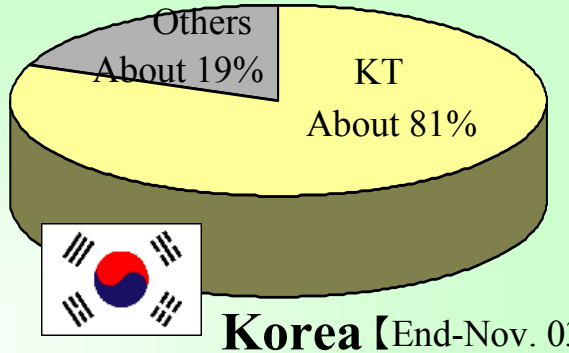
Current Status of DSL Market Share (International Comparison)



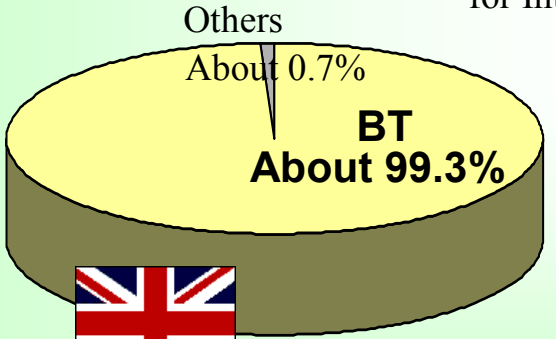
Japan 【End-Dec. 03】
Source: MPHPT



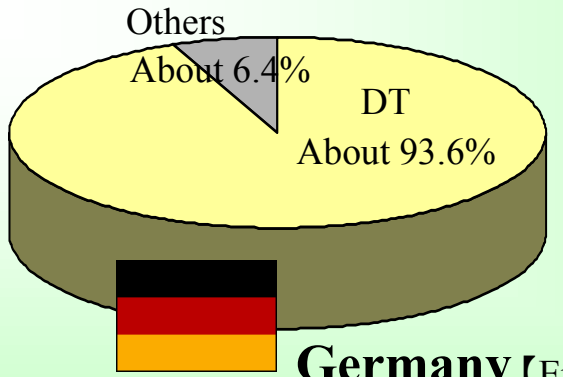
US 【End-Jul. 03】
Source: FCC "High-Speed Services for Internet Access"



Korea 【End-Nov. 03】
Source: Ministry of Information and Communication (MIC)

