Chapter 2
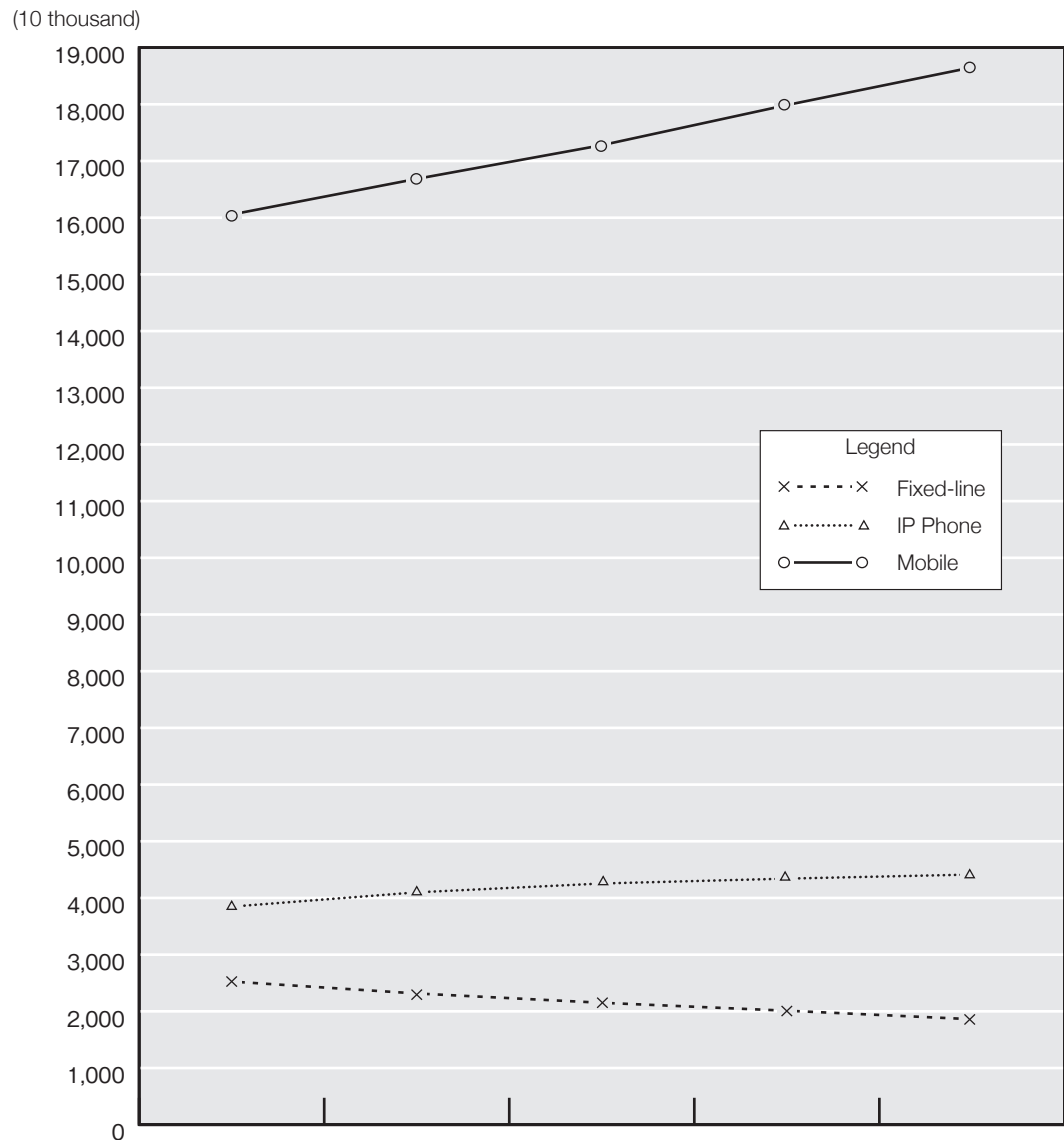# Situation of Info-communications Service Usage

2-1 Situation of Number of Contracts for Various Services

2-1-1 Trends in Number of Telecommunications Services Subscriptions, etc.

