Outline of the Telecommunications Business in Japan

TELECOMMUNICATIONS BUREAU,
MINISTRY OF PUBLIC MANAGEMENT,
HOME AFFAIRS, POSTS AND
TELECOMMUNICATIONS (MPHPT)

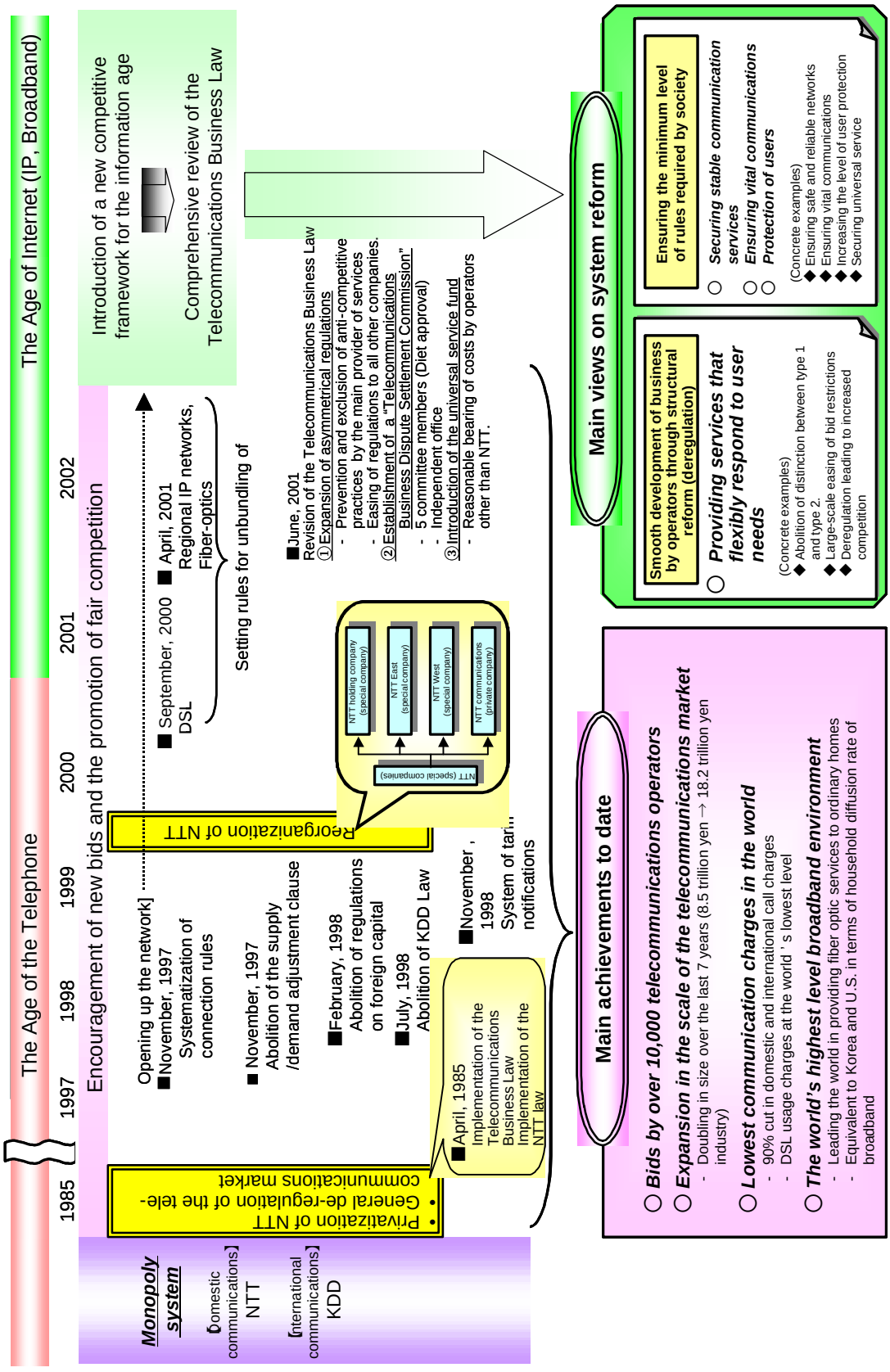
June 2004

Contents

References

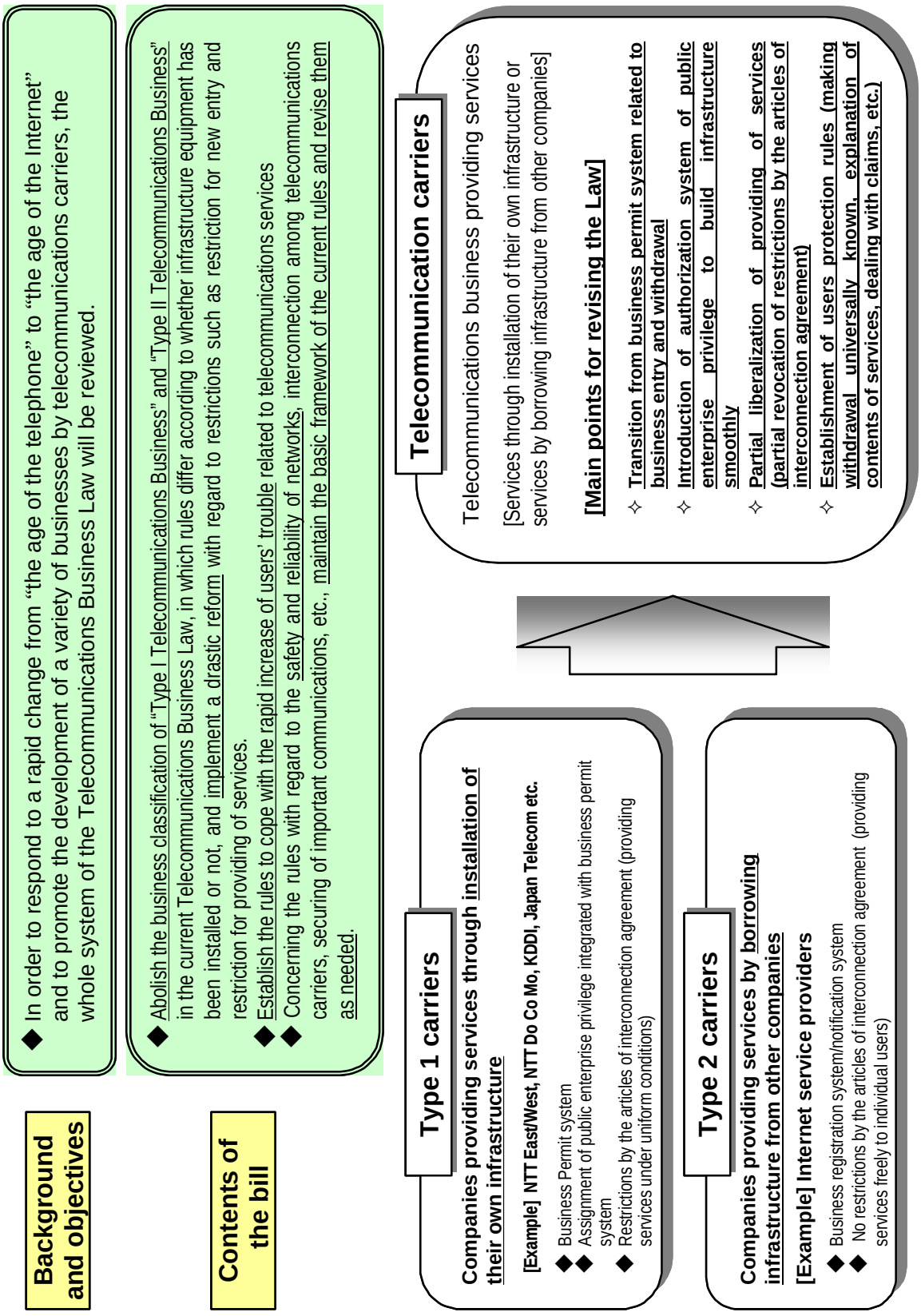
I. Development of Japanese pro-competition policy

1. The Promotion of Pro-Competitive Policies in the Telecommunications Field



2. Pro-competition policy in the telecommunications carriers business for promoting IT revolution

Outline (1) of the bill partially revising the Telecommunications Business Law



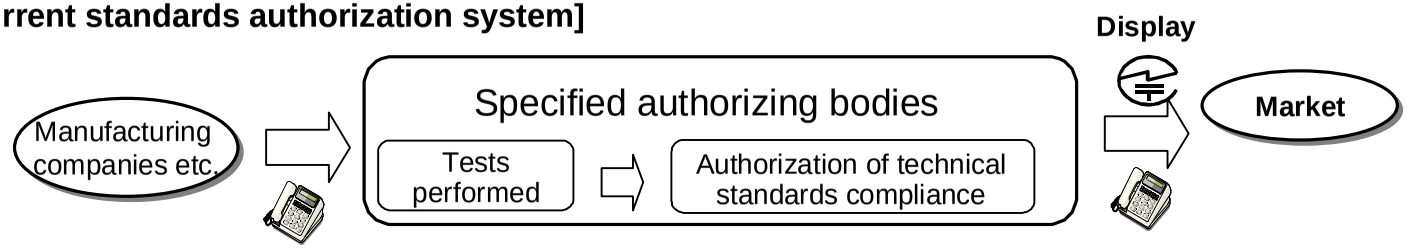
Background and objectives

- **Manufacturing companies, based on changes in the market environment, have requested the introduction of an "independent declaration of conformance system" in which it is possible to make an independent declaration that their products conform to a technical standard.**
- **Maintain and strengthen international competitiveness in industry, in order to realize the swift introduction of telecommunications devices into the market.**

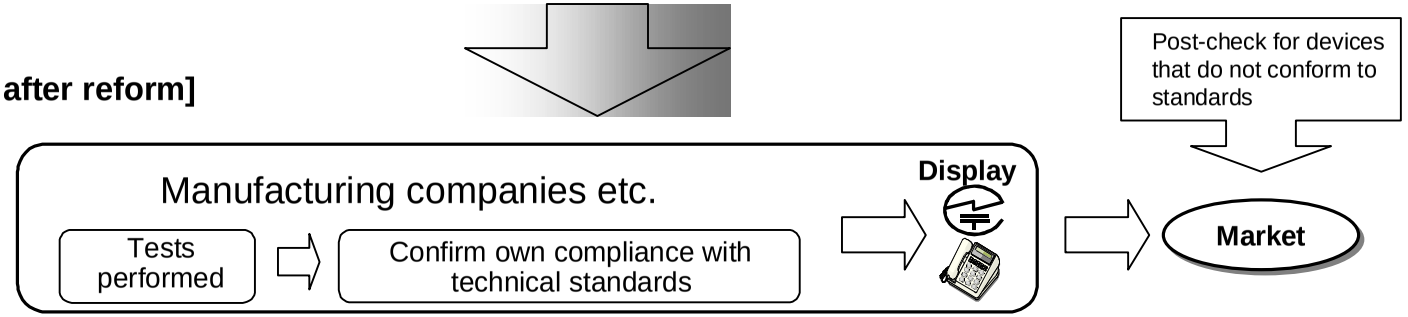
Content of the Bill

① **According to the Telecommunications Law, newly create a system in which it is possible for manufacturers to confirm their own conformity to technical standards.**
② **Change from a system in which specified authorizing bodies conduct authorizations to a system in which authorization is performed by bodies registering with the MPHPT Minister.**

[Current standards authorization system]



[System after reform]



Manufacturing companies etc. without test facilities can choose an authorization system involving newly registered bodies in a system similar to the current specified authorizing bodies system.

3. Establishment of Interconnection Rules

1 Introducing regulation for Designated Telecommunications Facilities

1997 ・Imposing obligation to interconnection with Telecommunications circuit facilities

・Introducing regulation for Category I designated telecommunications facilities for fixed communications networks (requirement establishment, approval and publishing interconnection tariffs)

2001 ・Introducing regulation for Category II designated telecommunications facilities for mobile communications networks (requirement of establishment, notification and publishing interconnection tariffs)

2 Calculation of interconnection charges for fixed communications networks

1997 Implementation of appropriate calculation of cost based on interconnection accounting results, in line with the introduction of regulation for Category I designated telecommunications facilities.

2000 Introducing the Long-Run Incremental Cost methodology for fixed communications networks to increase the transparency of calculations and give incentives to streamline.

2003 Review of the Long-Run Incremental Cost methodology and calculation of interconnection charges.

2004 Starting investigation into method of calculating interconnection charges from 2005.

(charges for 3 minutes)

FY	1998	1999	2000	2001	2002	2003/4
GC connection	5.81 yen	5.57 yen	4.95 yen	4.60 yen	4.50 yen	4.37 yen
ZC connection	11.98 yen	10.64 yen	7.65 yen	5.88 yen	4.78 yen	5.36 yen

3 Unbundling of subscriber lines

2000 Obligation to unbundling of subscriber lines (copper lines) for Category I designated telecommunications facilities

2001 Obligation to unbundling of subscriber fiber lines for Category I designated telecommunications facilities

* The collocation rules such as procedures when a telecommunications carriers perform works by themselves in NTT East and West building were established in the year 2000 and has been revised as necessary.
* Unbundling charges have been recalculated every year after being obligation. The current charges are as shown in the table below.

(monthly charge per line)

	NTT East	NTT West
Dry copper	1,385 yen per line/month	1,453 yen per line/month
Line sharing	158 yen per line/month	165 yen per line/month
Subscriber fiber optics(Note)	5,232 yen per line/month	5,239 yen per line/month
Backbone fiber optics	2.166 yen m/month	2.241 yen m/month

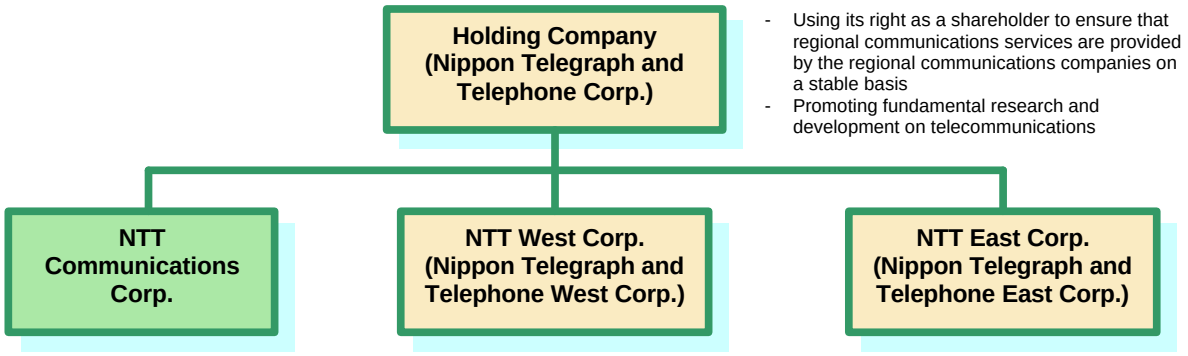
Note)In the case of subscriber fiber optics, as charge is calculated based on future costs, revision is not taking place

4 Procedures to settle disputes between carriers

1985 When consultation over interconnection between carriers fails to come to an agreement, the carriers can request to the MPT minister (at present, MPHPT minister) on order for interconnection / an award.

2001 Telecommunications Business Dispute Settlement Commission was established and the carriers can apply for mediation and arbitration when consultation over interconnection pails to come to an agreement.