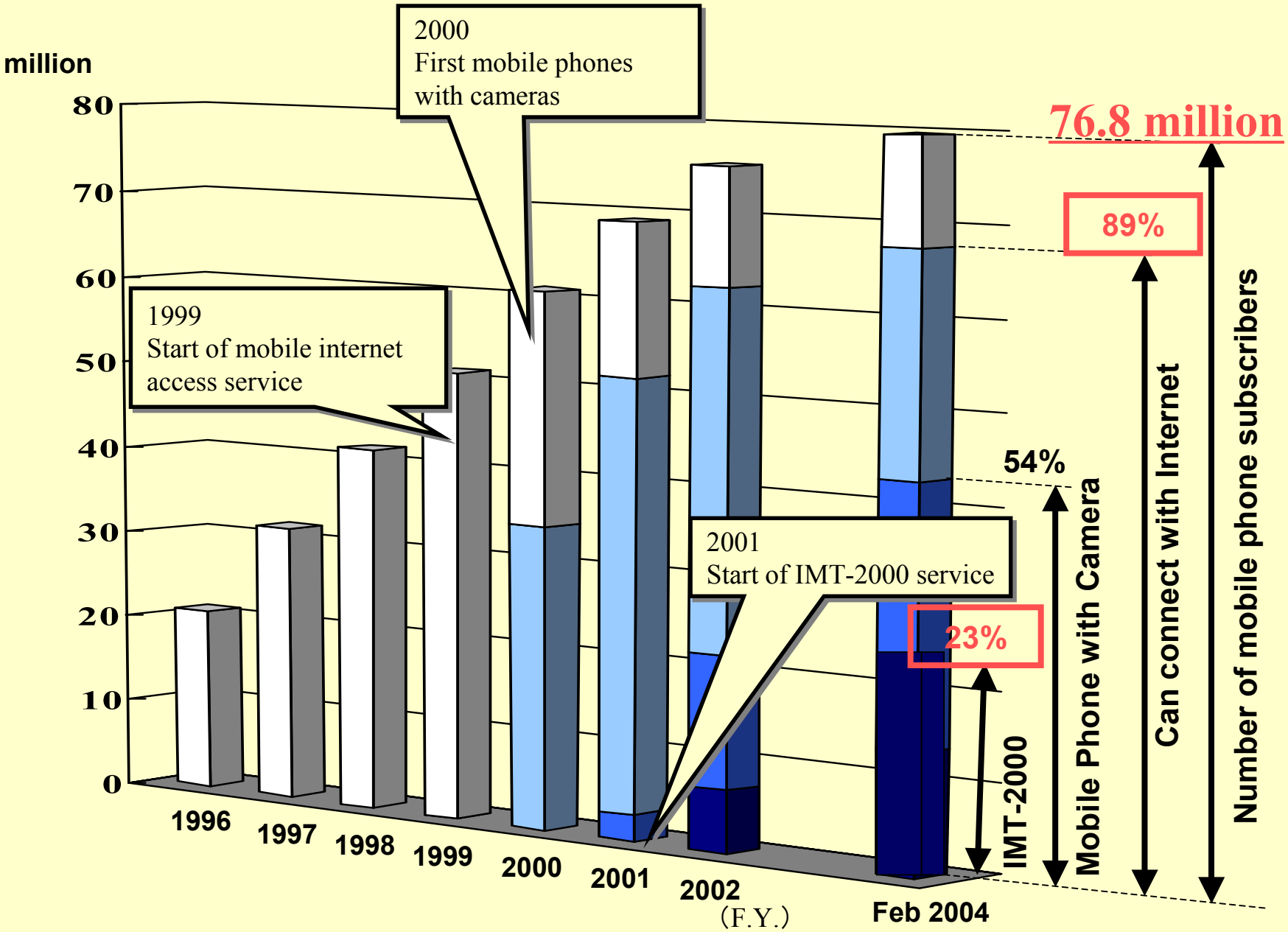


UK 【End-Sep. 03】
Source: Oftel's Internet and Broadband Brief – Sep. 2003

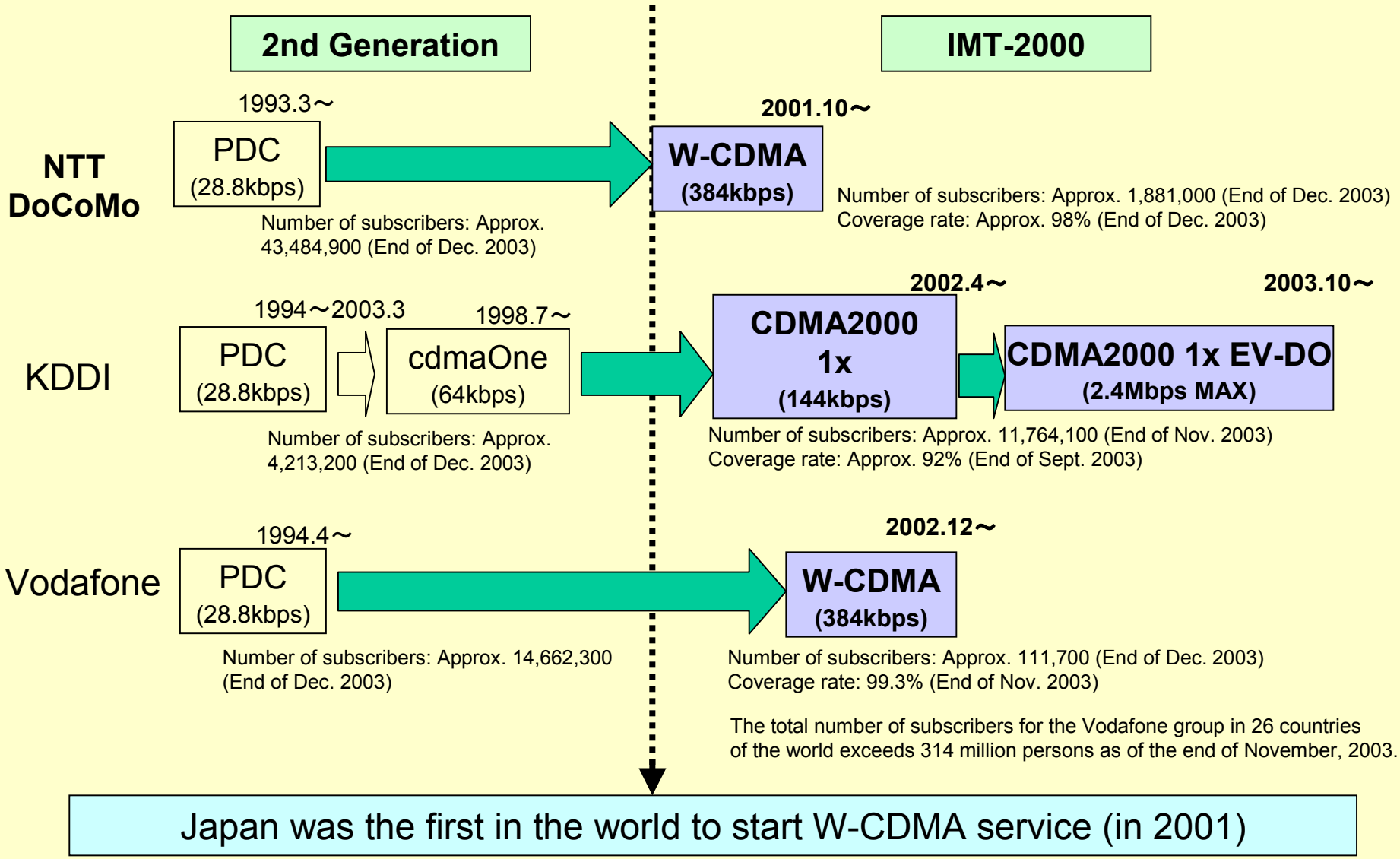


Germany 【End-Jul. 03】
Source: EC "9th Report on the Implementation of the Telecommunications Regulatory Package"