(10 thousand)

(Units: 10,000 contracts (subscriber telephones, ISDN, mobile phones, and PHS); 10,000 units (public phones); and 10,000 telephone numbers (IP phones))

Service		FY2015	FY2016	FY2017	FY2018	FY2019
Fixed-line Service Total		2,525	2,315	2,151	2,011	1,861
	Subscriber Telephone	2,170	1,987	1,845	1,724	1,595
	ISDN	338	312	290	272	251
	Public Phone	17	16	16	16	15
IP Phone		3,847	4,099	4,255	4,341	4,413
	(0ABJ-IP phone)	3,077	3,245	3,364	3,446	3,521
	(050-IP phone)	770	853	891	895	892
Mobile Service Total		16,056	16,685	17,279	17,987	18,651
	Mobile Phone	15,656	16,350	17,019	17,782	18,490
	PHS	400	336	260	206	162

Note: Figures for "Public Phone" represent the numbers of installed units.
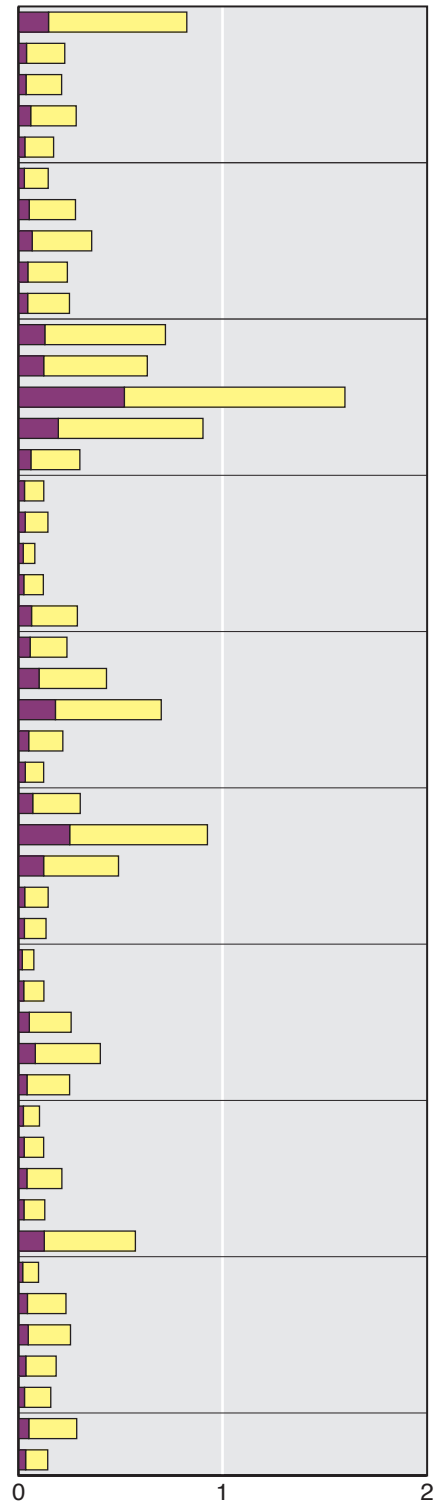*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-1-2 Number of Subscriber Telephone Contracts by Prefecture

(Contracts)