4. Outline of NTT Reorganization Scheme

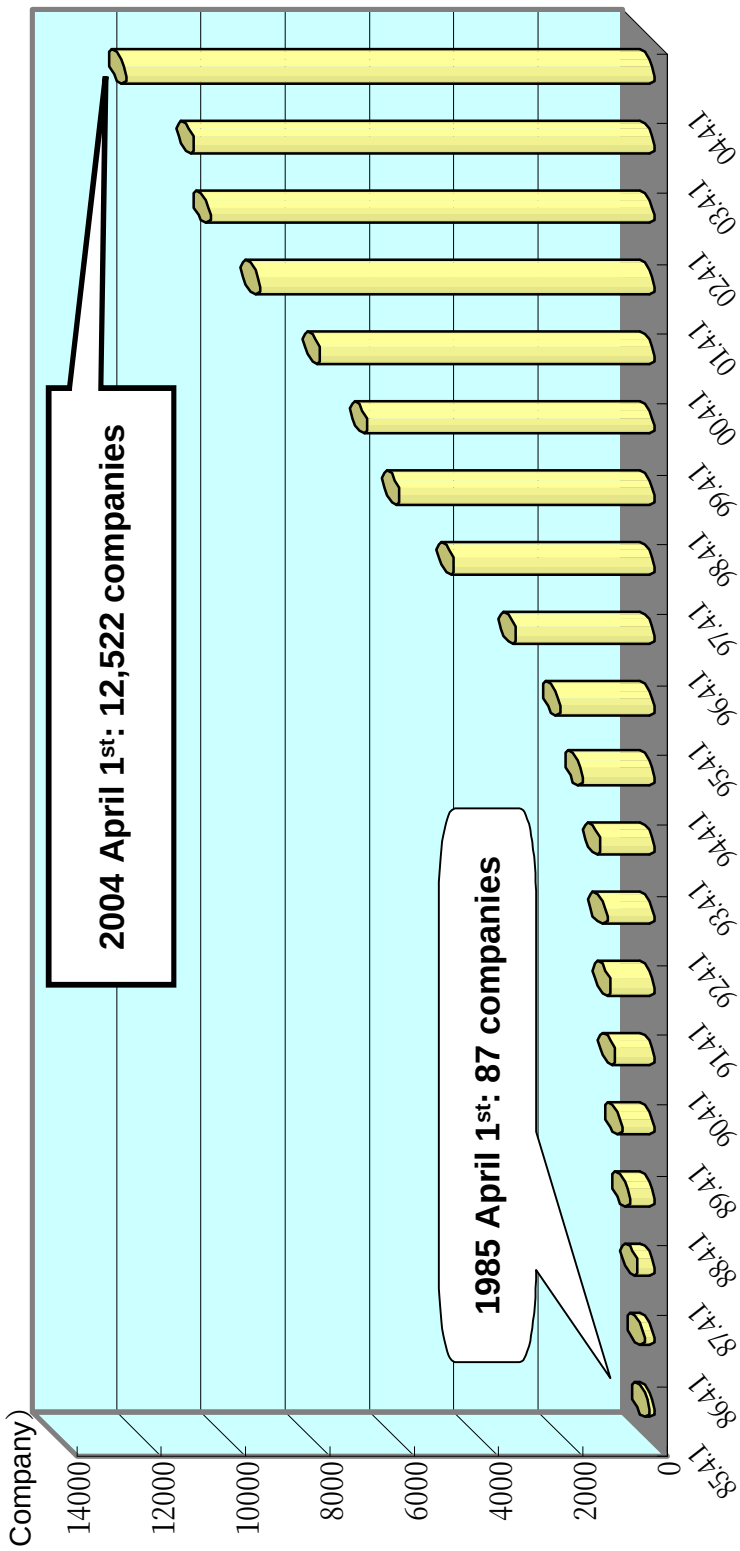


References

1. special corporation, private company
2. The holding company holds all shares of NTT East Corp. and NTT West Corp.

II. Current situation surrounding the telecommunications business

1. Changes in the total number of telecommunications carriers



Number of telecommunications carriers	1985.4.1	1986.4.1	1988.4.1	1989.4.1	1900.4.1	1991.4.1	1992.4.1	1993.4.1	1994.4.1	1995.4.1
	87	369	567	738	903	1,011	1,106	1,259	1,675	2,218
1996.4.1	1998.4.1	1999.4.1	2000.4.1	2001.4.1	2002.4.1	2003.4.1	2004.4.1			
3,260	6.024	6.780	7,900	9.348	10,521	10,904	12,522			
1994.4.1	4,726									

Notes:
1. Type I carriers offer services by establishing their own telecommunications circuit facilities.
2. Type II carriers offer services by leasing telecommunications circuit facilities.
3. NTT was reorganized into two regional Type I carriers (NTT East Corp. and NTT West Corp.) and one long-distance/international carrier (NTT Communications Corp.) under one holding company (NTT) on July 1, 1999.
4. On October 1, 2000, DDI Corp., KDD Corp. and IDO Corp. were merged into DDI Corp. (KDDI)

2. Market Scale

【Results for 2002】

? The amount invested in equipment for all industries decreased 7.5% in 2002 from the same time the previous year, and the amount invested in equipment by type 1 carriers was 2.4917 trillion yen (a reduction of 16.9% from the previous year).

? Although a reduction was seen in equipment investment by NTT East and West and regional NCC, there was an increase in equipment investment by satellite operators (111.1% increase on previous year), long-distance and international (4.6% increase on previous year).

? Based on the IRU, installed transmission route equipment grew by approximately 110,000 kilometers and IRU-contract based expenditure was 22 billion yen.

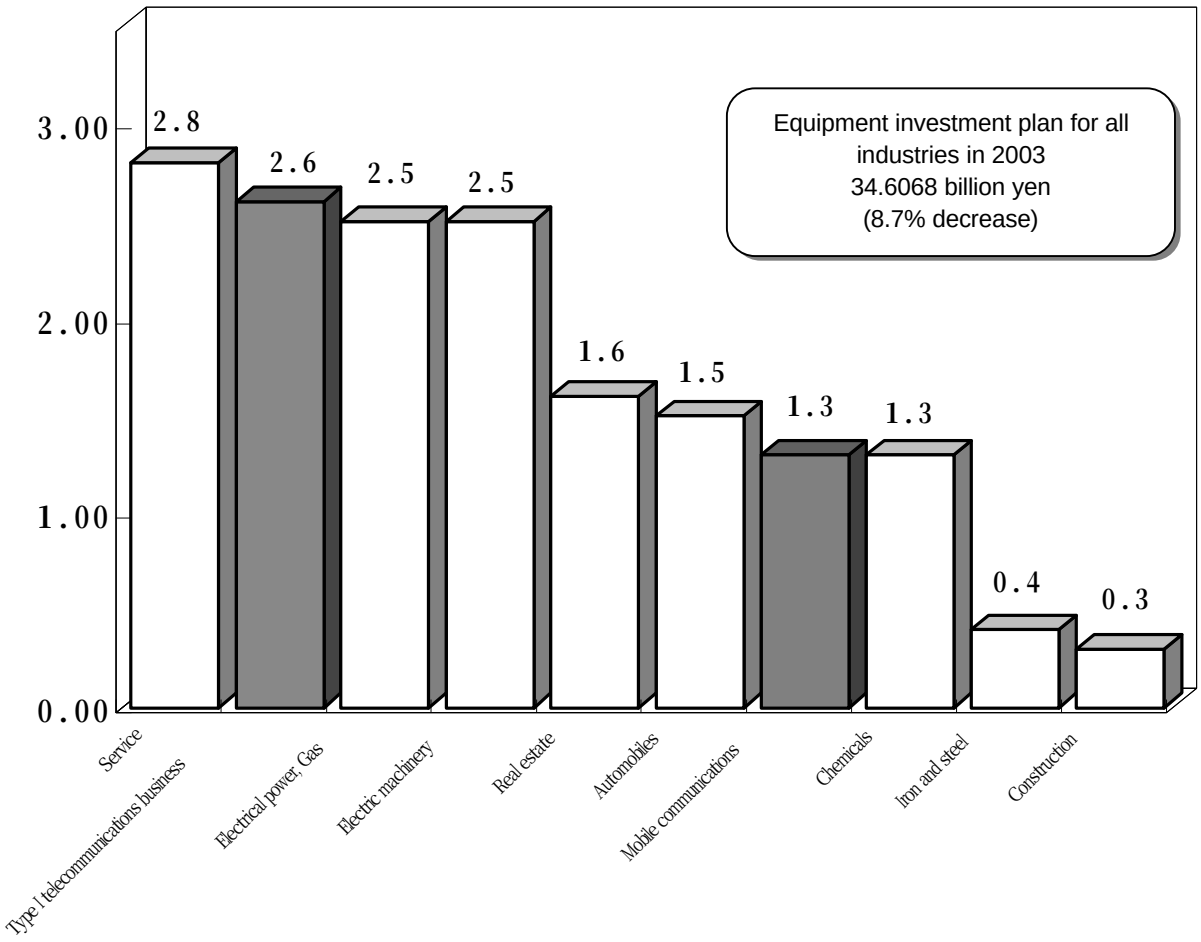
【2003 Year Plan】

? While the planned investment equipment total for all industries in 2003 has decreased by 8.7% from the previous year, the planned investment in equipment in type 1 carriers is expected to grow by 6.2% to 2.6462 trillion yen.

? Type 1 carriers are in second place among all industries, with 7.6% of all planned investment in equipment (34.6068 trillion yen).

? Based on the IRU, installed transmission route equipment will grow by approximately 200,000 kilometers and IRU-contract based expenditure will be 30.5 billion yen.

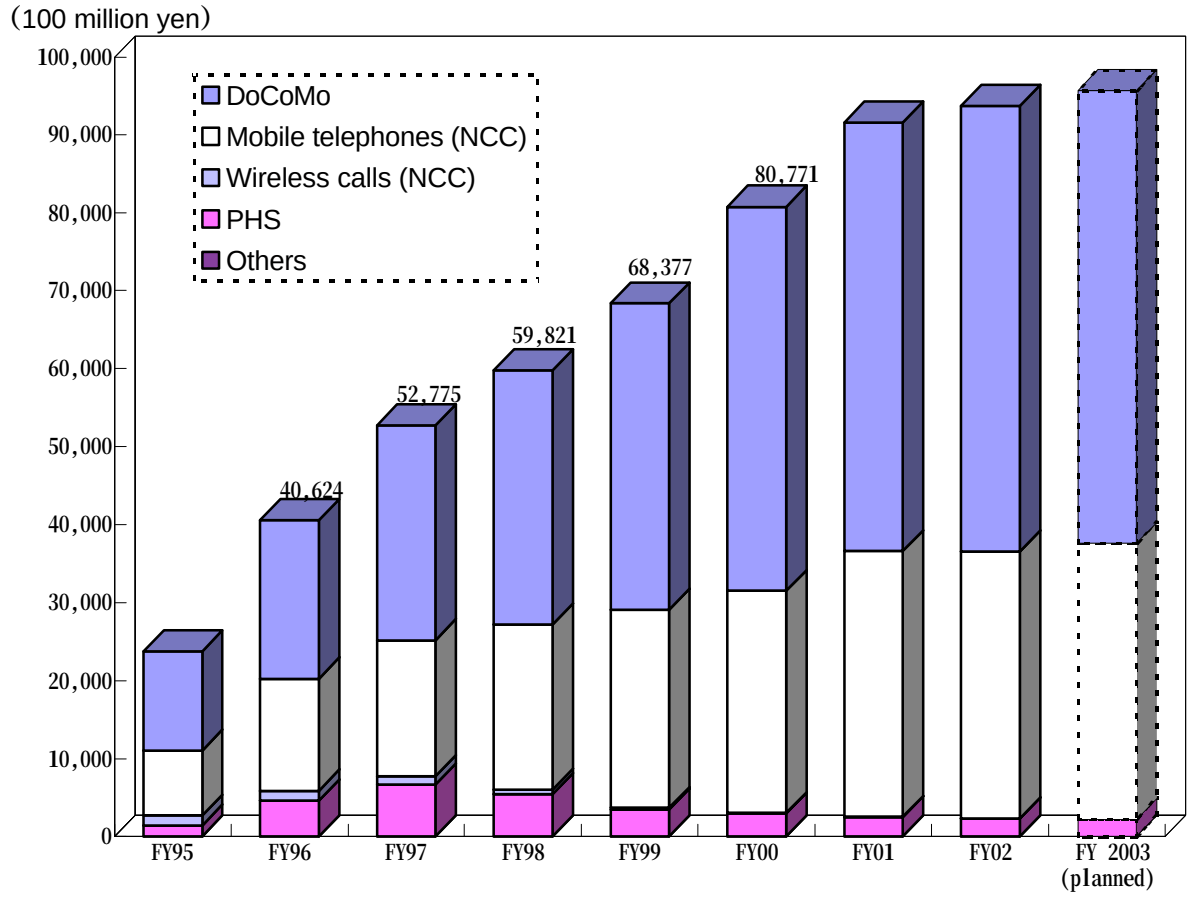
【2003 equipment investment plan】



(Note) 1. Figures in( )is the growth(%)compared to the previous year.
2. For other industries, see Cabinet report “Corporate trends survey report” (March 2003).
3. The equipment investment figures are shown rounded up.

3. Market scale of the mobile telecommunications business

- **Sales in the mobile telecommunications industry in 2002 increased to 9.4 trillion yen from 9.2 trillion yen in 2001 (an increase of 2.3% compared to the same period in the previous year).**
- **DoCoMo group – approximately 5.7 trillion yen(increase of 3.9%), mobile telephone NCC – approximately 3.4 trillion yen (increase of 0.4%), PHS – approximately 230 billion yen(decrease of7.6%)**
- **Sales in the mobile telecommunications industry in 2003 are expected to break through the 9.5 billion yen.**



(Unit：100 million yen)

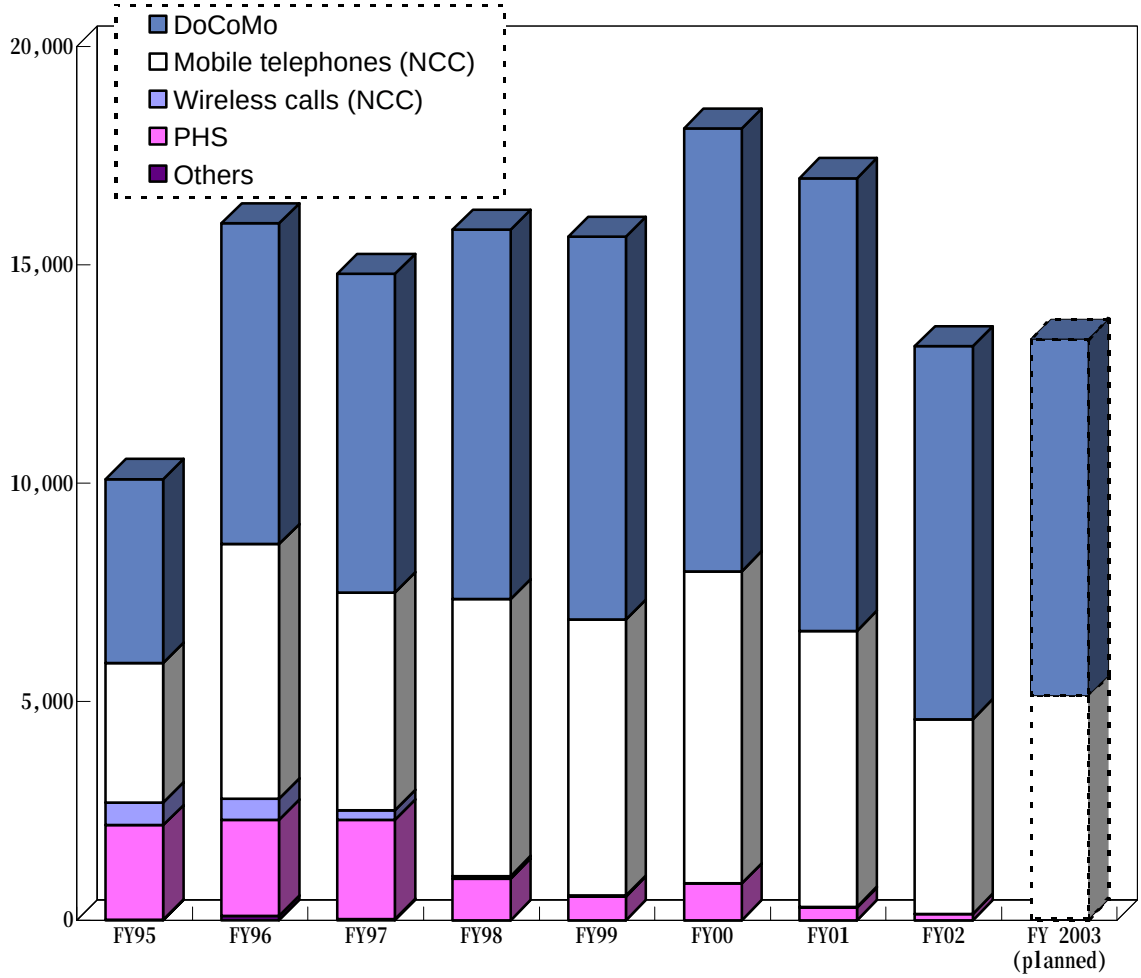
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003 (planned)
DoCoMo	12,727	20,339	27,552	32,597	39,274	49,239	54,982	57,103	58,090
Mobile telephones (NCC)	8,378	14,375	17,447	21,197	25,392	28,490	34,073	34,199	35,307
Wireless calls (NCC)	1,248	1,268	1,068	587	255	43	27	29	30
PHS	1,382	4,585	6,665	5,401	3,417	2,956	2,489	2,301	2,320
Others	53	57	43	39	39	43	42	42	43
Total	23,788	40,624	52,775	59,821	68,377	80,771	91,613	93,674	95,790
(Increase rate compared to previous year (%))	(71.6)	(70.8)	(29.9)	(13.4)	(14.3)	(18.1)	(13.4)	(2.2)	(2.3)