Changes in the Number of Mobile Phone Subscribers



Deployment of IMT-2000 in Japan

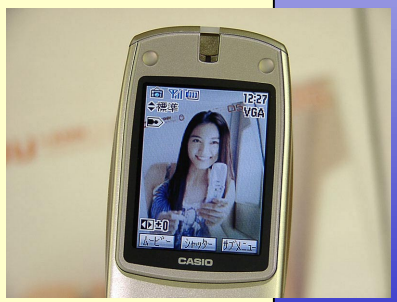


Development of Mobile Phone Services

Voice telephony

Mobile Internet

Multimedia
(”everything in the pocket”)



1G
(1979～)

2G
(1993～)

3G
(2001～)

Systems Beyond IMT-2000
(Around 2010)

Personal authentication
+
Payment from the account

Mobile phone as a tool for e-payment

Broadband Deployment in Japan

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Fiber Optic Infrastructure in Japan

Coverage

100%

72%

20%

"Efforts to establish fiber optic Cable nationwide by FY2005"
(Decision by the Cabinet in Nov. 99)

Private Sector Initiative

[Government Support for Carriers]

✧Ultra-low interest financing (since FY95)

✧Tax benefit incentive(since FY91)

Previous Target
(Report of Telecommunications Council in May 94)

achievement

Current Status of Establishment of Fiber Optic Cable

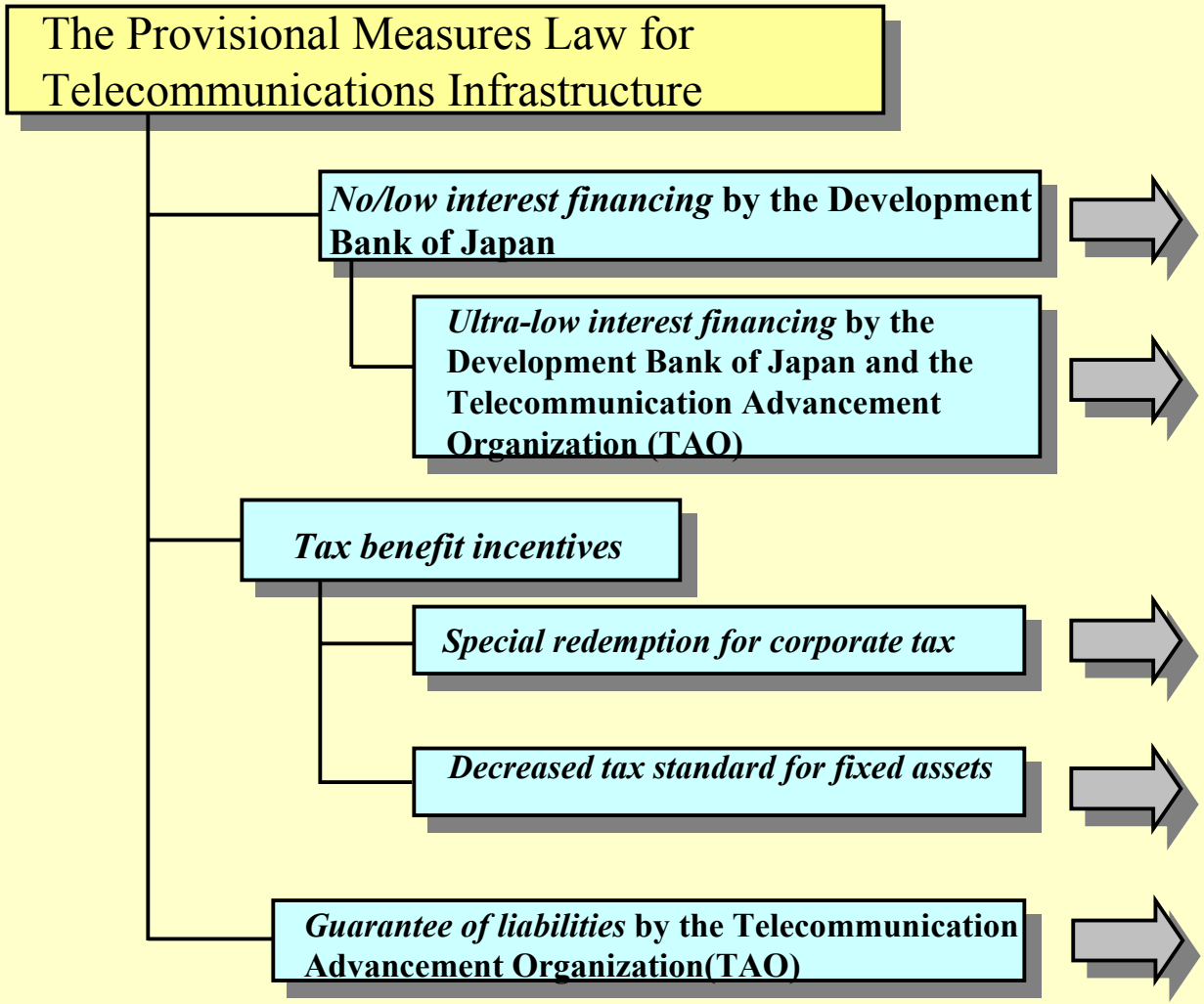
・ Backbone ⇒ Almost all networks have been replaced by fiber optic cables

・ ***Access network ⇒ About 72% of feeder points have been covered (at the end of March 2003)***

Fiber to the Curb (FTTC)

1994 2000 2003 2005 2010 (FY)

How to Deploy Broadband Infrastructure



[Outline of the Schemes]

No/low interest financing by the Development Bank of Japan for operators introducing broadband access networks such as fiber optic/DSL, etc. (No interest for public corporations, low interest for private corporations)

TAO makes interest-based assistance for private corporations with low interest financing from the Development Bank of Japan.