Pref.	FY2016 Total	FY2017 Total	FY2018 Total	FY2019 Total	FY2019 NTT(Re-entry) Total	FY2019 NTT(Re-entry) Business	FY2019 NTT(Re-entry) Residential
Hokkaido	1,048,790	986,548	923,739	851,620	822,923	145,697	677,226
Aomori	280,216	266,625	251,263	232,337	225,177	37,825	187,352
Iwate	257,667	245,938	233,019	216,909	209,810	35,432	174,378
Miyagi	360,444	339,839	318,343	296,178	281,203	58,257	222,946
Akita	211,037	199,855	188,956	176,344	170,508	29,593	140,915
Yamagata	181,432	171,957	160,955	149,321	144,118	27,260	116,858
Fukushima	347,577	328,538	307,809	285,623	277,666	51,022	226,644
Ibaraki	459,998	428,704	400,105	370,700	357,074	65,796	291,278
Tochigi	305,783	286,363	266,751	247,955	237,950	44,335	193,615
Gunma	312,803	294,422	276,539	258,205	248,220	43,381	204,839
Saitama	955,825	880,136	817,897	757,130	718,255	127,592	590,663
Chiba	836,549	768,715	715,804	663,591	629,476	122,016	507,460
Tokyo	2,198,493	2,008,796	1,876,185	1,746,802	1,597,436	517,153	1,080,283
Kanagawa	1,222,482	1,122,205	1,041,101	962,496	902,198	193,641	708,557
Niigata	379,784	358,366	335,803	311,268	299,113	59,239	239,874
Toyama	162,035	150,742	139,585	127,722	122,387	27,931	94,456
Ishikawa	178,028	168,099	159,298	149,183	142,715	31,538	111,177
Fukui	107,856	98,907	88,915	81,638	78,540	21,868	56,672
Yamanashi	156,978	145,796	134,501	123,877	120,266	24,545	95,721
Nagano	376,480	351,126	324,681	297,636	286,958	62,439	224,519
Gifu	308,494	286,642	265,742	245,433	235,927	55,573	180,354
Shizuoka	572,497	531,745	494,447	454,097	429,529	99,264	330,265
Aichi	944,346	871,708	809,403	745,776	697,794	179,457	518,337
Mie	285,176	263,444	245,304	223,625	215,725	48,433	167,292
Shiga	158,708	147,322	138,045	128,055	121,766	31,914	89,852
Kyoto	390,737	366,308	344,377	319,745	300,993	68,244	232,749
Osaka	1,270,066	1,169,017	1,093,866	1,007,276	923,960	249,337	674,623
Hyogo	644,383	597,351	559,365	518,001	488,433	121,618	366,815
Nara	187,527	175,261	164,482	152,252	143,846	28,923	114,923
Wakayama	170,236	157,279	148,574	137,894	133,451	27,453	105,998
Tottori	92,830	86,353	81,943	76,073	73,759	17,115	56,644
Shimane	145,771	139,870	134,306	125,435	123,012	24,112	98,900
Okayama	324,663	304,737	286,727	266,902	256,440	51,588	204,852
Hiroshima	504,593	472,271	446,484	416,457	399,346	80,881	318,465
Yamaguchi	304,110	287,885	272,802	254,499	248,907	40,189	208,718
Tokushima	132,048	121,631	113,946	104,816	101,407	22,571	78,836
Kagawa	159,614	149,222	139,600	128,440	121,751	26,271	95,480
Ehime	268,258	251,024	234,922	217,179	211,052	39,653	171,399
Kochi	159,761	150,803	141,651	130,410	127,307	25,273	102,034
Fukuoka	778,581	708,115	661,901	608,481	571,110	124,878	446,232
Saga	125,243	117,064	109,016	100,260	96,624	18,945	77,679
Nagasaki	294,649	273,987	256,654	237,908	231,134	42,309	188,825
Kumamoto	316,434	298,020	280,380	260,663	253,266	46,329	206,937
Oita	233,960	218,726	203,951	188,985	183,010	34,344	148,666
Miyazaki	204,597	189,497	175,738	160,800	156,646	27,957	128,689
Kagoshima	361,576	337,552	315,219	290,522	283,707	49,046	234,661
Okinawa	188,825	175,580	162,126	147,354	141,739	33,463	108,276
Total	19,867,940	18,450,091	17,242,220	15,953,873	15,143,634	3,341,700	11,801,934

NTT Subscribers by Region (FY 2019)

0   1   2
(Unit: million subscribers)

Legend ■ : Business use
        □ : Residential use

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications and other organizations

2-1-3 Number of ISDN Contracts by Prefecture

(Contracts)