(Note) Sales base(Telecommunications operator revenue + related business revenue).
From December 1998, DoCoMo figures include PHS.
NCC:New Common Carrier(carriers newly entering market)

4. Mobile telecommunications equipment investment

- **Investment in equipment investment in 2002 was approximately 1.31 trillion yen（reduction of 22.7% from previous years）**
- **In 2003, there was a slight rise to 1.35 trillion yen（up 2.5% from the previous year).**

（100 million yen）



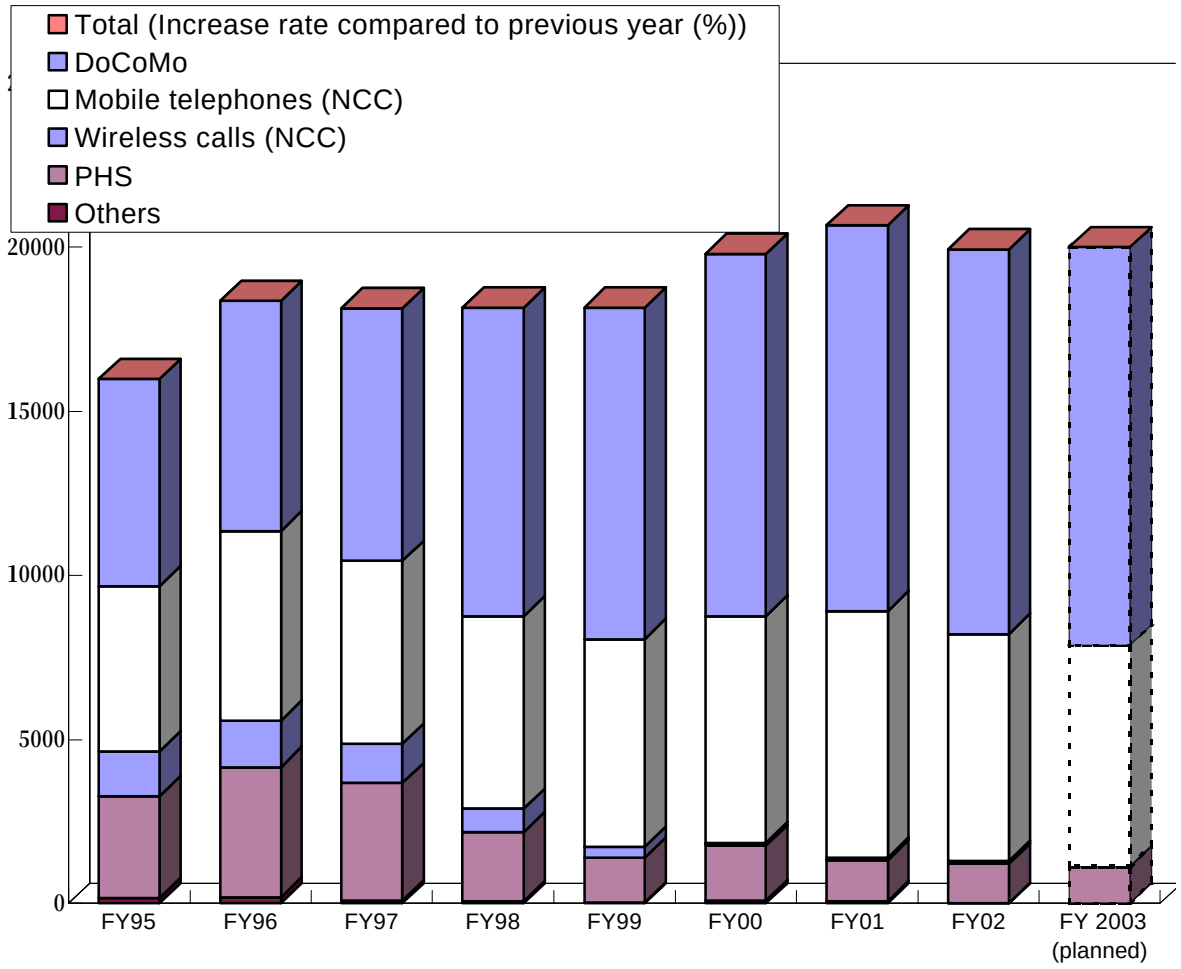
（Unit：100 million yen）

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003 (planned)
DoCoMo	4,215	7,336	7,293	8,458	8,760	10,128	10,373	8,532	8,165
Mobile telephones (NCC)	3,180	5,828	4,986	6,334	6,317	7,138	6,306	4,449	5,107
Wireless calls (NCC)	534	481	219	54	27	3	21	2	1
PHS	2,157	2,205	2,270	955	536	840	281	143	178
Others	13	95	23	2	1	4	6	5	9
Total	10,099	15,945	14,791	15,803	15,641	18,113	16,987	13,131	13,460
(Increase rate compared to previous year (%))	(68.6)	(57.9)	(-7.2)	(6.8)	(-1.0)	(15.8)	(-6.2)	(-22.7)	(2.5)

(Note) DoCoMo includes equipment investment in wireless call companies.
From December 1998, DoCoMo figures include PHS.

5. Number of mobile telecommunications company employees

- **The number of employees at the end of 2002 was approximately 20,000 (3.5% decrease from the previous year)**
- **In 2003, a slight increase was seen (0.4% increase from the previous year)**



(Unit：people)

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003 (planned)
DoCoMo	6,323	7,014	7,692	9,404	10,098	11,034	11,745	11,718	12,120
Mobile telephones (NCC)	5,025	5,780	5,568	5,854	6,335	6,902	7,520	6,914	6,706
Wireless calls (NCC)	1,363	1,406	1,200	713	330	86	79	88	56
PHS	3,103	3,975	3,589	2,115	1,361	1,681	1,249	1,187	1,091
Others	178	193	89	72	41	95	74	28	32
Total	15,992	18,368	18,138	18,158	18,165	19,798	20,667	19,935	20,005
(Increase rate compared to previous year (%))	(22.7)	(14.9)	(-1.3)	(0.1)	(0.0)	(9.0)	(4.4)	(-3.5)	(0.4)

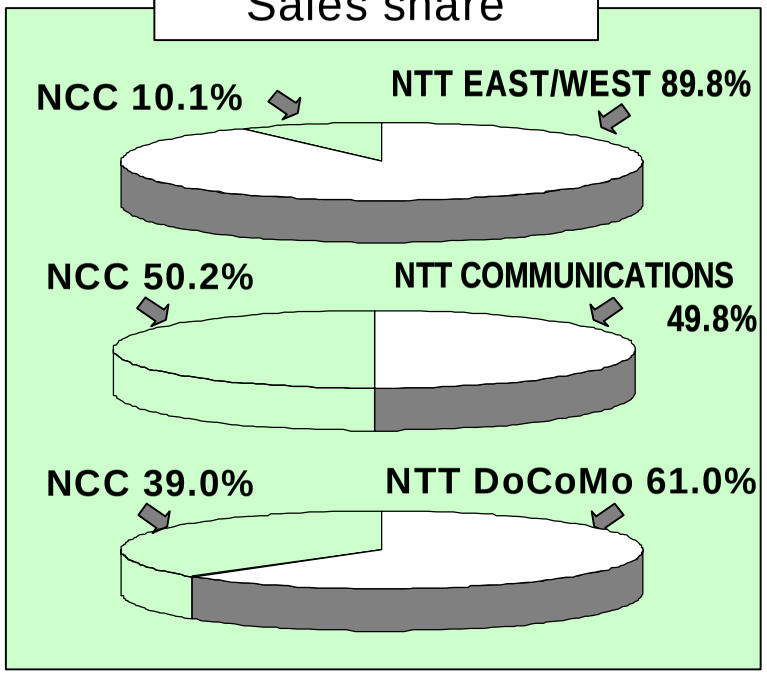
(Note) DoCoMo includes number of employees working for DoCoMo wireless call companies
From 1998, this includes the number of employees working for PHS companies.

Local call

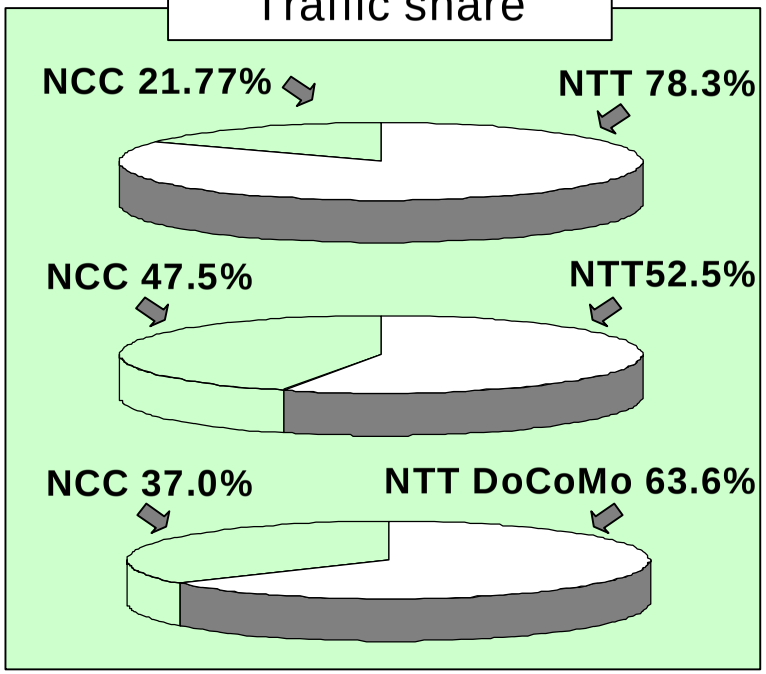
Long distance call, etc.

Mobile call

Sales share



Traffic share



Settlement of accounts of 2002 (in 100,000,000 yen)

	NTT-Group companies	NCC
Local call	45, 673	5, 132
Long-distance/ international call	11, 521	11, 597
Mobile call	57, 103	36, 500

Settlement of accounts of 2002 (in 100,000,000 calls)

	NTT-Group companies	NCC
Local call	323. 5	89. 7
Out-of-town call	159. 1	143. 7
Mobile call	372. 1	218. 5

※1: Local calls and out-of-town calls is the number of calls that are transmitted from subscriber telephones and ISDN

※2: Mobile calls are the number of calls from cellular phones.

※ NCC (New Common Carrier)

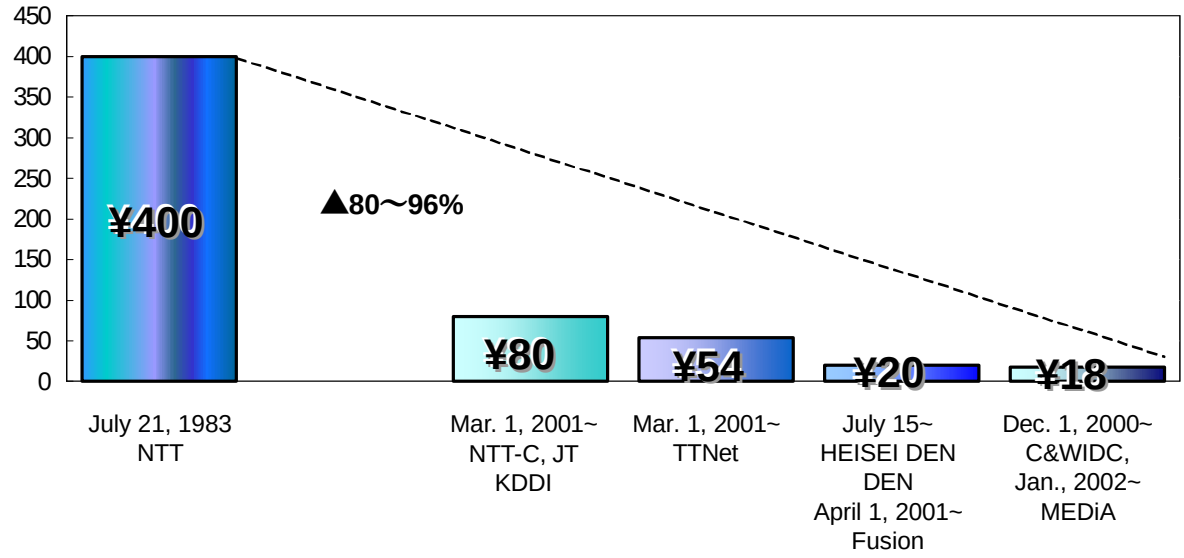
NCC is an abbreviation of Type I Telecommunications Carriers who have entered the telecommunications service market since the telecommunication system was revised in April 1985. The number of the telecommunication carriers who have entered the telecommunication service business is 417 as of august 1, 2003, and they are providing a variety of services such as telephones, private lines, cellular phones, wireless calling.

Source: Data of the Ministry of Public Management, Home Affairs, Posts and Telecommunications

7. Current Status of Rate Reductions

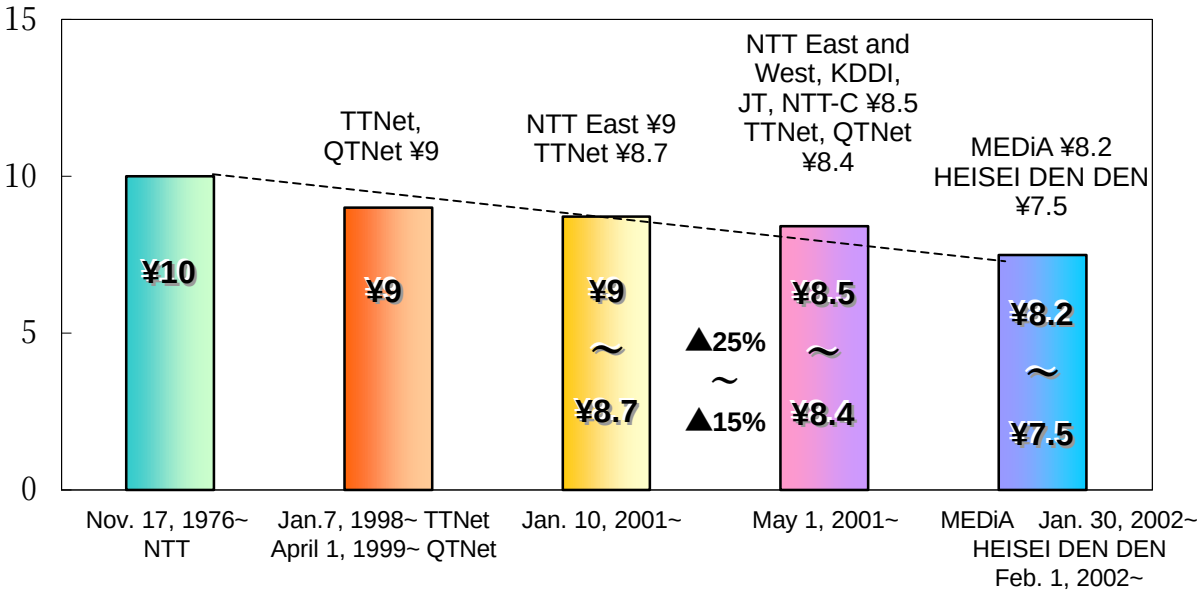
(1) Long-distance call (Tokyo-Osaka)