Operators introducing broadband access networks such as fiber optic/DSL, etc. can apply for a special 6 – 18% redemption for corporate tax.

Operators introducing broadband access networks such as fiber optic/DSL, etc. can decrease the tax standard for fixed assets tax by 20 – 25%.

TAO guarantees the debt liabilities of operators introducing broadband access networks such as fiber optic/DSL, etc.

Note: These schemes are also applied to CATV operators providing telecommunications services.

Fiber Optic Infrastructure by the Scale of the Population

as of the end of March 2003

Area		Coverage								
		FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02
Metropolitan Areas	Total	16%	21%	28%	34%	44%	56%	61%	77%	**89%**
	Business Areas	32%	47%	74%	89%	92%	93%	94%	95%	**97%**
Cities with populations of more than 100 thousand	Total	8%	11%	11%	13%	22%	31%	40%	54%	**73%**
	Business Areas	6%	23%	48%	59%	69%	72%	72%	77%	**85%**
Others		2%	3%	5%	6%	8%	14%	22%	38%	**49%**
Nationwide		10%	13%	16%	19%	27%	36%	43%	59%	**72%**

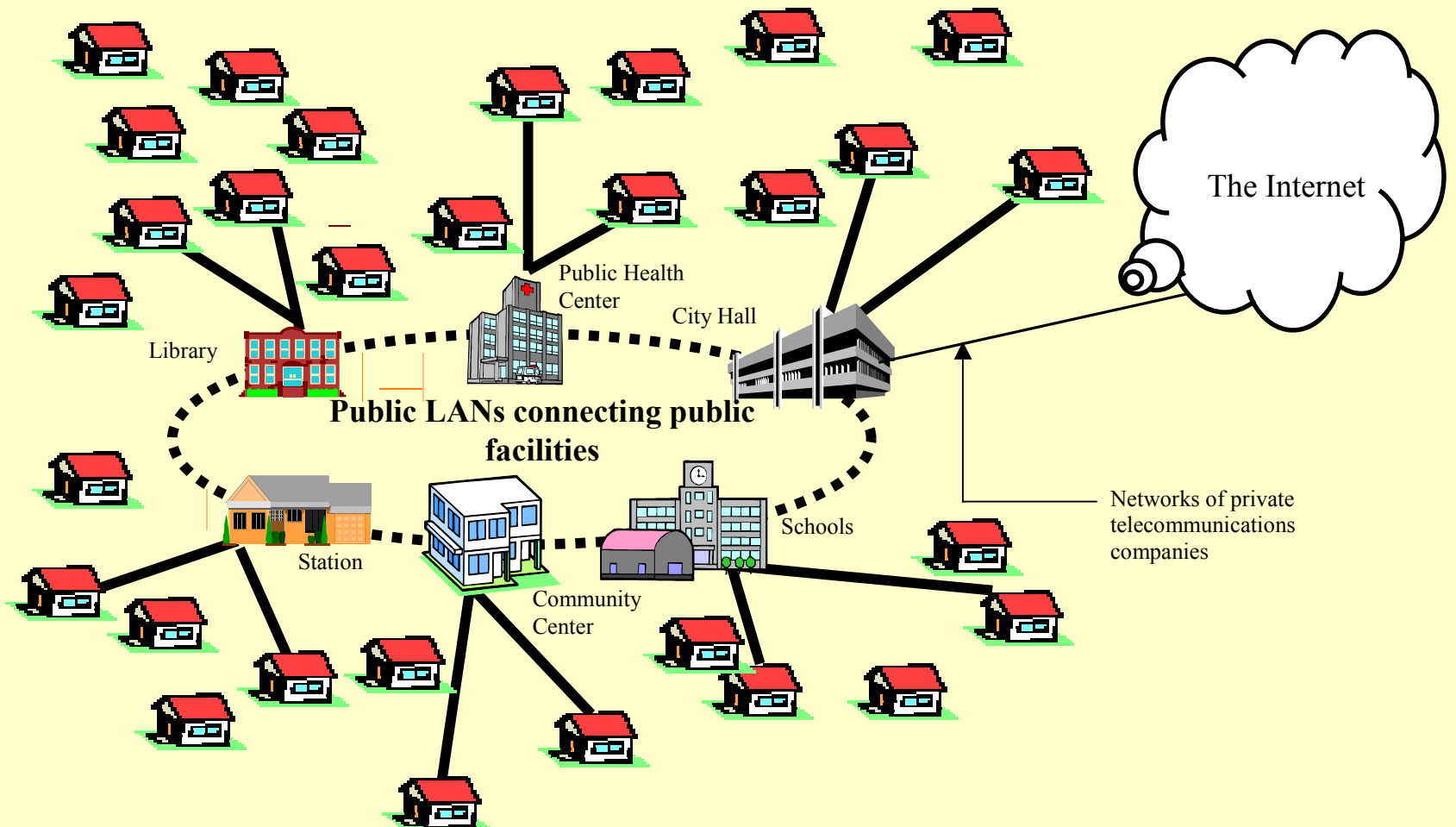
Note : "Business Area" means an area in which more than 50% of subscribers are business customers.