Pref.	Basic Interface							Primary Rate Interface				
	FY2016	FY2017	FY2018	FY2019				FY2016	FY2017	FY2018	FY2019	
					NTT East ·West (Re-entry)							NTT East · West (Re-entry)
	Total	Total	Total	Total	Total	Business	Residential	Total	Total	Total	Total	
Hokkaido	134,634	125,374	116,055	106,018	84,977	75,010	9,967	832	808	787	744	394
Aomori	26,347	24,456	22,536	20,891	16,525	15,632	893	131	124	118	112	82
Iwate	27,929	25,928	24,172	22,302	17,410	16,341	1,069	107	100	97	88	58
Miyagi	56,665	52,458	48,994	45,352	32,321	30,479	1,842	456	435	449	431	166
Akita	21,148	19,806	18,294	16,895	13,570	12,718	852	103	99	97	93	74
Yamagata	22,844	21,274	19,657	18,122	14,465	13,567	898	109	96	93	93	68
Fukushima	38,937	36,088	33,518	31,015	24,950	22,989	1,961	148	134	125	118	76
Ibaraki	54,401	50,787	46,688	42,538	32,239	30,015	2,224	295	277	250	219	148
Tochigi	40,508	37,890	34,712	31,698	23,708	21,877	1,831	278	271	263	252	186
Gunma	40,005	37,445	34,139	31,425	23,457	21,463	1,994	279	277	228	229	142
Saitama	135,168	127,097	117,783	108,487	70,983	63,819	7,164	928	923	898	918	456
Chiba	116,402	108,923	100,981	92,803	64,630	59,360	5,270	1,159	1,066	1,028	945	530
Tokyo	548,527	510,787	476,007	440,386	278,888	258,237	20,651	16,656	16,485	15,873	15,248	6,758
Kanagawa	193,439	180,573	167,789	156,573	105,926	96,439	9,487	2,834	2,752	2,668	2,549	1,269
Niigata	48,719	45,173	41,720	38,380	28,973	27,263	1,710	192	167	160	148	84
Toyama	25,925	23,629	22,293	20,319	16,187	14,858	1,329	173	175	159	149	91
Ishikawa	28,316	26,104	24,520	22,508	17,711	16,166	1,545	213	208	186	180	86
Fukui	18,474	16,937	15,667	14,269	11,872	11,126	746	93	88	75	71	62
Yamanashi	17,971	16,822	15,409	14,316	11,802	10,710	1,092	82	80	78	75	61
Nagano	49,450	46,038	41,981	38,466	30,578	27,569	3,009	230	224	200	189	106
Gifu	45,419	42,317	39,703	36,506	29,399	26,590	2,809	220	203	197	166	111
Shizuoka	84,632	78,385	73,513	67,137	48,889	45,971	2,918	455	411	386	377	259
Aichi	176,800	163,259	152,646	140,621	98,797	91,776	7,021	1,508	1,459	1,371	1,342	803
Mie	40,881	38,356	36,363	33,548	27,738	25,327	2,411	167	170	170	155	113
Shiga	29,327	27,381	25,892	23,739	18,573	17,246	1,327	174	152	144	137	68
Kyoto	61,216	57,341	54,208	49,791	34,950	31,278	3,672	373	350	341	336	187
Osaka	267,722	248,123	232,199	214,062	132,822	122,447	10,375	4,449	4,285	3,972	3,847	1,967
Hyogo	100,240	94,127	88,503	82,250	60,646	55,983	4,663	885	796	779	760	427
Nara	23,762	22,217	20,836	19,194	14,108	12,063	2,045	107	105	95	90	62
Wakayama	18,633	17,437	16,323	15,010	12,233	11,158	1,075	66	65	63	69	54
Tottori	13,852	12,901	12,032	11,182	9,780	8,928	852	66	65	54	52	39
Shimane	17,276	16,170	15,405	14,423	12,878	11,759	1,119	142	135	128	122	67
Okayama	46,172	43,059	40,761	37,761	30,295	27,726	2,569	266	238	221	210	155
Hiroshima	71,746	65,442	63,269	58,886	45,893	42,237	3,656	428	383	365	340	221
Yamaguchi	32,179	30,008	28,633	26,520	22,031	20,033	1,998	144	135	128	131	96
Tokushima	16,547	15,194	14,429	13,383	11,169	10,251	918	87	79	71	59	41
Kagawa	24,020	22,657	21,397	19,519	15,118	14,287	831	157	153	148	143	78
Ehime	29,947	27,581	25,832	23,655	19,938	18,297	1,641	184	170	152	142	93
Kochi	16,603	15,776	14,955	13,962	12,257	11,381	876	83	80	74	73	62
Fukuoka	124,845	117,118	111,003	102,674	67,911	63,677	4,234	1,188	1,121	1,068	1,008	415
Saga	15,566	14,702	13,904	12,970	10,424	9,651	773	61	59	60	56	48
Nagasaki	28,291	26,487	25,234	23,388	19,119	17,810	1,309	177	158	152	151	84
Kumamoto	36,675	34,446	32,442	30,041	24,036	22,459	1,577	202	196	183	162	98
Oita	27,886	26,393	25,078	23,144	18,772	17,292	1,480	110	109	97	89	48
Miyazaki	22,566	21,200	20,156	18,461	15,090	13,980	1,110	130	121	118	105	73
Kagoshima	34,673	32,514	30,663	28,422	23,457	21,899	1,558	152	137	123	121	78
Okinawa	25,157	23,503	22,202	20,665	16,469	15,913	556	310	283	252	232	138
Nationwide	3,078,442	2,867,683	2,680,496	2,473,677	1,773,964	1,633,057	140,907	37,589	36,407	34,744	33,326	16,782

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications and other organizations

2-1-4 Number of Mobile Phone and PHS Contracts by Prefecture

(Contracts)