（3 minutes, daytime, weekdays）

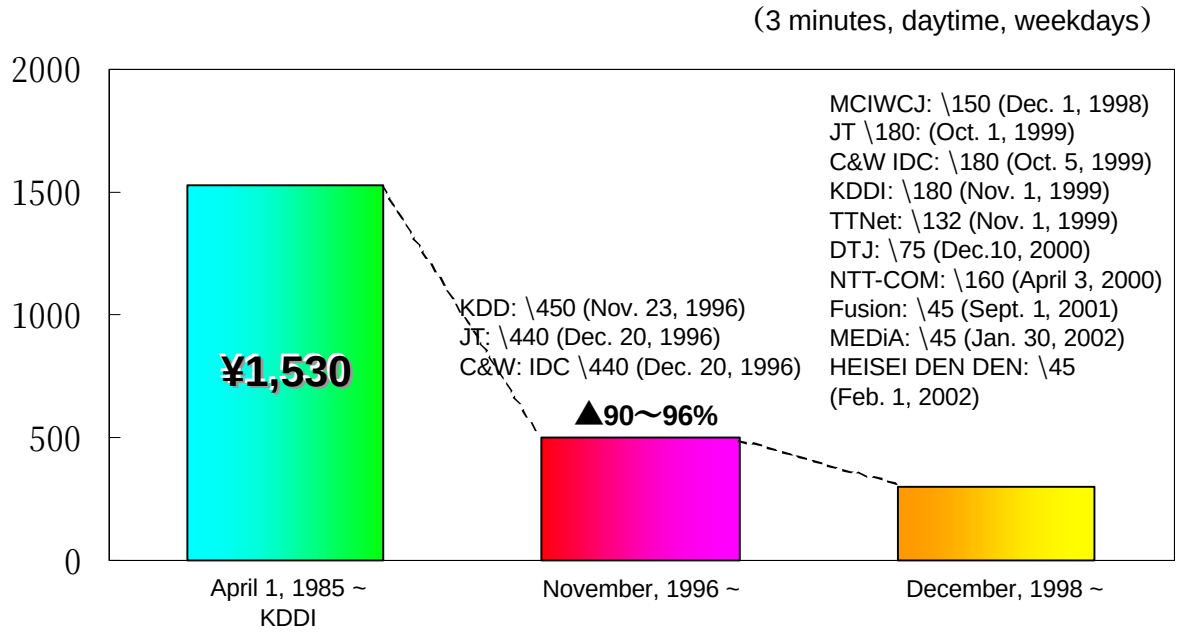


(2) Local call

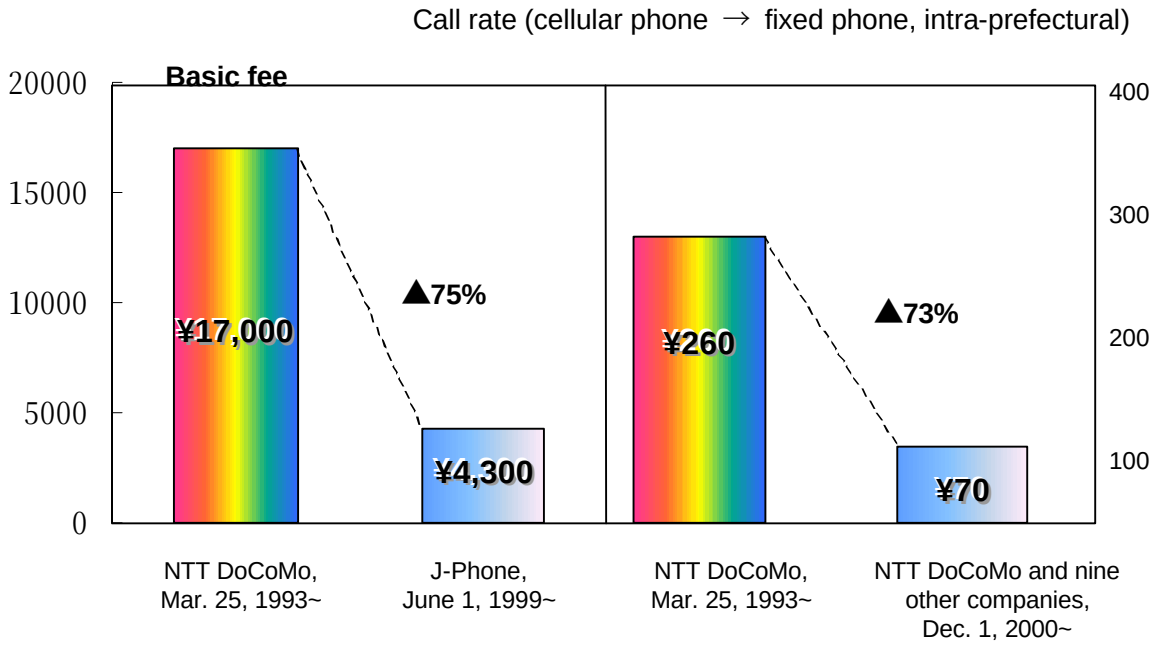
（3 minutes, daytime, weekdays）



(3) International call (Japan-U.S.A)



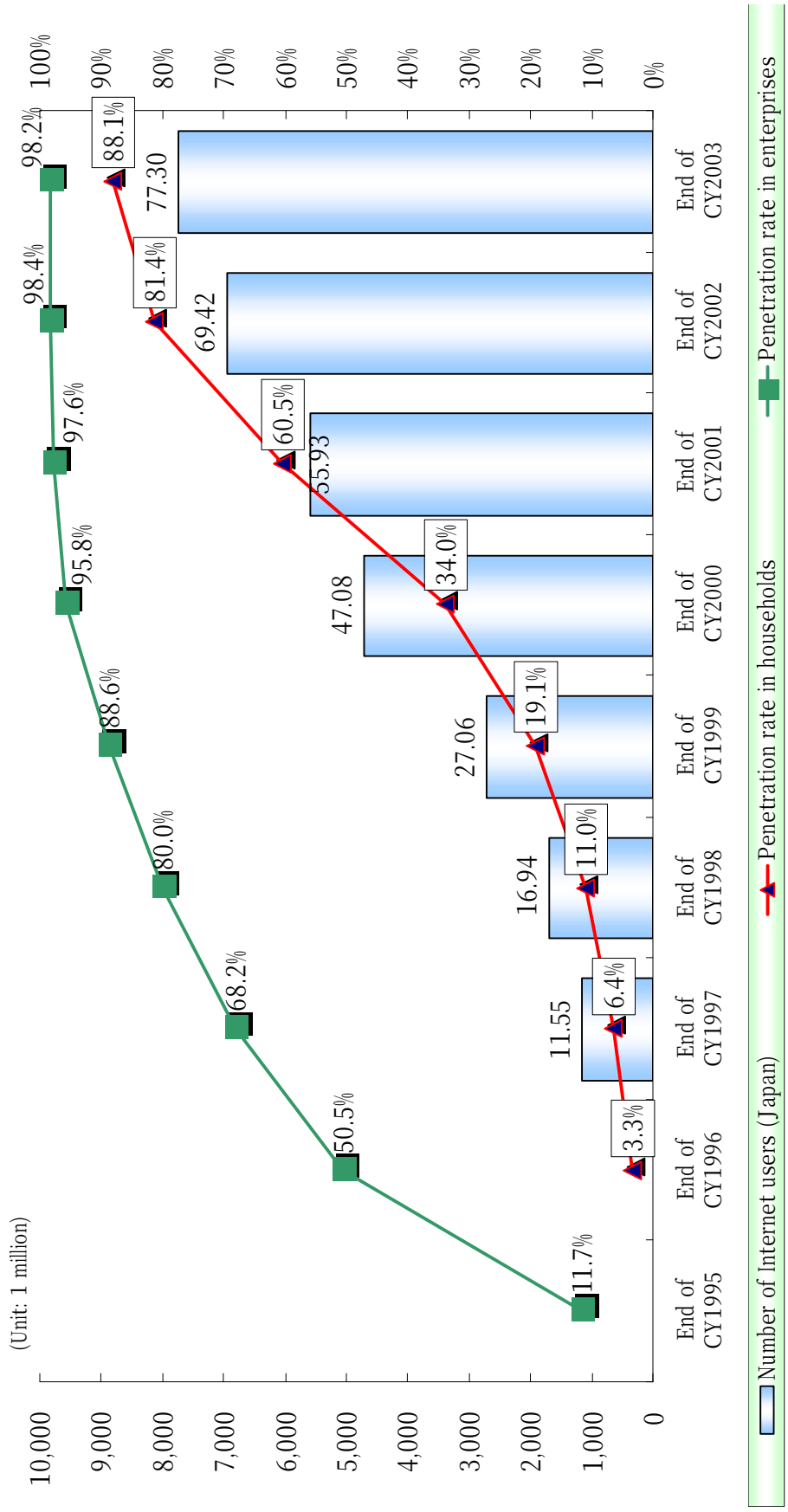
(4) Cellular phone (800MHz digital system)



Note: On March 25, 1993, the "800MHz digital cellular phone service" started.
NTT DoCoMo reduced the basic charge to 4,500 yen (including a free call allowance worth 200) in June 2000.

III. Internet

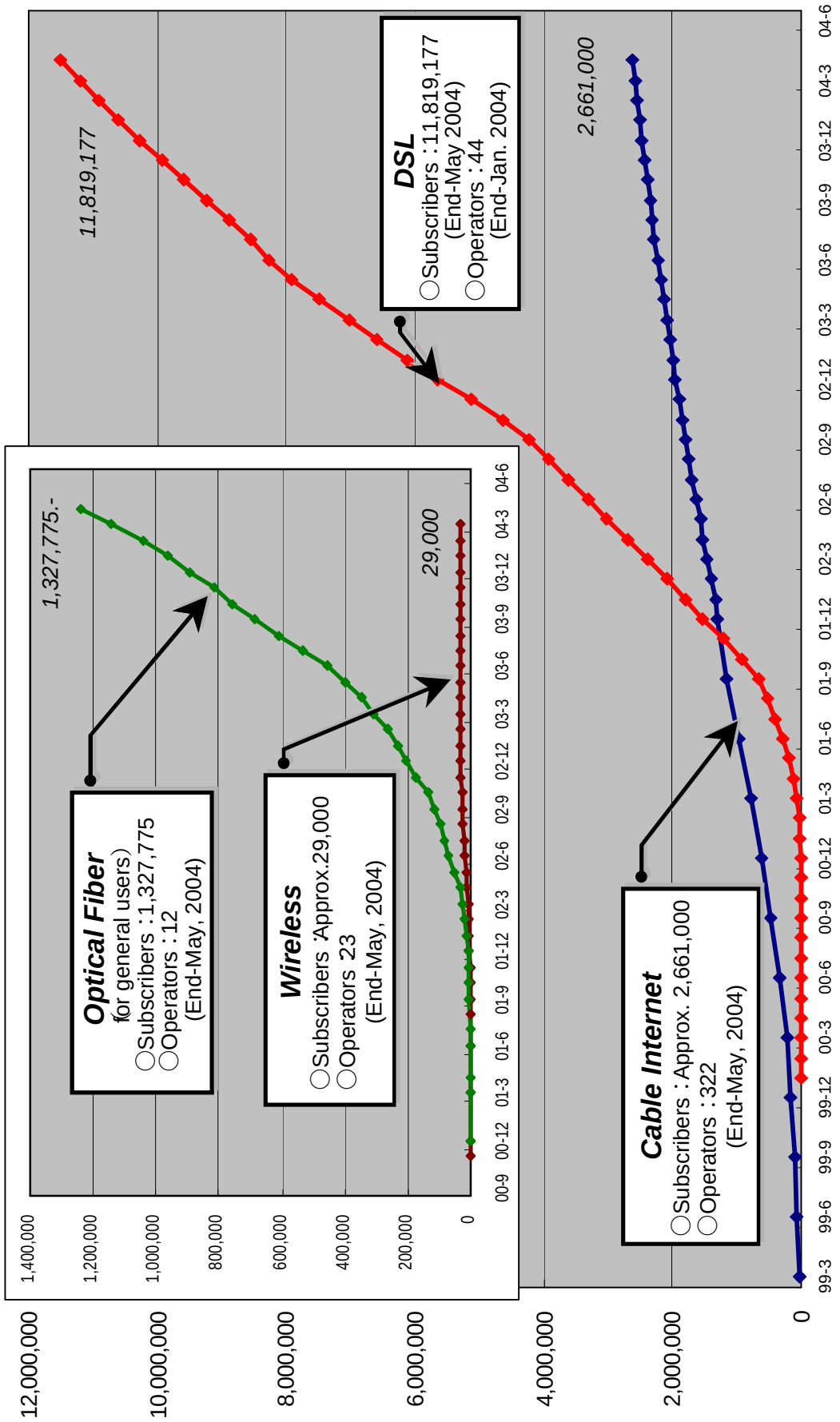
1. Total Internet user population and Internet diffusion rate



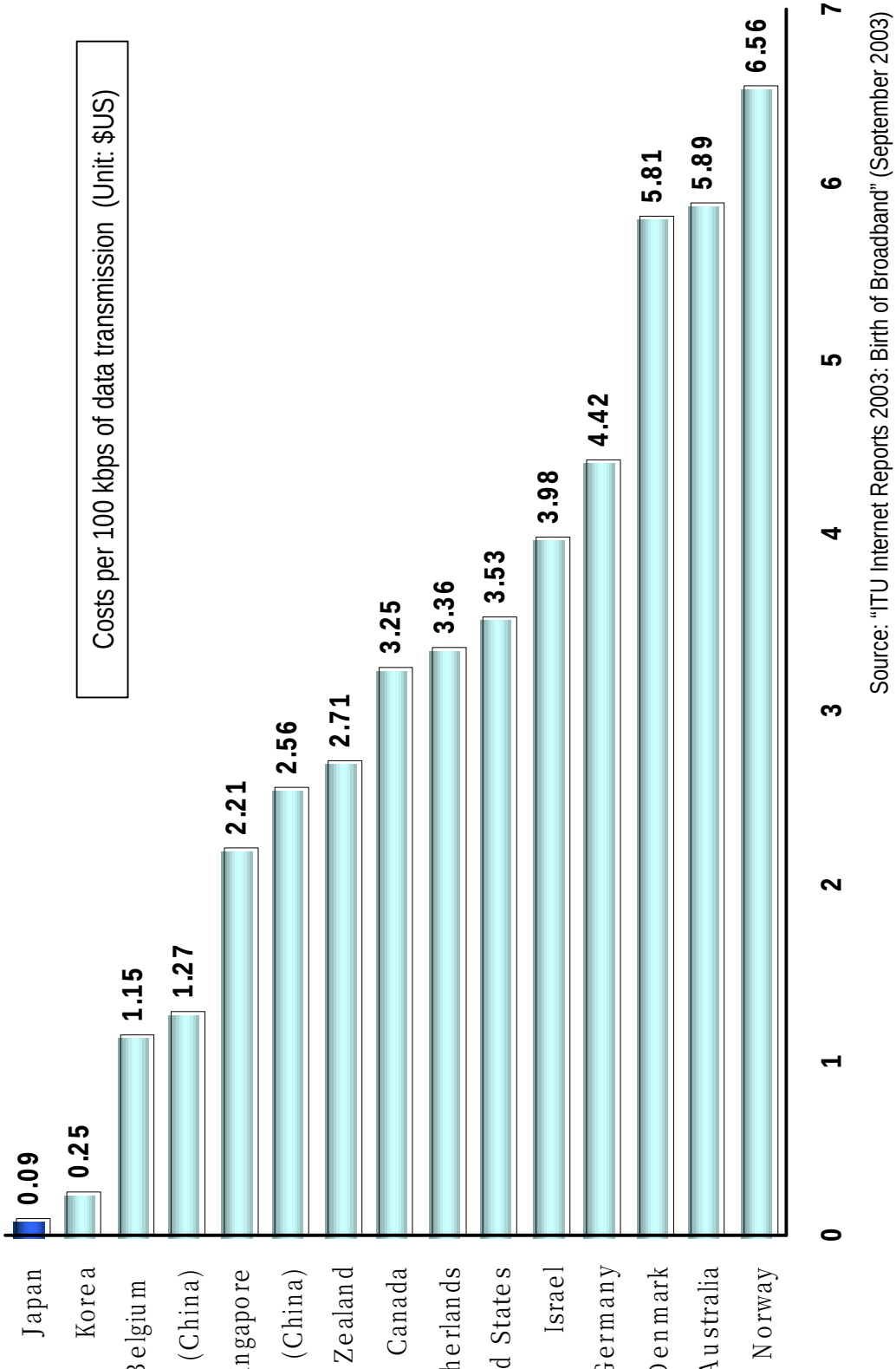
※ Businesses are those having more than 300 workers on their payrolls, and are located in Japan (excluding businesses in the agriculture, forestry, fisheries and mining industries).

Source: WHITEPAPER Information and Communications in Japan 2003, etc.