Government Grant for FTTH in Rural Areas

✧ **Many local governments have already established "Public LANs" connecting public facilities. (34.8% of all local governments had public LANs in July 2002.)**

✧ **These local governments can establish an FTTH network in rural areas where private companies cannot due to cost-benefit issues.**

✧ **MPHPT assists those local governments with grants (1/3 of the construction cost).**



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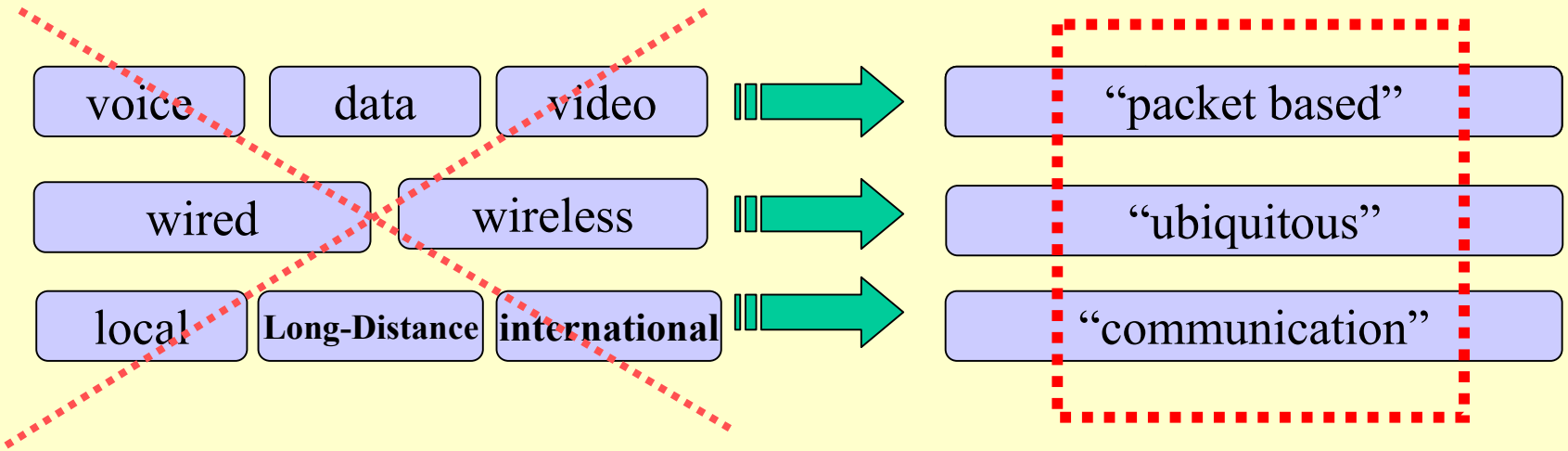
Basic Viewpoints for Further Reform in the IP Age

Transition from PSTN age to IP age

The age of "Everything over IP"

(e.g.) VoIP is not the replacement of traditional telephony.

Drastic Change of market Structure



Roadmap of Japanese Broadband Competition Policies

Change of Network and Market Structure

Transition from PSTN age to IP age

1st Stage (effective since April 2004)

Deregulation (Revision of the Telecom Business Law)

2nd Stage (launched partially)

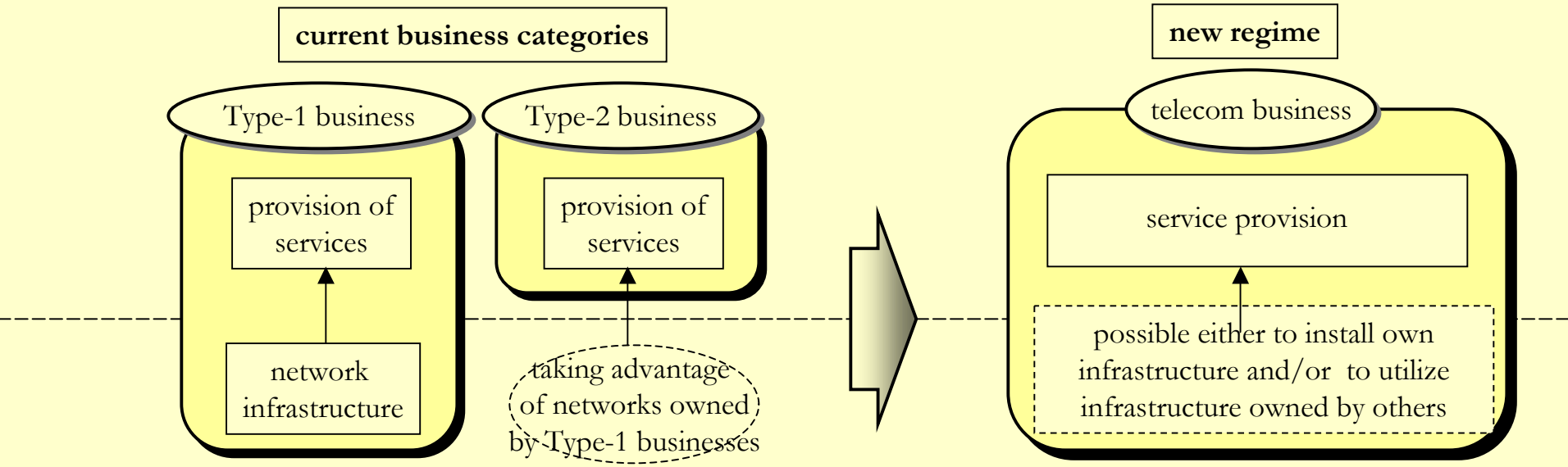
Rule change corresponding to IP based services