Pref.	FY2016	FY2017	FY2018	FY2019
Hokkaido	5,628,567	5,843,959	5,895,707	5,819,753
Aomori	1,185,464	1,192,605	1,193,077	1,176,981
Iwate	1,161,157	1,167,778	1,168,610	1,150,198
Miyagi	2,649,001	2,737,821	2,680,955	2,795,336
Akita	923,155	923,138	918,106	899,429
Yamagata	1,035,506	1,038,527	1,039,742	1,024,110
Fukushima	1,876,552	1,875,172	1,868,427	1,838,020
Ibaraki	2,935,554	2,916,082	2,912,004	2,856,172
Tochigi	1,960,543	1,960,781	1,959,606	1,944,132
Gunma	2,001,361	2,001,265	2,020,847	1,981,904
Saitama	7,907,212	7,836,813	7,896,874	7,686,590
Chiba	6,703,486	6,643,408	6,654,827	6,544,681
Tokyo	43,969,701	48,432,052	53,622,797	60,034,916
Kanagawa	10,793,756	10,489,043	10,362,330	10,149,863
Niigata	2,195,780	2,185,331	2,171,151	2,133,268
Toyama	1,076,276	1,078,515	1,089,369	1,082,649
Ishikawa	1,190,430	1,196,666	1,190,816	1,179,718
Fukui	785,905	787,978	785,987	770,213
Yamanashi	866,157	856,877	852,212	830,699
Nagano	2,092,662	2,109,586	2,209,218	2,509,160
Gifu	2,056,505	2,041,326	2,029,266	1,990,436
Shizuoka	3,801,794	3,784,624	3,859,571	3,814,373
Aichi	8,728,288	8,911,004	9,617,688	9,871,726
Mie	1,844,985	1,832,030	1,821,398	1,781,566
Shiga	1,412,280	1,396,090	1,388,804	1,365,235
Kyoto	2,869,833	2,846,721	2,848,874	2,801,816
Osaka	11,283,150	11,415,942	11,562,119	11,585,950
Hyogo	5,868,607	5,787,715	5,672,086	5,531,958
Nara	1,376,081	1,346,126	1,341,371	1,321,433
Wakayama	966,765	954,555	943,434	920,099
Tottori	549,703	551,930	547,967	533,619
Shimane	673,563	674,419	670,166	657,315
Okayama	2,001,624	1,991,408	1,976,981	1,929,221
Hiroshima	3,271,591	3,341,318	3,355,221	3,373,136
Yamaguchi	1,411,005	1,408,333	1,399,108	1,383,085
Tokushima	736,088	732,379	730,036	717,519
Kagawa	1,078,177	1,097,300	1,046,049	1,020,433
Ehime	1,385,463	1,387,275	1,394,763	1,376,297
Kochi	705,678	706,034	699,776	685,580
Fukuoka	6,733,714	8,113,926	9,278,106	10,316,489
Saga	812,431	809,666	804,274	787,075
Nagasaki	1,343,038	1,341,208	1,331,605	1,301,392
Kumamoto	1,794,022	1,791,146	1,787,918	1,755,511
Oita	1,121,831	1,137,315	1,147,839	1,135,313
Miyazaki	1,058,566	1,061,712	1,057,817	1,042,396
Kagoshima	1,584,730	1,584,914	1,577,438	1,545,044
Okinawa	1,445,016	1,470,177	1,490,457	1,562,300
Total	**166,852,753**	**172,789,990**	**179,872,794**	**186,514,109**

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-1-5 Number of Domestic Leased Circuits

(Thousand circuits)

	FY2015	FY2016	FY2017	FY2018	FY2019
General Leased Circuits (Frequency Band Use)	216	209	203	197	192
General Leased Circuits (Code Transmission)	22	21	20	19	18
High-Speed Digital Transmission Services	130	121	109	78	43

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-1-6 Number of Broadband Service Contracts, etc.

(Contracts)

		FY2018	FY2019	FY2020
Internet connection service (for fixed communication)	(total of 55 providers)	41,271,495	41,930,610	42,779,932
Internet connection service (for mobile communication)	(total of 30 providers)	181,674,422	185,242,351	191,334,287
FTTH access service	(total of 304 providers)	31,668,714	33,084,966	35,017,728
DSL access service	(total of 15 providers)	1,729,646	1,397,840	1,073,135
CATV access service	(total of 243 providers)	6,836,853	6,712,063	6,584,216
FWA access service	(total of 29 providers)	4,576	4,343	3,549
BWA access service	(total of 88 providers)	66,240,686	71,199,932	75,703,595
3.9-4G mobile phone terminals packet communications service	(total of 5 providers)	136,642,057	152,623,405	154,366,473
5G mobile phone terminals packet communications service	(total of 5 providers)	—	24,040	14,185,509
Local 5G service	(1 provider)	—	—	17
Mobile Phone and PHS terminal Internet connection service	(total of 5 providers)	179,617,886	186,310,026	194,935,826
Public radio LAN access service	(total of 23 providers)	113,381,458	119,096,358	125,078,785
IP-VPN service	(total of 47 providers)	616,868	659,244	659,917
Wide-area Ethernet service	(total of 80 providers)	622,370	643,819	662,524

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2 Situation of Traffic

2-2-1 Whole Traffic

### 2-2-1-1 Situation of Total Number of Calls

(100 Million calls)