2. Changes in the total number of subscribers to high-speed and ultra-high-speed Internet services

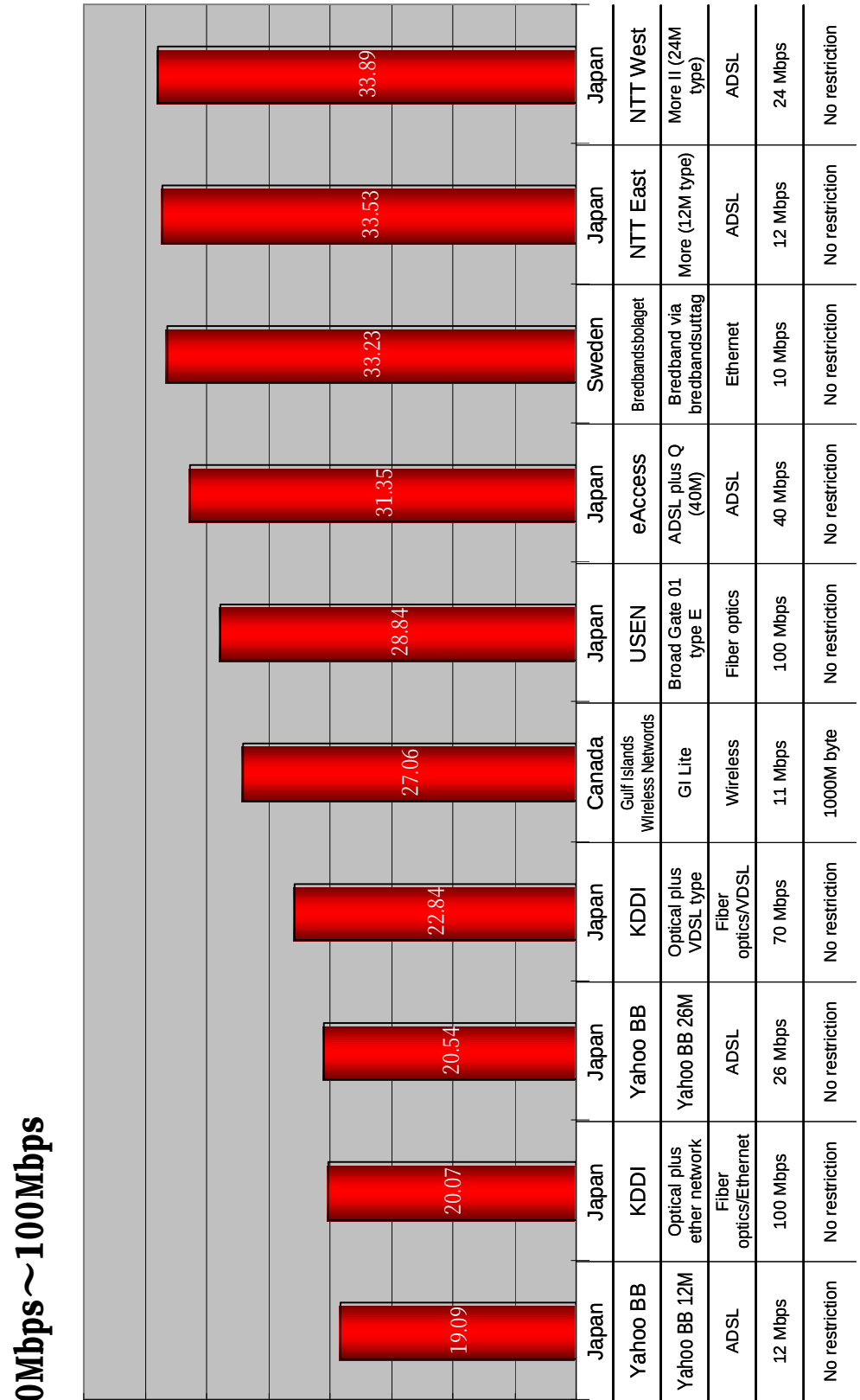


3. Broadband Fees by communications Speed (Costs per 100 kbps of data transmission)



Source: "ITU Internet Reports 2003: Birth of Broadband" (September 2003)

4. The world's top ten services in terms of broadband charges (OECD)



Name of participating countries	Japan	Japan	Japan	Japan	Canada	Japan	Japan	Sweden	Japan	Japan
Companies	Yahoo BB	KDDI	Yahoo BB	KDDI	Gulf Islands Wireless Networds	USEN	eAccess	Bredbandsbolaget	NTT East	NTT West
Service plan	Yahoo BB 12M	Optical plus ether network	Yahoo BB 26M	Optical plus VDSL type	GI Lite	Broad Gate 01 type E	ADSL plus Q (40M)	Bredband via bredbandsuttag	More (12M type)	More II (24M type)
Line type	ADSL	Fiber optics/Ethernet	ADSL	Fiber optics/VDSL	Wireless	Fiber optics	ADSL	Ethernet	ADSL	ADSL
Communication speed	12 Mbps	100 Mbps	26 Mbps	70 Mbps	11 Mbps	100 Mbps	40 Mbps	10 Mbps	12 Mbps	24 Mbps
Amount of communication specified within basic charge	No restriction	No restriction	No restriction	No restriction	1000M byte	No restriction	No restriction	No restriction	No restriction	No restriction

* Source: OECD DSTI/ICCP/TISP(2003)8/FINAL Benchmarking Broadband prices in the OECD
* Target is ordinary homes and small/medium companies, services billed based on a flat rate or communication charge base (excluding time billing)
* Data as of October 2003
* Calculated according to the various discount plan used.

5. Deployment of fiber-optic networks

(1) Current status in terms of cable length used

(As of the end of FY2002; unit: 1,000km)

Item	Cable length	Fiber-optic cable
Backbone networks	320	298
Access networks	1,567	493
Total	1,887	791

(2) Changes in ratio of fiber-optic cables to all cables (cable length)

(Unit: %)

End of Fiscal Year	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03
Backbone networks	36.4	42.1	48.0	55.4	60.3	65.8	70.9	78.1	86.0	89.4	90.6	91.9	93.3
Access networks	2.3	2.9	3.8	4.7	6.4	9.7	13.2	15.2	17.7	18.9	20.7	26.9	31.5
Total	8.6	10.1	12.4	15.1	17.3	21.4	25.1	27.7	32.6	31.4	32.5	38.1	41.9

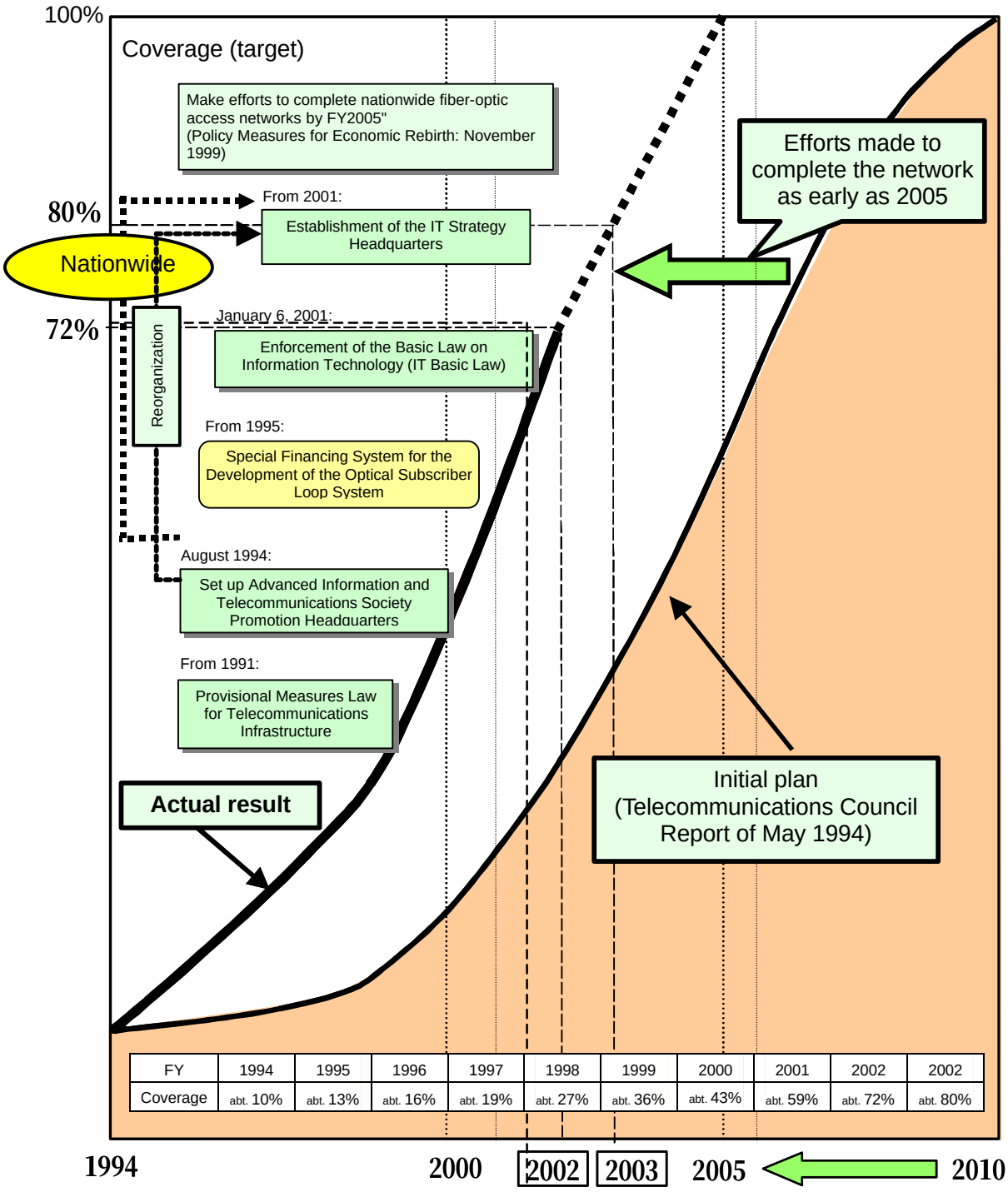
Note: Since the end of FY2000, the total length of the International cables has been deducted from the total length of the relay carriers' cables.

(3) Trends in actual investment in fiber-optic networks

(Unit: 1 billion yen)

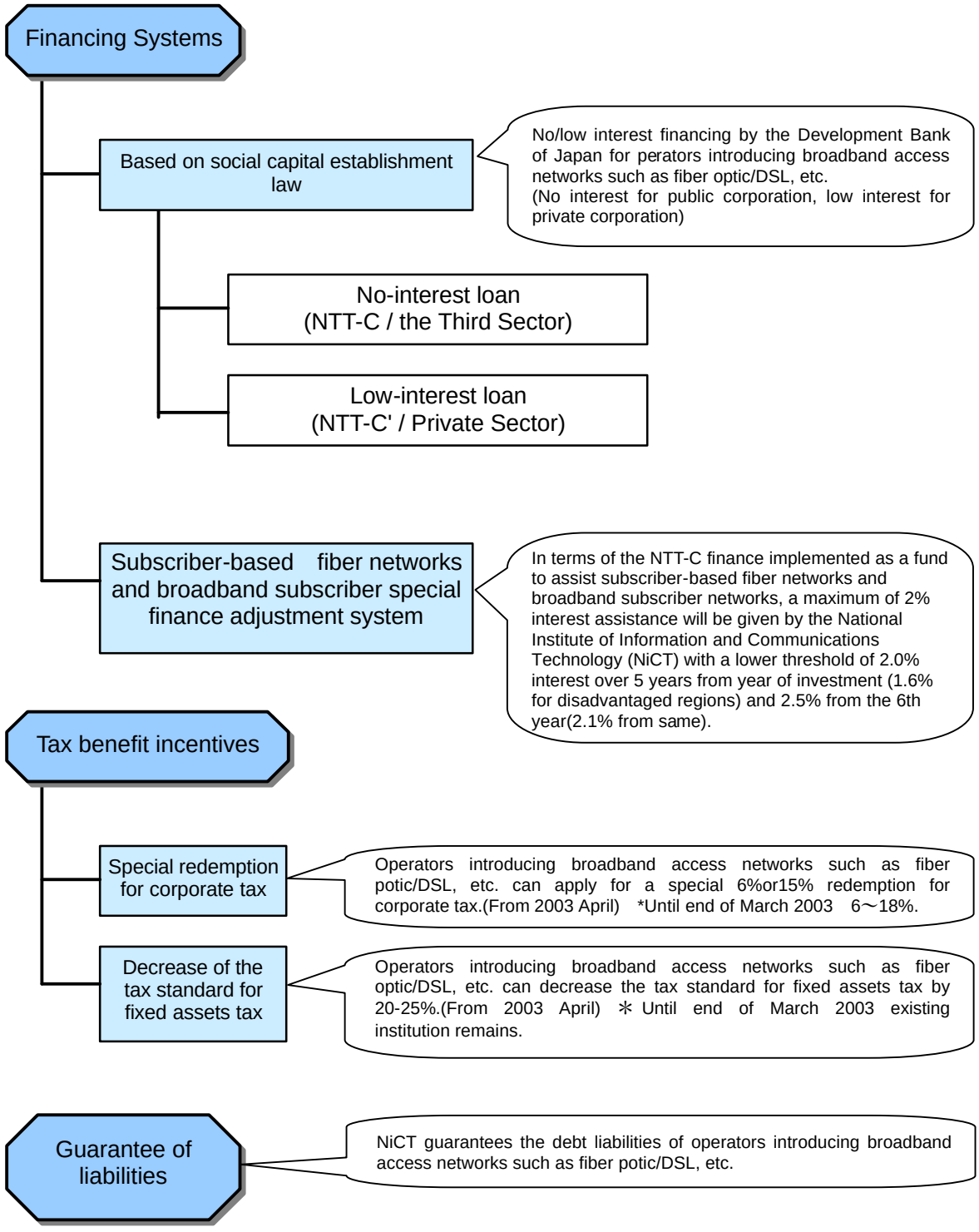
End of Fiscal Year	FY98	FY99	FY00	FY01	FY02	FY03
Backbone networks	2,276	2,905	2,033	1,956	2,022	1,300
Access networks	2,286	2,600	1,944	2,152	2,887	3,694
Total	4,562	5,505	3,977	4,108	4,909	4,995

(4) Target of fiber optic Infrastructure



FY	1994	1995	1996	1997	1998	1999	2000	2001	2002	2002
Coverage	abt. 10%	abt. 13%	abt. 16%	abt. 19%	abt. 27%	abt. 36%	abt. 43%	abt. 59%	abt. 72%	abt. 80%

6. Major support systems for fiber-optic networks and broadband access networks

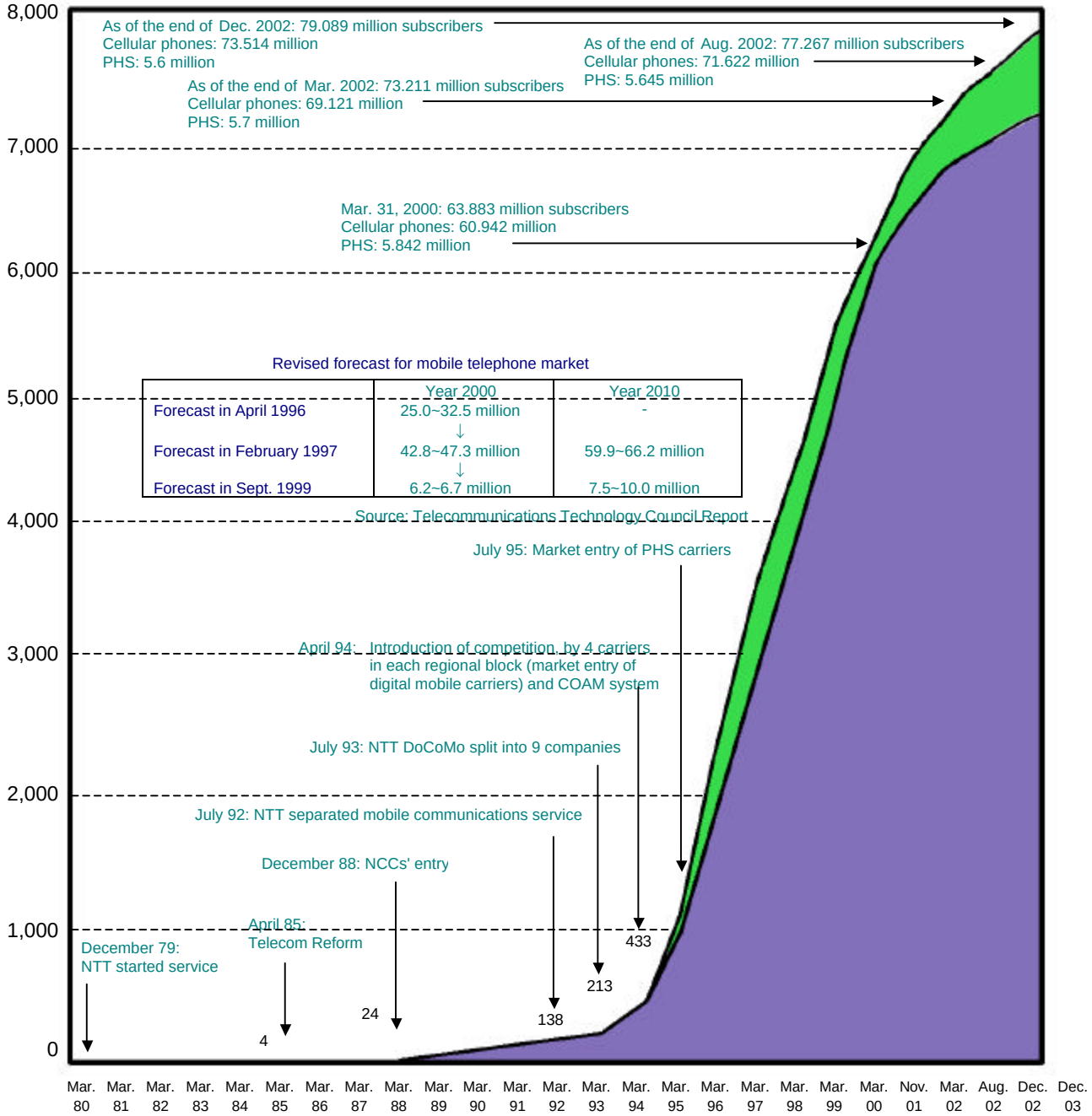


To receive the following support, applicants should obtain authorization of deployment plans from MPHPT in line with the Provisional Measures Law for Telecommunications Infrastructure Improvement.