Revision of Telecommunications Business Law (1st Stage)

New regime corresponding
to transition from "telephone-age" to "IP-age"

New competition regime

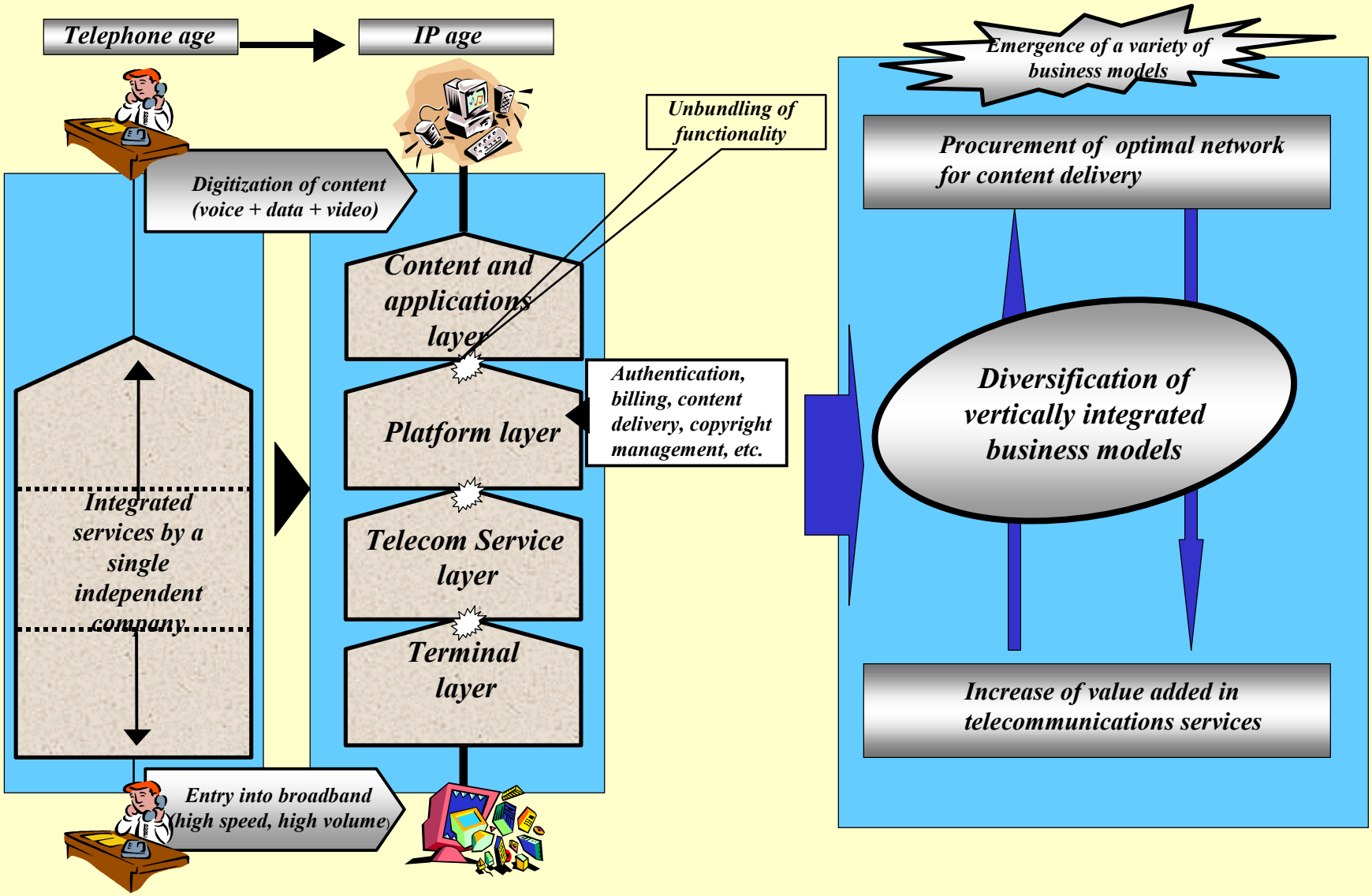
- **Abolition of Type-1 and Type-2 business categories**
- **Drastic deregulation for market entry of Type-1 business**
  - **Move from permission system to registration / notification system**
- **Further deregulation for non-dominant carriers**



Many Issues Ahead on IP Based Services (2nd Stage)