Outgoing \ Incoming	Subscriber Telephoe/ISDN					IP Phone				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	105.7	91.2	76.9	65.8	53.8	2.3	1.6	1.4	1.3	1.2
Public Telephone	1.0	0.8	0.7	0.6	0.5					
ISDN	88.6	78.8	72.9	63.8	57.3					
IP Phone	112.4	115.7	120.2	121.5	121.1	10.4	11.2	11.5	12.1	12.0
Mobile phone/PHS	62.4	60.8	56.6	50.5	45.6	60.1	64.7	70.5	72.0	72.3
Total	**370.2**	**347.4**	**327.3**	**302.2**	**278.2**	**72.8**	**77.5**	**83.4**	**85.4**	**85.5**

Outgoing \ Incoming	Mobile phone/PHS					Total				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	28.7	25.6	23.0	21.2	19.5	226.4	198.1	174.9	152.7	132.2
Public Telephone										
ISDN										
IP Phone	26.2	27.8	29.2	30.4	31.3	149.1	154.8	160.9	164.0	164.3
Mobile phone/PHS	395.6	378.5	358.9	343.8	327.4	518.1	503.9	486.1	466.3	445.3
Total	**450.5**	**431.9**	**411.1**	**395.5**	**378.1**	**893.5**	**856.8**	**821.8**	**783.0**	**741.8**

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-1-2 Total Number of Calls Between Fixed Telephone and Mobile Telephone


(100 Million calls)
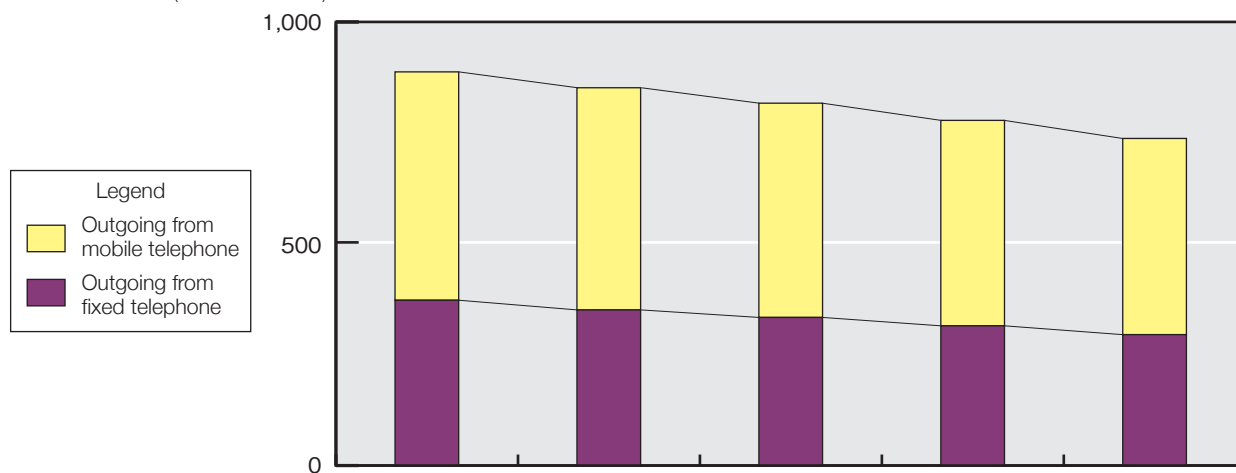
Outgoing	Incoming	FY2015	FY2016	FY2017	FY2018	FY2019
Fixed	Fixed	320.4	299.3	283.6	265.1	245.9
Fixed	Mobile	54.9	53.4	52.2	51.6	50.8
Mobile	Mobile	395.6	378.5	358.9	343.8	327.4
Mobile	Fixed	122.5	125.5	127.1	122.5	117.9
Total		**893.5**	**856.8**	**821.8**	**783.0**	**741.8**

Note: Outgoing from fixed telephone: Outgoing from subscriber telephones, public telephones, ISDN and IP phones
　　　Outgoing from mobile telephone: Outgoing from mobile phones and PHS
　　　Incoming to fixed telephone: Incoming to subscriber telephones, ISDN and IP phones
　　　Incoming to mobile telephone: Incoming to mobile phones and PHS

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-1-3 Daily Number of Calls per Subscription (Contract)

(Calls/day)