IV. Mobile communications

1. Status of diffusion of mobile phones

Mobile contracts in December 2003 - 79.787 million subscribers
PHS contracts in December 20 – 5.224 million subscribers.



Deposit	¥200,000 → ¥100,000 → Abolished
Subscription fee	¥80,000 → ¥72,000 → ¥45,800 → ¥21,000→¥9,000→¥6,000→Free
Monthly basic charge	¥30,000 → ¥18,000 → ¥15,000 → ¥9,500 → ¥8,400 → ¥6,600 → Abolished (Analog) (800MHz, digital) ¥8,800 → ¥6,800 → ¥4,900 → ¥4,500
Call charge (3 minutes)	¥280 → ¥260 → ¥230→¥200→¥150→¥ Abolished (Analog) (800MHz, digital) ¥260 → ¥200→¥180→¥110→¥80→¥70 (Dec. 2000)

Note: Figures are cellular phone rates of NTT DoCoMo (standard plan rate for 3 minutes during daytime hours on weekdays [when the person receiving the call is using a standard telephone within the central business zone of NTT DoCoMo]).

V. Introduction of new wireless systems

1. The third-generation mobile communications system (IMT-2000)

※IMT-2000: International Mobile Telecommunications - 2000

◎ Characteristics

- Realization of an internationally unified system → Global service that can be used worldwide
- High transmission speed about 200 times faster than that of existing mobile telephones (capable of transmitting simple, moving images)
- Capable of providing a voice-communications service whose quality is as good as that of the fixed telephone network.

◎ Schedule for launching services

- NTT DoCoMo Group ‥ In May 2001, this group launched the third-generation mobile communications service on an experimental basis. (Japanese/European system)
  In October 2001, this group launched the full-fledged service.
- Vodafone ‥‥‥‥‥‥‥‥‥‥‥‥ This group launched the experimental service in June 2002. (Japanese/European System)
  In December 2002, this group launched the full-fledged service.
- KDDI Group ‥‥‥‥‥‥‥‥‥‥ This group launched the service in April 2002. (North American system)
  Starts service October 2003 (2GHz band, EV-DO system)
  Starts service November 2003 (800 MHz band, EV-DO system)

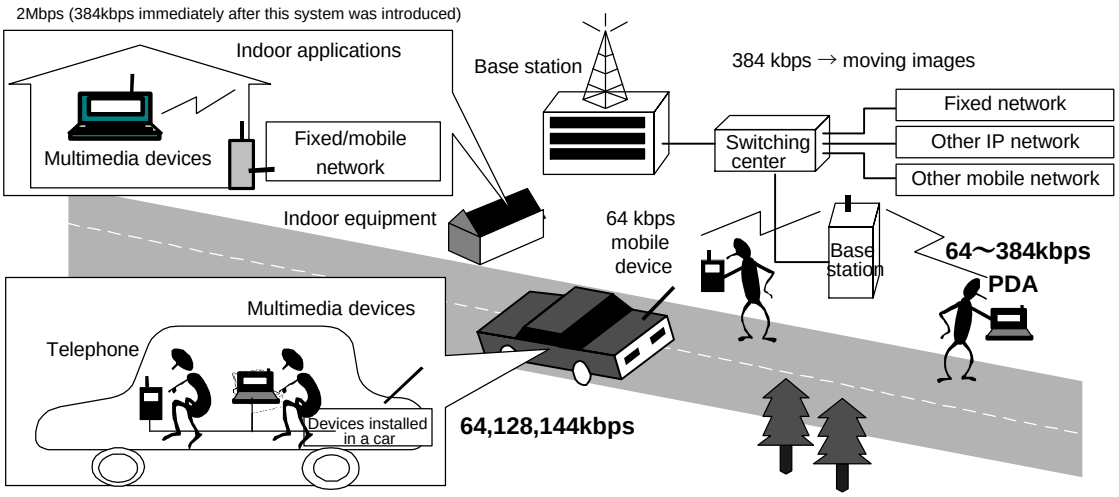
The number of subscribers for the 3G mobile communications system (IMT-2000)
Approx. 17.7 (as of April 2004)

～Changes in the mobile communications system～

◆The first-generation mobile telephone (analogue system)
This system was launched in 1979, using the frequency band of 800MHz. Voice communications service only.

◆The second-generation mobile telephone (digital system)
This system was launched in 1993, using the frequency bands of 800MHz and 1.5GHz. Voice-communications and low-speed data transmission services (transmission speed of 9.6 – 64 kbps)

◆PHS (Personal Handy Phone System)
This system was launched in 1995, using the frequency band of 1.9 GHz. Voice-communications and low-speed data transmission services (transmission speed of 32 – 128 kbps)



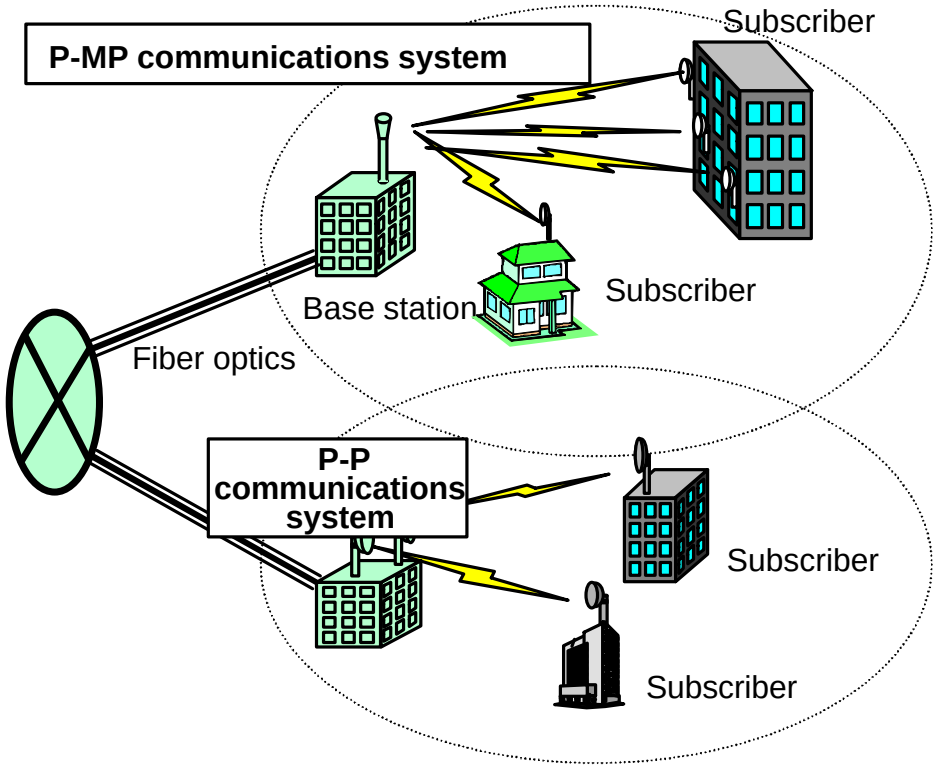
2. Wireless access system

Recently, there has been a dramatic increase in demand for Internet access using wireless systems from access points installed in public spaces such as coffee shops and stations etc. and connecting to the Internet between the office and the home by directly accessing the carrier's switch.

Frequency bands		Maximum transmission speed	Transmission distance	Institutionalization	Number of companies entered
2.4 GHz band	P-P※1	Around 10Mbps※2	Around 5km※3	1999.10 (Expansion of the frequency-band)	——
	P-MP※1	Around 2 Mbps	Around 300m※3		
5 GHz band		Around 54 Mbps	Around 300m - 3km	2002.9	5
5.2GHz band (indoors only)		Around 54Mbps	Around 200m	2000.3	——
18 GHz band※5		Around 156 Mbps	Around 10km	2003.10	——
22/26/38 GHz band		Around 156 Mbps	Around 4km	1998.12	8※4
26/38 GHz band		Around 10 Mbps	Around (radius) 1km		6※4
25/27 GHz band		Around 100 Mbps	Around 100m	2002.2	——

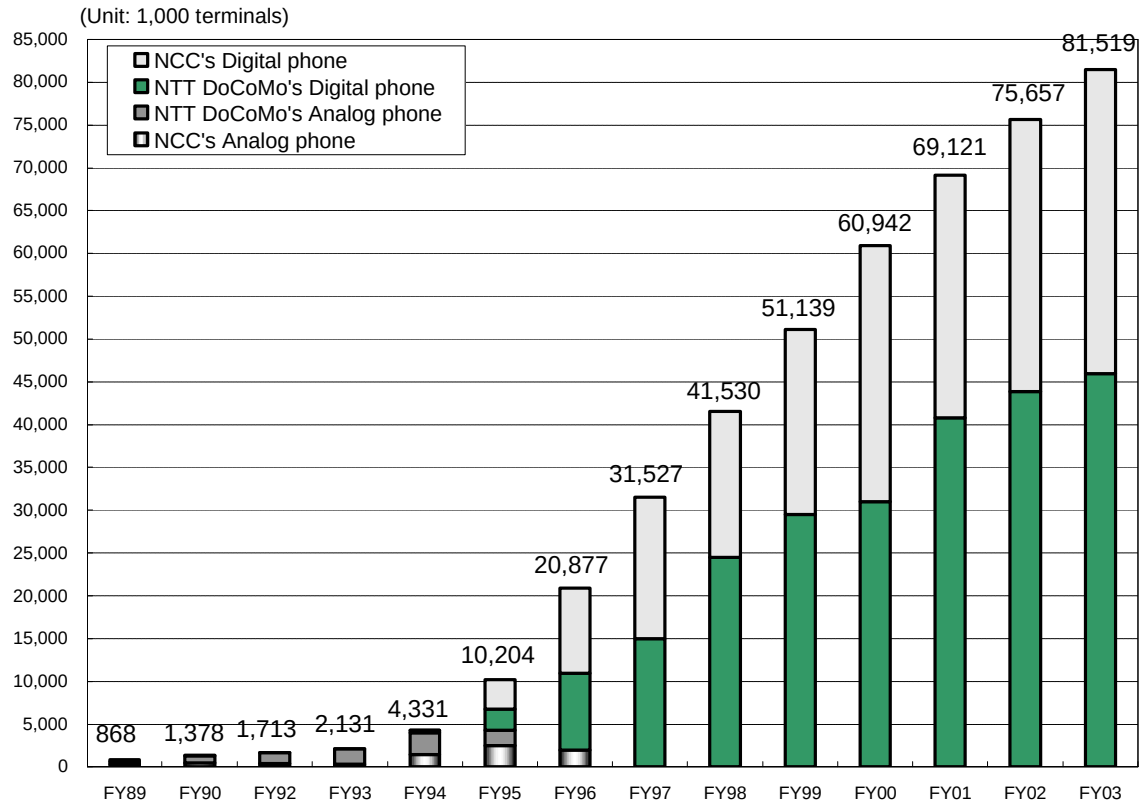
Notes:

1. P-P: A system used when one radio station communicates with another radio subscriber station.
   P-MP: A system used when one base station communicates with more than one subscriber station.
2. The most widely-used system (IEEE 802.11b)
   The revision of the current regulation in February 2002 enabled higher-speed telecommunications of more than 20 Mbps.
3. Because this frequency band is used for other purposes as well, the transmission distance is greatly affected by the surrounding environment. (High-directional antenna capable of extending transmission distance three-fold will be introduced by the revision of the current regulation in February 2002.)
4. Some companies use both systems. As a result, the number of the companies in this market totaled 11.
5. Licensed bodies are regional public bodies with telecommunications businesses or telecommunications carriers that have been entrusted by regional public bodies.

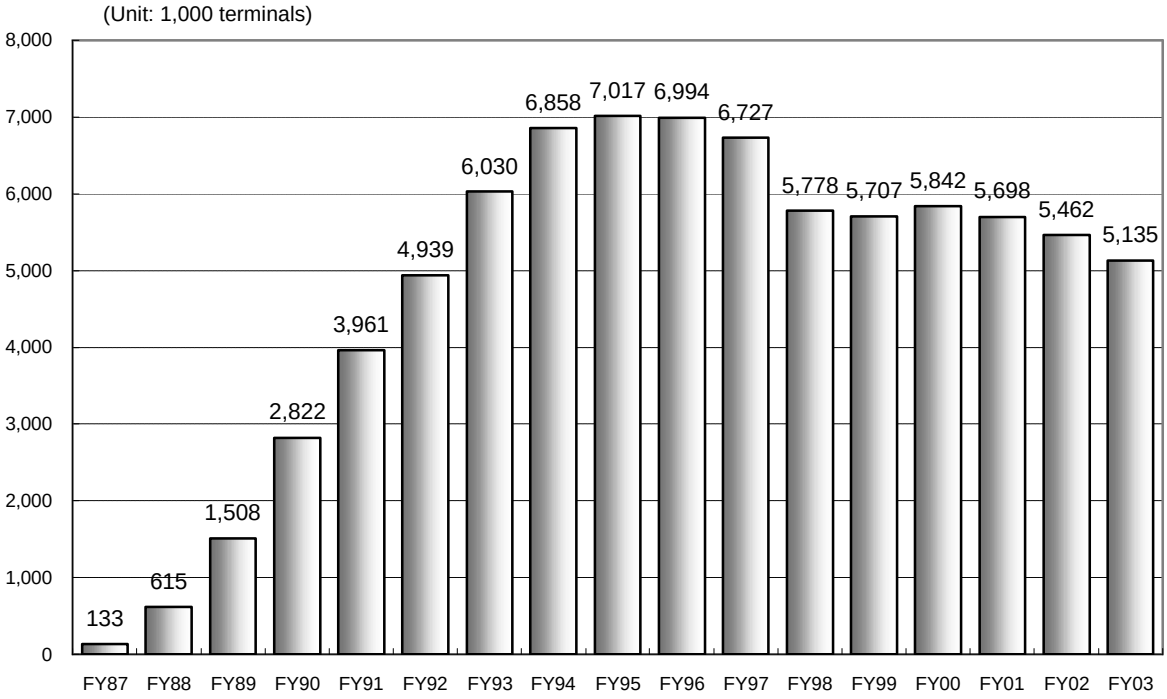


VI. Status of diffusion of major radio stations

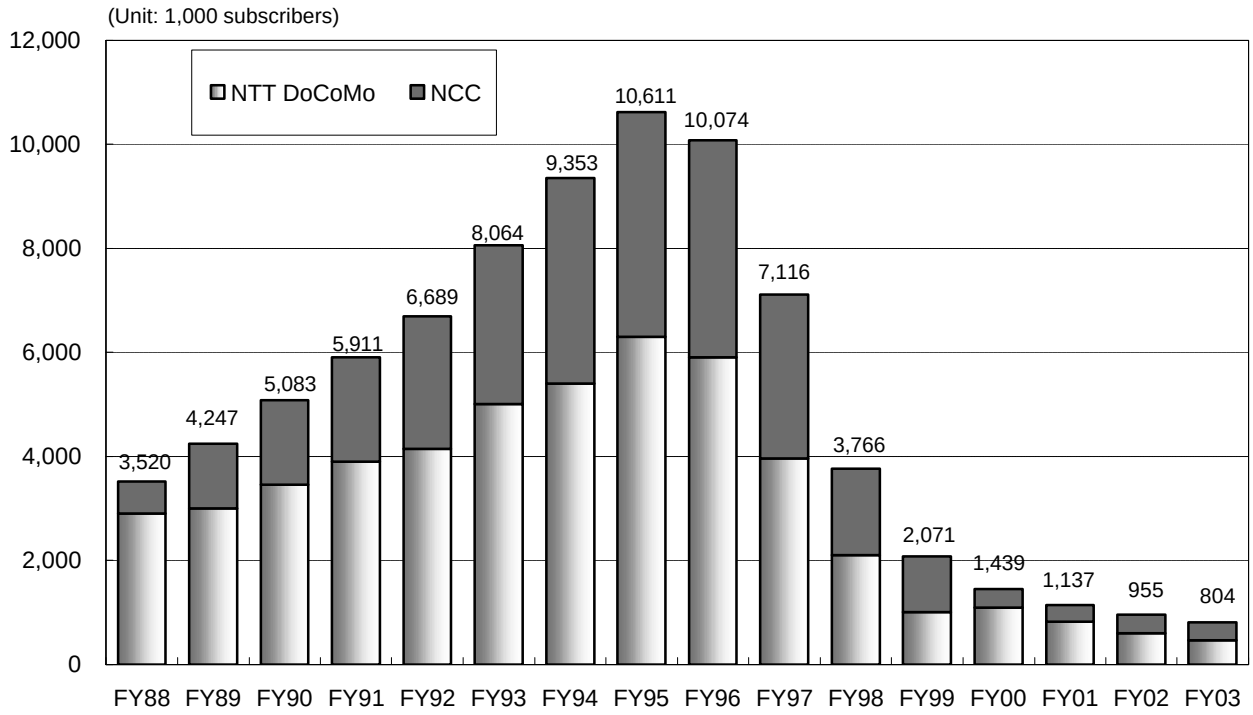
1. Transition of the Number of Cellular Phones