1. Review of Market Definition
2. Interconnection Rules
3. Universal Service
4. Social Issues
5. International Consistency

Layered Competition Model

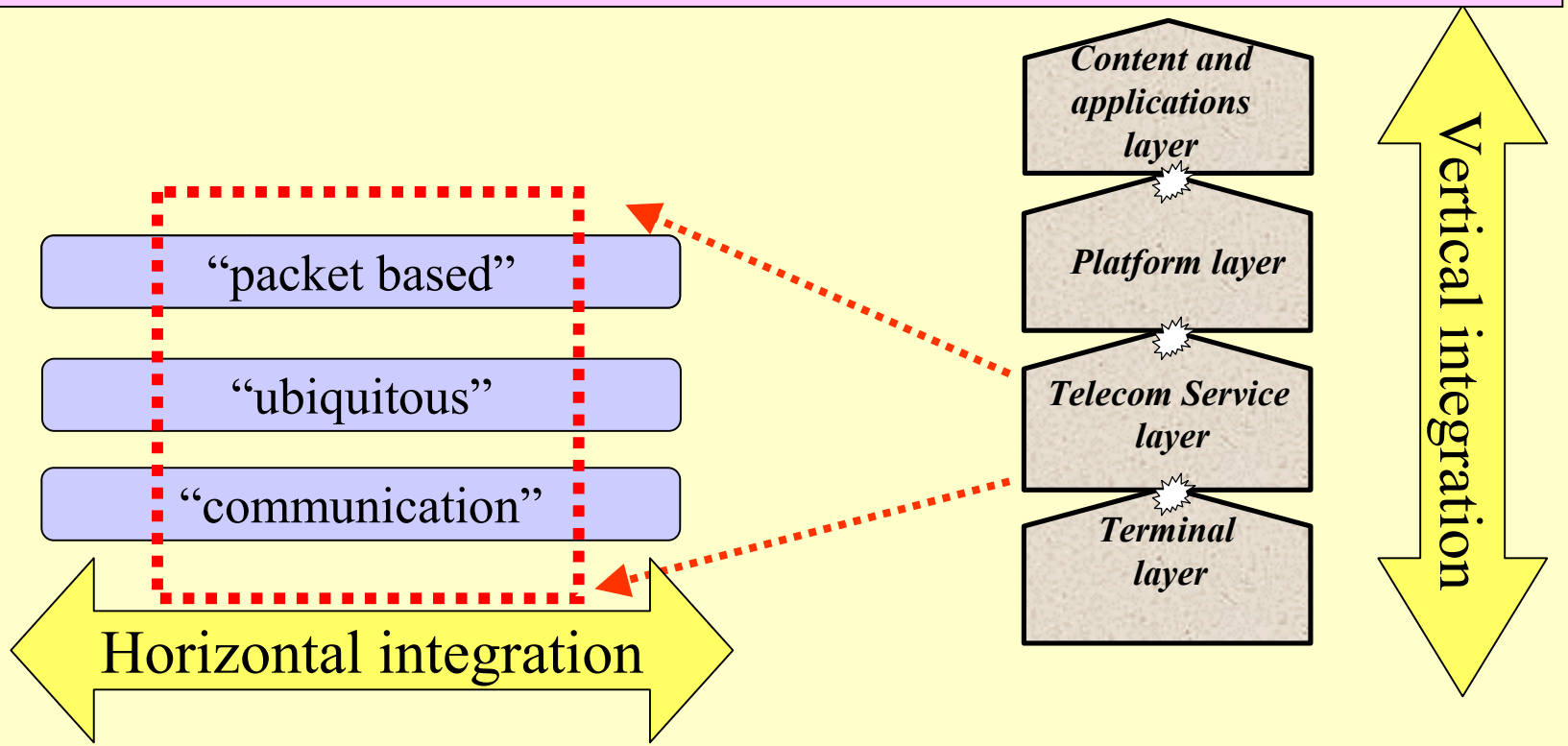


(Reference) Yasu Taniwaki "Emerging Broadband Market and the Relevant Policy Agenda in Japan," Journal of Interactive Advertising, Volume 4, Number 1, Fall 2003, Michigan State University and the University of Texas at Austin