(Calls / day)
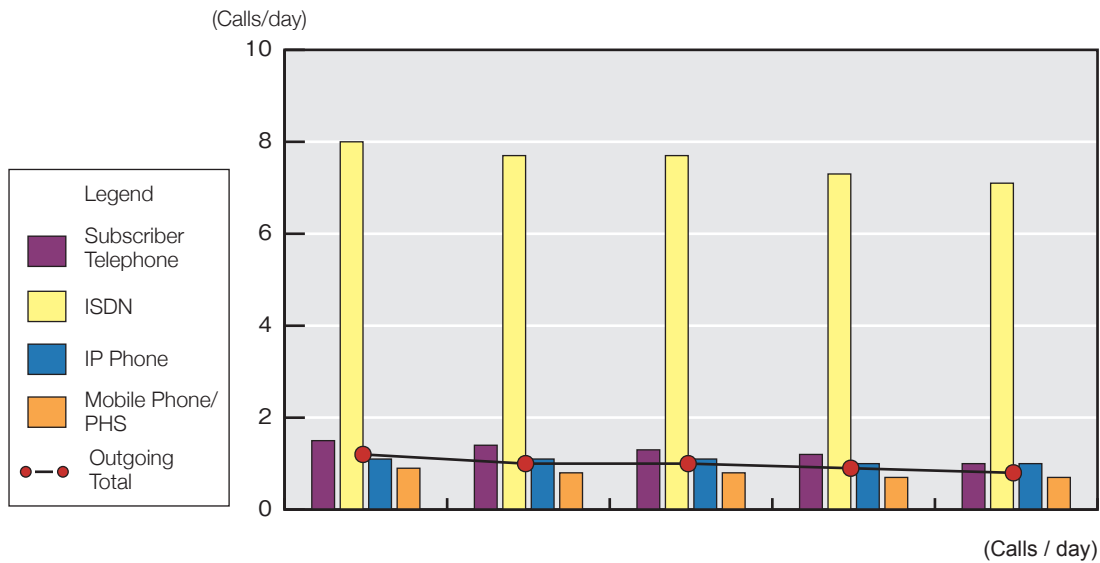
Outgoing	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	1.5	1.4	1.3	1.2	1.0
ISDN	8.0	7.7	7.7	7.3	7.1
IP Phone	1.1	1.1	1.1	1.0	1.0
Mobile phone/PHS	0.9	0.8	0.8	0.7	0.7
Outgoing Total	**1.2**	**1.0**	**1.0**	**0.9**	**0.8**

Note: The categories of respective outgoing calls are as listed below. For example, the number of outgoing calls from subscriber telephones shows the total number of calls outgoing from subscriber telephones and destined for fixed telephones, IP phones, mobile phones, and PHS terminals. Since the actual number of outgoing calls from fixed telephones and destined for IP phones, mobile phones and PHS terminals cannot be identified, the number of those calls is calculated according to the ratio to the number of outgoing calls from fixed telephones and destined for fixed telephones.

Outgoing	ISDN	Cellular Telephone	PHS
Incoming	Fixed Telephone, IP Phone, Mobile Phone, PHS	Fixed Telephone, IP Phone, Mobile Phone, PHS	Fixed Telephone, IP Phone, Mobile Phone, PHS

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-1-4 Situation of Total Call Duration

(Million hours)

Incoming / Outgoing	Subscriber Telephoe/ISDN					IP Phone				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	350.0	288.0	234.3	194.6	154.3	9.0	5.8	5.0	4.4	4.2
Public Telephone	2.2	1.8	1.5	1.3	1.1					
ISDN	210.2	186.2	169.6	153.3	138.4					
IP Phone	363.4	359.5	351.7	340.4	327.5	47.7	49.9	48.3	49.9	48.2
Mobile phone/PHS	213.5	210.2	201.5	194.6	183.9	195.3	220.9	256.3	276.5	303.2
Total	**1,139.2**	**1,045.7**	**958.6**	**884.1**	**805.2**	**252.1**	**276.7**	**309.6**	**330.8**	**355.6**

Incoming / Outgoing	Mobile phone/PHS					Total				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	81.7	74.0	67.6	63.3	59.3	653.1	555.8	478.0	416.9	357.3
Public Telephone										
ISDN										
IP Phone	77.2	83.8	89.3	93.6	97.8	488.3	493.3	489.2	483.9	473.5
Mobile phone/PHS	1,821.8	1,800.2	1,722.6	1,656.1	1,607.1	2,230.6	2,231.4	2,180.4	2,127.2	2,094.2
Total	**1,980.7**	**1,958.1**	**1,879.4**	**1,813.0**	**1,764.2**	**3,372.1**	**3,280.5**	**3,147.6**	**3,027.9**	**2,925.0**

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-1-5 Average Call Duration per Call

(Seconds)

Outgoing \ Incoming	Subscriber Telephoe/ISDN					IP Phone				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	119.2	113.7	109.7	106.5	103.2	140.9	130.5	128.6	121.8	126.0
Public Telephone	79.2	81.0	77.1	78.0	79.2					
ISDN	85.4	85.1	83.8	86.5	87.0					
IP Phone	116.4	111.9	105.3	100.9	97.4	165.1	160.4	151.2	148.5	144.6
Mobile phone/PHS	123.2	124.5	128.2	138.7	145.2	117.0	122.9	130.9	138.3	151.0
Total	**110.8**	**108.4**	**105.4**	**105.3**	**104.2**	**124.7**	**128.5**	**133.6**	**139.4**	**149.7**