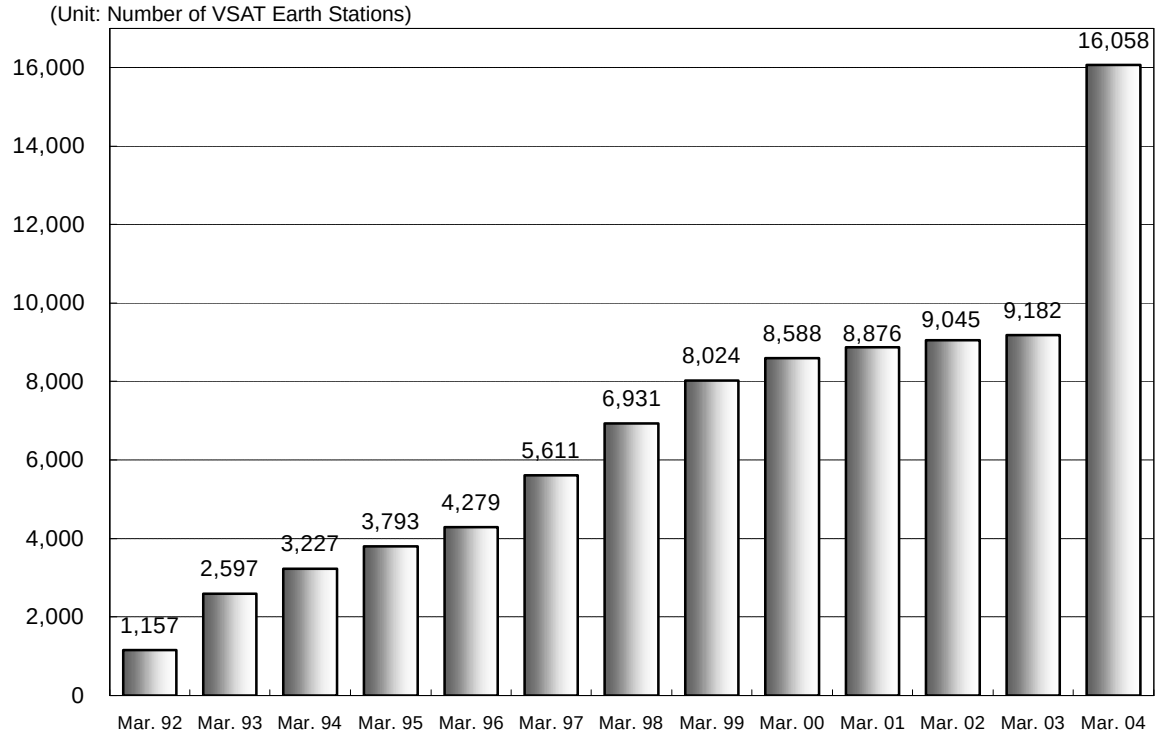
2. Transition of the Number of PHS Subscribers



3. Transition of the Number of Radio Pagers Subscribers



4. Transition of the Number of VSAT Earth Stations (Jurisdiction of Satellite Communications Section, Fixed Radiocommunications Division)



References

Reference I. Status of diffusion of cable television

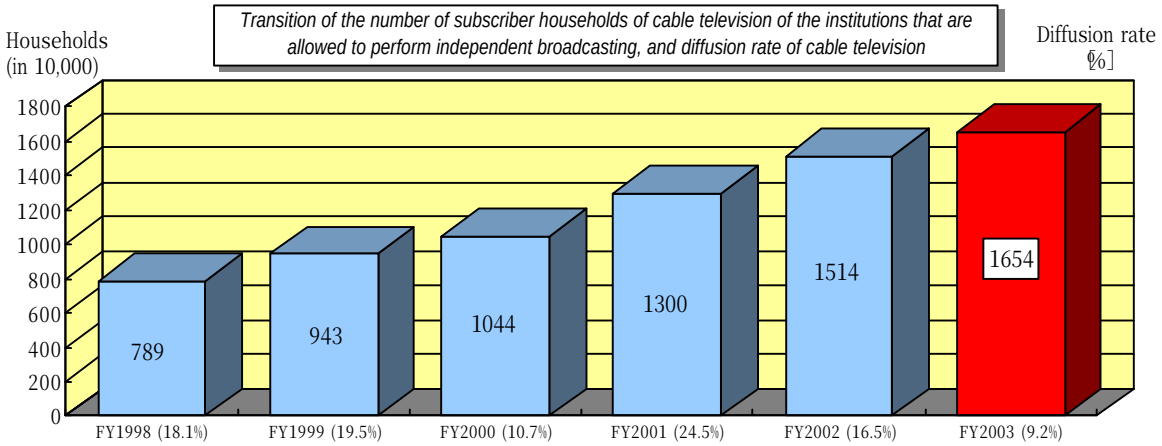
Reference II. Current Status of Broadcasting Business in Japan

Reference I. Status of Diffusion of Cable Television

The number of cable television subscribers for approved facilities performing independent broadcasting in 2003 was 16.54 million subscribers, an increase of 1.4 million from the end of the previous year.

Further, in terms of subscribing households, there was an increase of 2.5 points from the previous year to 33.6%, reaching a third of all households nationwide.

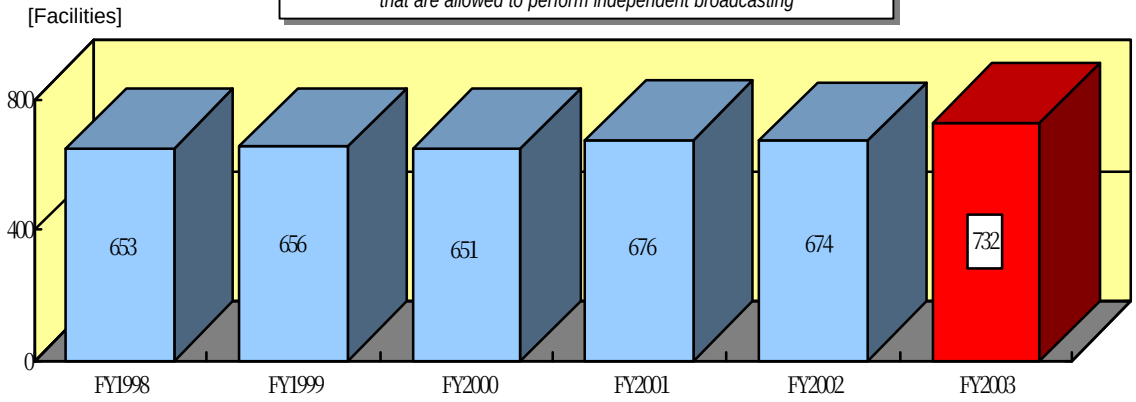
Transition of the number of subscriber households of cable television of the institutions that are allowed to perform independent broadcasting, and diffusion rate of cable television



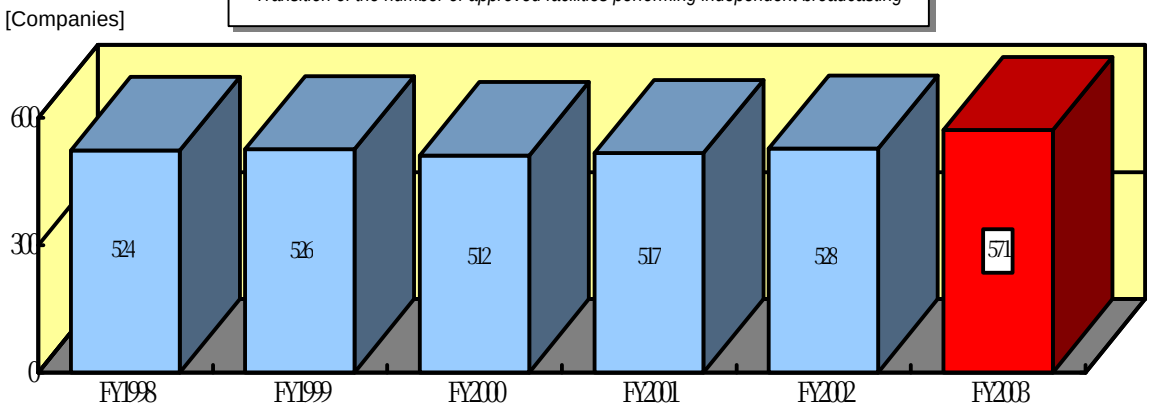
※1 the figures in the parenthesis are the rate of year-to-year increase in the total number of subscriber households. However, the rate of June of FY2003 is the increase rate compared with the end of FY2000, and the rate of September of FY2003 is the increase rate compared with June of FY2003.

※2 The diffusion rate is calculated from the number of households in the residents' basic register as of the end of each fiscal year (the number of households as of the end of FY2002 is used for the rate of FY2003.

Transition of the number of the institutions and telecommunications carriers that are allowed to perform independent broadcasting



Transition of the number of approved facilities performing independent broadcasting



※ The number of telecommunication carriers up to FY1999 is the total of the figures collected by each Telecommunications Bureau.

Note: The institutions that have obtained the business permit include those having the equipment for which the institutions have received the registration of the Law Concerning Broadcast on Telecommunications Services and the broadcasting method equivalent to that of the institutions that have obtained the business permit according to the Cable Television Broadcasting Law.

1. Number of cable television subscriber households

The number of subscriber households increased by 5.8% from the previous year to 24.68 million households.

Sections	2002	2003	Number increased	Rate of increase
Cable television as a whole	23,332,218	24,683,928	1,351,710	5.8%

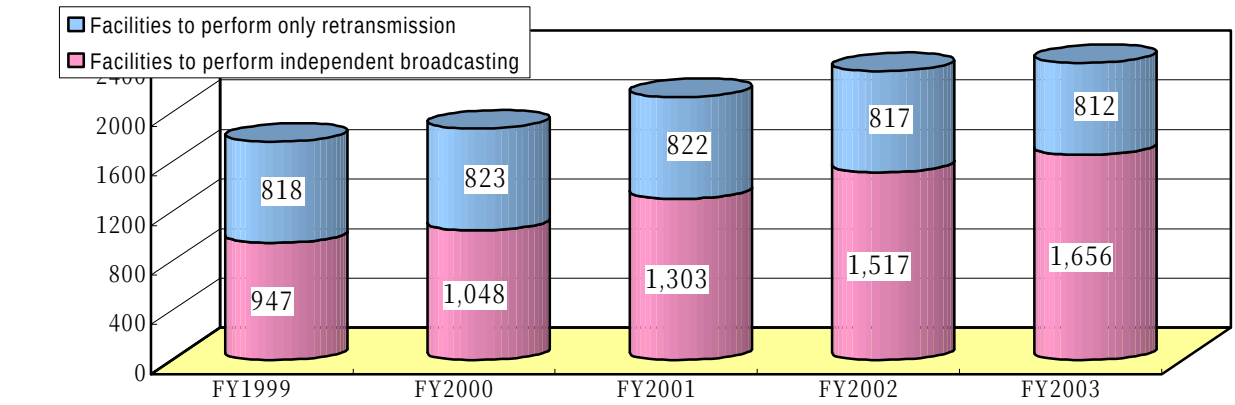
Those conducting independent broadcasting	Approved facilities	15,138,168	16,538,072	1,399,904	9.2%
	Notifying facilites	27,763	25,463	-2,300	-8.3%
	Subtotal	15,165,931	16,563,535	1,397,604	9.2%

Those just retransmitting	Approved facilities	2,044,024	2,007,516	-36,508	-1.8%
	Notifying facilites	5,359,759	5,352,509	-7,250	-0.1%
	Small-scale facilities	762,504	760,368	-2,136	-0.3%
	Subtotal	8,166,287	8,120,393	-45,894	-0.6%

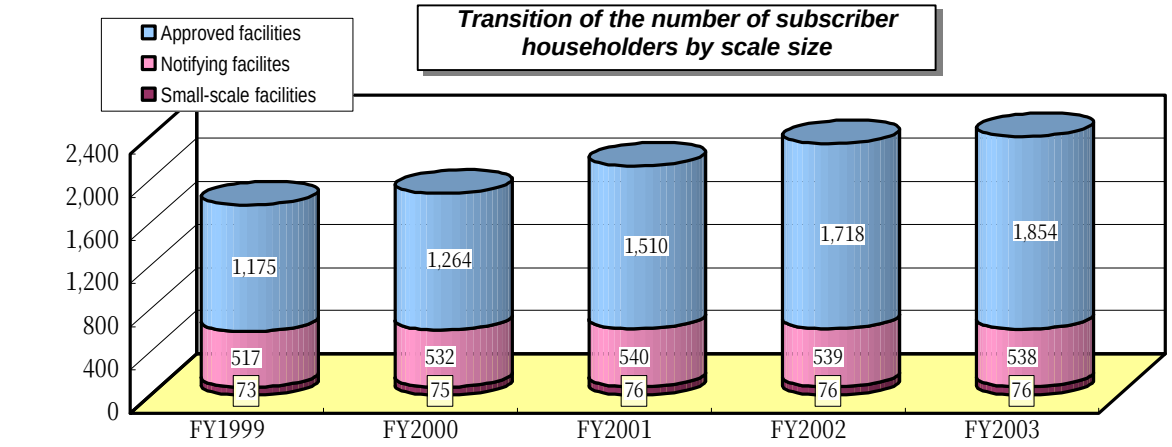
Note: Sections are as follows

- Approved facilities：501 terminals or more
- Notifying facilities：From 51-500 terminals
- Small-scale terminals：Less than 50 terminals

Transition of the number of subscriber householders by independent broadcasting media or retransmission



Transition of the number of subscriber householders by scale size



2. Number of cable television facilities and operators

(1) Number of facilities

There were approximately 74,000 facilities, an increase of 0.1% from the previous year.

Sections		2002	2003	Number increased	Rate of increase
Cable television as a whole		74,280	74,380	100	0.1%
Those conducting independent broadcasting	Approved facilities	674	732	58	8.6%
	Notifying facilites	285	250	-35	-12.3%
	Subtotal	959	982	23	2.4%
Those just retransmitting	Approved facilities	1,196	1,165	-31	-2.6%
	Notifying facilites	37,889	37,891	2	0.0%
	Small-scale facilities	34,236	34,342	106	0.3%
	Subtotal	73,321	73,398	77	0.1%

Note: Sections are as follows

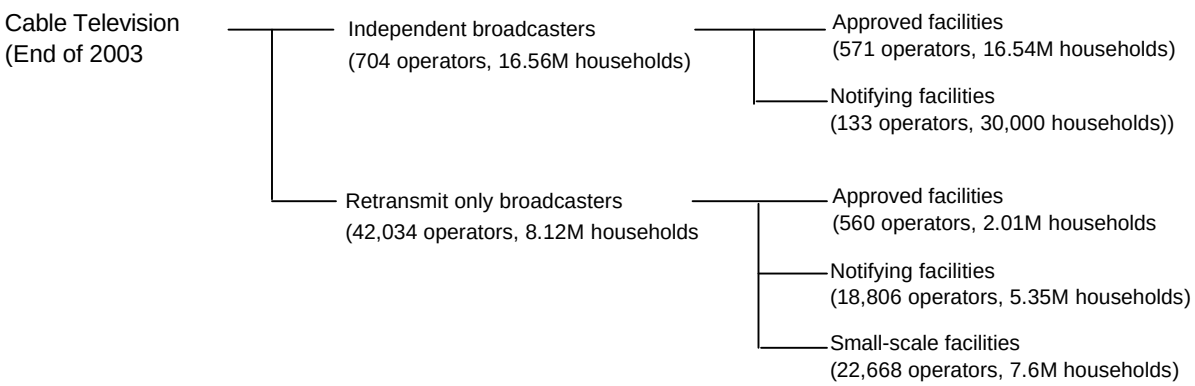
- Approved facilities：501 terminals or more
- Notifying facilities：From 51-500 terminals
- Small-scale terminals：Less than 50 terminals

(2) Number of operators

There were approximately 43,000 operators, a reduction of 5.5% from the previous year.