Review of Market Definition

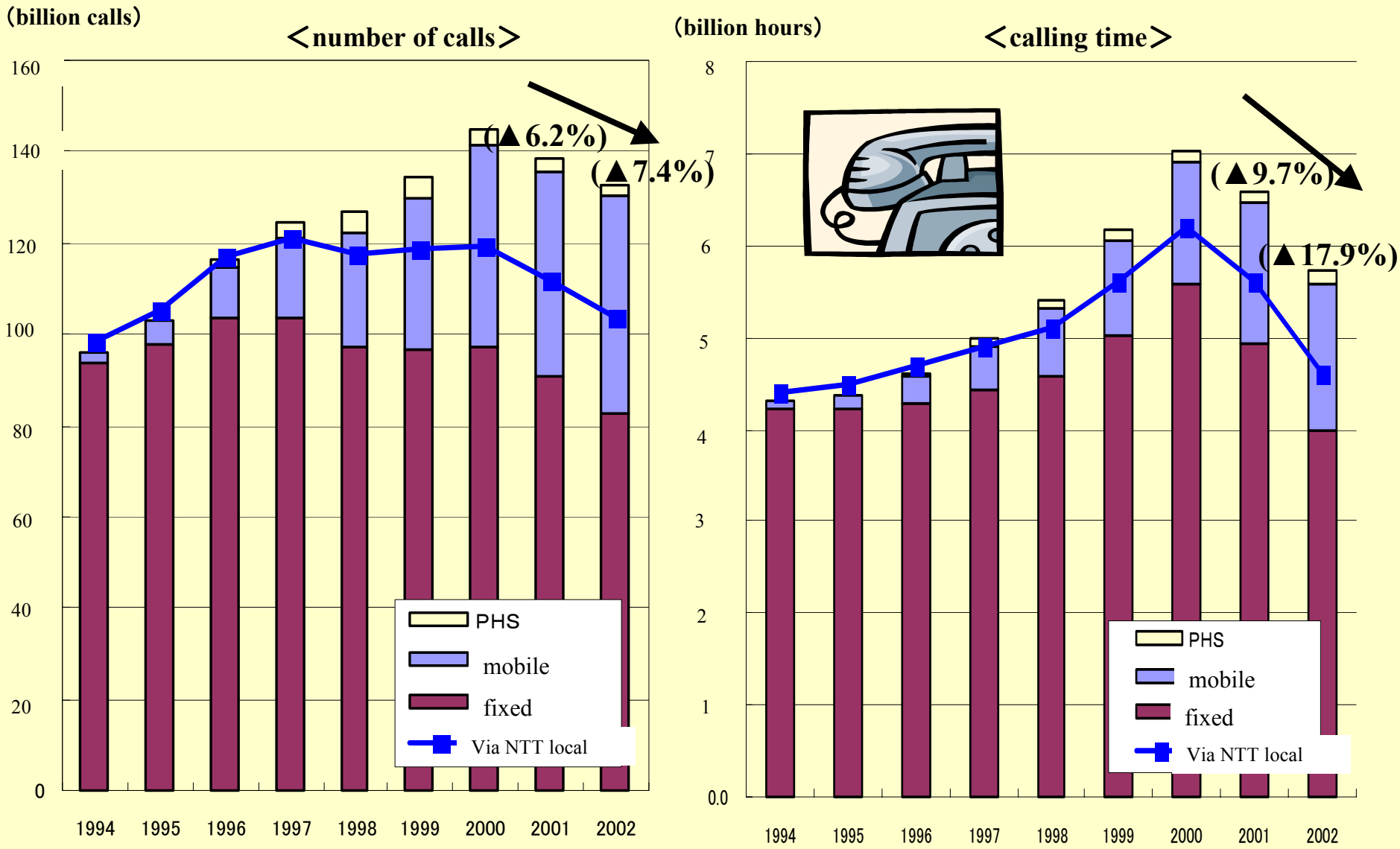
Review of Market Definition

■ Development of methodology of how to define markets
(Analysis of market dominance in newly emerging markets)



Study Group of the MPHPT is now reviewing the "internet access market", which is expected to complete the study in June 2004.

Reduction in Fixed Telephone Traffic Volume



Review of Interconnection Rule

(Reduction in volume of fixed telephone calls)

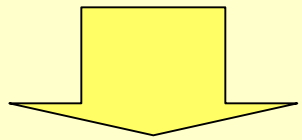
- Transition from dial up internet access to high speed internet access
- Market growth in mobile phone usage
- Growth in demand for VoIP service (e.g. IP centrex)

→ Possibility of drastic increase of access charges (using TELRIC model)

(Emerging new interconnection regime)

- Spread of new intercompensation regimes such as “transit” and “peering”

→ New intercarrier compensation regime corresponding to IP networks



Review of Interconnection Rules

- Development of Intercarrier compensation rule
- Review of availability of TELRIC model

Telecommunications Council will complete the study on a new access charge mechanism by this autumn.

Other Issues to be Reviewed

Universal Service

- Much more difficult to define “essential service indispensable to social and economic activities”
- Redefinition of “universal service”

(from “service” to “access” (i.e. Maintenance of physical network layer))

Social Issues

- Spam VoIP / Emergency calls / Virus
- Service Quality Rules on “best effort” type service

(e.g.. difficult for consumers to recognize the difference between “nominal” speed and “effective” speed)

International Consistency

- IP based services easily cross national borders.
- Equivalence of regulations required to avoid international “regulation leverage”.

E-Japan Strategy

Nov. 2000

Basic IT Law
(Basic Law on Formation of an Advanced Information and Telecommunications Network Society)

Jan. 2001

"e-Japan Strategy"
Objective: Make Japan the world's leading IT nation by the year 2005

focusing on the promotion of broadband infrastructure

Jul. 2003

"e-Japan Strategy II"
Objective: The practical application and implementation of Japan's IT infrastructure and advanced technology

focusing more on broadband content and application

Arigatou-Gozaimasita ！

Thank you!

Reference :

Yasu Taniwaki “Emerging Broadband Market and the Relevant Policy Agenda in Japan,” Journal of Interactive Advertising (http://jiad.org), Volume 4, Number 1, Fall 2003, Michigan State University and the University of Texas at Austin