Sections		2002	2003	Number increased	Rate of increase
Cable television as a whole		45,203	42,738	-2,465	-5.5%
Those conducting independent broadcasting	Approved facilities	528	571	43	8.1%
	Notifying facilites	140	133	-7	-5.0%
	Subtotal	668	704	36	5.4%
Those just retransmitting	Approved facilities	567	560	-7	-1.2%
	Notifying facilites	20,201	18,806	-1,395	-6.9%
	Small-scale facilities	23,767	22,668	-1,099	-4.6%
	Subtotal	44,535	42,034	-2,501	-5.6%

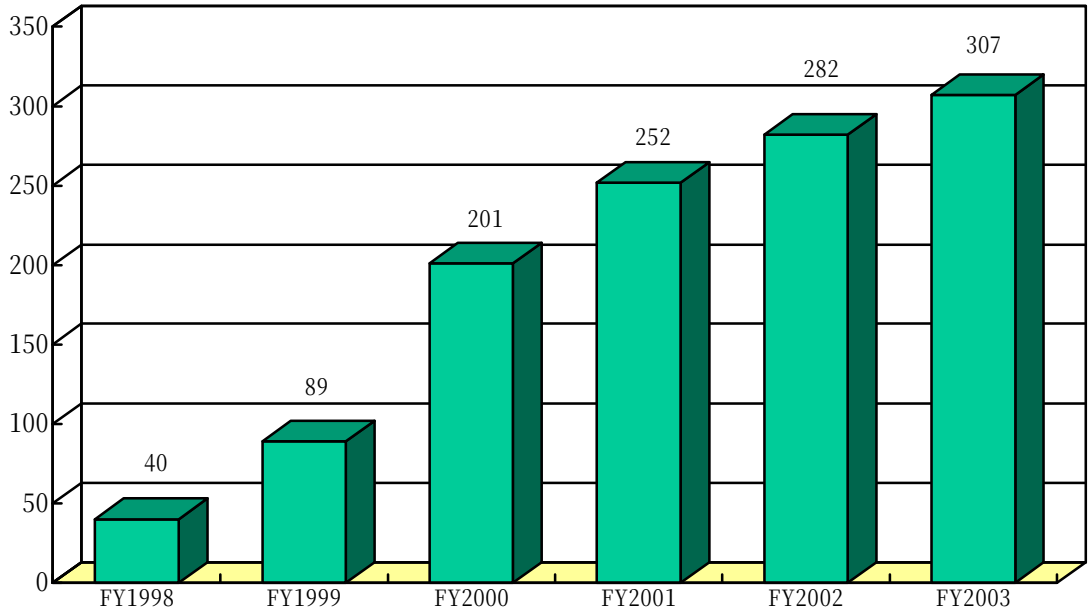
Reference



3. State of penetration of cable Internet connection services

(1) Transition of the number of operators operating Internet connection services using CATV networks

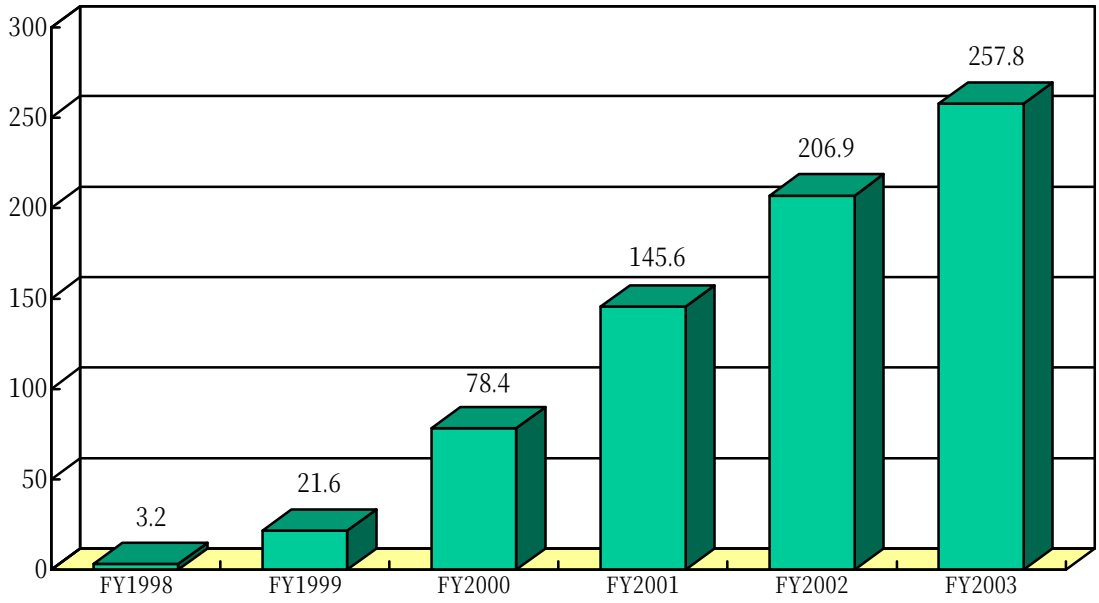
（Unit：companies）



Note：This includes CATV companies providing lines as dedicated services to Internet connection operators

(2) Transition of the number of users of Internet connection services using CATV networks

（Unit：Companies）



Note1: Partially includes subcribers of dial-up connection services
Note 2: Includes number of lines where CATV operators are Internet connection operators providing lines as dedicated services.

Reference II. Current Status of Broadcasting Business in Japan

1. Operating Status of Broadcasters

	FY94	FY95	FY96	FY97	FY98	FY99	FY00	Dec. 2001	Dec. 2002	Mar. 2003	Dec. 2003	Apr. 2004
AM broadcasters	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**-**	**48**	**-**	**48**
Shortwave broadcasters	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**-**	**-**	**2**	**-**	**2**
FM broadcasters	46	49	51	51	52	53	55	-	-	55	-	55
FM sound multiplex broadcasters	1	1					0	-	-	0	-	0
FM teletext multiplex broadcasters		37	40	40	40	41	44	-	-	44	-	44
Community broadcasters	16	30	68	93	118	128	139	150	159	163	**-**	**167**
FM teletext multiplex broadcasts by community broadcasters					3	3	1	1	1	1	**-**	**1**
TV broadcasters	**123**	**125**	**128**	**128**	**129**	**129**	**129**	**-**	**-**	**129**	-	129
TV sound multiplex broadcasters	119	122	126	68	28	28	28	-	-	23	-	13
TV teletext multiplex broadcasters	25	24	25	24	23	21	19	-	-	13	-	6
TV data multiplex broadcasters			2	13	16	17	18	-	-	18	-	6
TV teletext multiplex and TV data multiplex broadcasters				16	16	15	15	-	-	2	-	0
BS analog TV broadcasters	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
BS analog sound multiplex broadcasters	3	3	3	2	2	2	2	2	2	2	2	2
BS analog data multiplex broadcasters	1	1	1	1	1	1	1	1	1	1	1	1
BS digital TV broadcasters							**1(8)**	**1(8)**	**1(8)**	**1(8)**	**1(8)**	**1(8)**
BS digital radio broadcasters							1(10)	1(10)	1(10)	1(10)	1(10)	1(10)
BS digital data broadcasters							1(9)	1(9)	1(9)	1(9)	1(9)	1(9)
CS digital TV broadcasters (using a satellite that does not orbit above 110 degrees of east longitude)			**1(56)**	**2(71)**	**2(115)**	**2(120)**	**1(113)**	**1(111)**	**1(105)**	**1(102)**	**1(99)**	**1(102)**
CS digital radio broadcasters			1(6)	2(8)	2(11)	2(11)	2(8)	2(6)	2(6)	2(6)	2(6)	2(5)
CS digital data broadcasters			1(1)	2(2)	2(4)	2(4)	2(2)	2(3)	2(3)	2(3)	2(3)	2(3)
CS digital TV broadcasters using a satellite that orbits above 110 degrees of east longitude							2(15)	2(15)	2(15)	2(15)	2(15)	2(15)
CS digital FM broadcasters using a satellite that orbits above 110 degrees of east longitude							1(1)	1(1)	1(1)	1(1)	1(1)	1(1)
CS digital data broadcasters using a satellite that orbits above 110 degrees of east longitude							2(8)	2(8)	2(8)	2(8)	2(8)	2(8)
CS analog TV broadcasters	2(10)	2(13)	2(13)	2(13)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
CS-PCM sound multiplex broadcasters	**1(3)**	**1(2)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**	**1(1)**

Notes：

1. Numbers of broadcasters include NHK, the University of the Air and other broadcasters.
2. Figures in parenthesis are the numbers of program supplying broadcasters who entrust broadcasting to facility supplying broadcasters (broadcast station licensees) and broadcasters on telecommunications services.

2. Diffusion of Terrestrial Broadcasting

	Commercial broadcasters	NHK
TV Broadcasting	Available nationwide. Four to six broadcast channels are viewable in approx. 90% of total household.	One general and one education channel are broadcast nationwide.
AM Broadcasting	Available nationwide. In major areas, two to four channels are broadcast.	Radio 1 and Radio 2 are broadcast nationwide.
FM Broadcasting	Available almost nationwide. In major areas, two channels are broadcast. In addition, foreign language broadcasting and community broadcasting are conducted.	One channel is broadcast nationwide.
Short Wave Broadcasting	One channel is broadcast nationwide.	(Overseas broadcasting is conducted.)

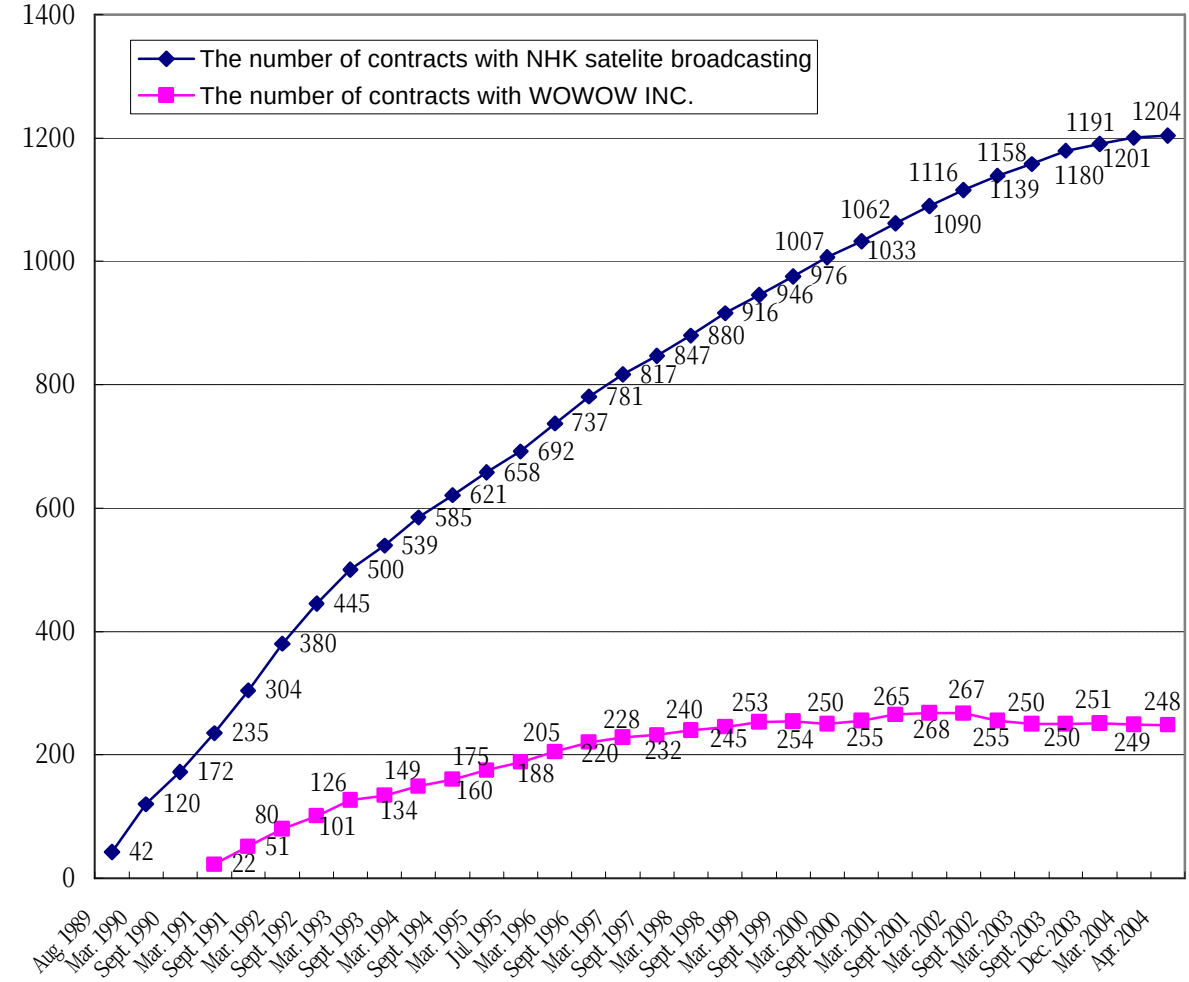
Note: In addition to the above, the University of the Air Foundation broadcasts one TV and one FM channel, targeting a major part of the Kanto Region as its coverage area.

3. Current Status of DBS in Japan

(1) Transition in receiving households

Transition of the number of household receivers

Unit: 10,000 households



(2) DBS via Communication Satellites

1) Transition of receiver's contract

(Unit: 1000 cases)

	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04
CS TV (Digital)	631	1,373	2,248	2,618	3,042	3,383	3,497	3,658

Note: Including East-longitudinal CS digital broadcasting from August 2004.

2) Numbers of licensees and channels by type of broadcasting

(i) BS analog broadcasting

Satellite	Type of broadcasting	Licensees	Number of channels
BSAT (BSAT-1a)	- High-definition TV broadcasting	- NHK	1
	- Standard definition TV broadcasting	- NHK and 1 commercial broadcaster	3
	- Standard definition TV sound multiplex broadcasting	- Commercial broadcasters	2
	- Standard definition TV data broadcasting	- 1 commercial broadcaster	1

(ii) BS digital broadcasting

Satellite	Type of broadcasting	Licensees	Number of channels
BSAT (BSAT-2a)	- High-definition TV broadcasting	- NHK and 6 commercial broadcasters	7
	- Standard definition TV broadcasting	- NHK (simulcast) and 7 commercial broadcasters	21
	- FM broadcasting	- 10 commercial broadcasters (including 1 simul-broadcaster)	23
	- Data broadcasting	- 9 commercial broadcasters (including 1 simul-broadcaster)	9

(iii) Analog broadcasting

Satellite	Type of broadcasting	Number of licensees	Number of channels
JSAT (JCSAT-2)	PCM sound broadcasting	1	17
	Data broadcasting	1	2

Notes: One broadcaster of JCSAT-2 data broadcasting also operates PCM sound broadcasting.

(iv) CS digital broadcasting (using a satellite that does not orbit above 110 degrees of east longitude)

Broadcasting Satellite	Type of broadcasting	Number of licensees	Number of channels
JSAT (JCSAT-3)	Standard definition TV broadcasting	58	110
	FM broadcasting	4*1	103
	Data broadcasting	2*2	23
JSAT (JCSAT-4)	Standard definition TV broadcasting	52	73
	Data broadcasting	1*2	16
SCC (SUPERBIRD-C)	FM broadcasting	1	419
	Data broadcasting	1*3	2

Notes:
1. Three broadcasters of JCSAT-3 radio broadcasting also operate standard definition TV broadcasting.
2. All data broadcasters also operate standard definition TV broadcasting.
3. All data broadcasters also operate FM broadcasting.

(v) CS digital broadcasting using a satellite that orbits above 110 degrees of east longitude

Broadcasting Satellite	Type of broadcasting	Number of licensees	Number of channels
SCC (N-SAT-110)	- High-definition TV broadcasting	1*1	2
	- Standard TV broadcasting	7	23
	- FM broadcasting	1*2	20
	- Data broadcasting	6*3	8
JSAT (N-SAT-110)	- Standard TV broadcasting	8	38
	- Data broadcasting	2*4	2

Notes:
1. High-definition TV broadcasting is operated only when the standard TV broadcasting is not operated. The high-definition TV broadcaster is also one of the standard TV broadcasters.
2. The FM broadcaster is also one of the standard TV broadcasters.
3. Three of the data broadcasters are also among the standard TV broadcasters.
4. Two of the data broadcasters are also among the standard TV broadcasters.