Outgoing \ Incoming	Mobile phone/PHS					Total				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone										
Public Telephone	102.5	104.1	105.8	107.5	109.5	103.8	101.0	98.4	98.3	97.3
ISDN										
IP Phone	106.1	108.5	110.1	110.8	112.5	117.9	114.7	109.5	106.2	103.7
Mobile phone/PHS	165.8	171.2	172.8	173.4	176.7	155.0	159.4	161.5	164.2	169.3
Total	**158.3**	**163.2**	**164.6**	**165.0**	**168.0**	**135.9**	**137.8**	**137.9**	**139.2**	**142.0**

Note: Total Call Duration (seconds) ÷ Total Number of Calls (calls)
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-1-6 Daily Duration per Subscription (Contract)
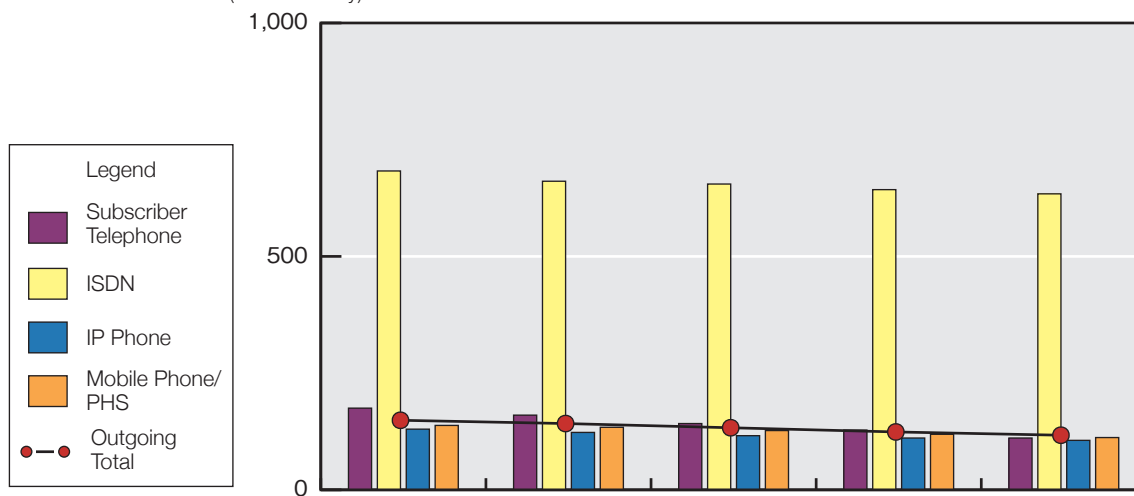
Outgoing	FY2015	FY2016	FY2017	FY2018	FY2019
Subscriber Telephone	175	160	142	128	111
ISDN	683	661	655	643	634
IP Phone	130	123	116	111	106
Mobile phone/PHS	138	134	127	119	112
Outgoing Total	**149**	**142**	**133**	**124**	**117**

Note: The category of outgoing call duration and calculation method are the same as those in note of 2-2-1-3.
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2 Traffic of Subscriber Telephone/ISDN

### 2-2-2-1 Situation of Calls by Time Zone

2-2-2-1-1 Number of Calls by Time Zone

(Million calls)

Time Zone	FY2015	FY2016	FY2017	FY2018	FY2019
0-1	145	129	116	100	87
1-2	126	113	102	89	79
2-3	113	101	92	81	71
3-4	104	94	84	75	67
4-5	105	96	86	76	68
5-6	130	118	107	93	81
6-7	187	166	148	130	113
7-8	361	321	283	244	202
8-9	893	789	697	616	509
9-10	1,860	1,645	1,454	1,267	1,085
10-11	1,944	1,710	1,518	1,323	1,132
11-12	1,802	1,586	1,406	1,227	1,055
12-13	1,096	963	852	733	626
13-14	1,590	1,401	1,242	1,074	925
14-15	1,583	1,403	1,247	1,082	932
15-16	1,586	1,403	1,245	1,077	933
16-17	1,617	1,413	1,244	1,083	939
17-18	1,397	1,203	1,048	905	774
18-19	985	834	714	602	503
19-20	698	584	493	410	344
20-21	469	385	322	267	226
21-22	283	238	201	169	144
22-23	196	171	149	128	109
23-24	166	145	128	111	95
Total	**19,434**	**17,003**	**14,975**	**12,961**	**11,103**
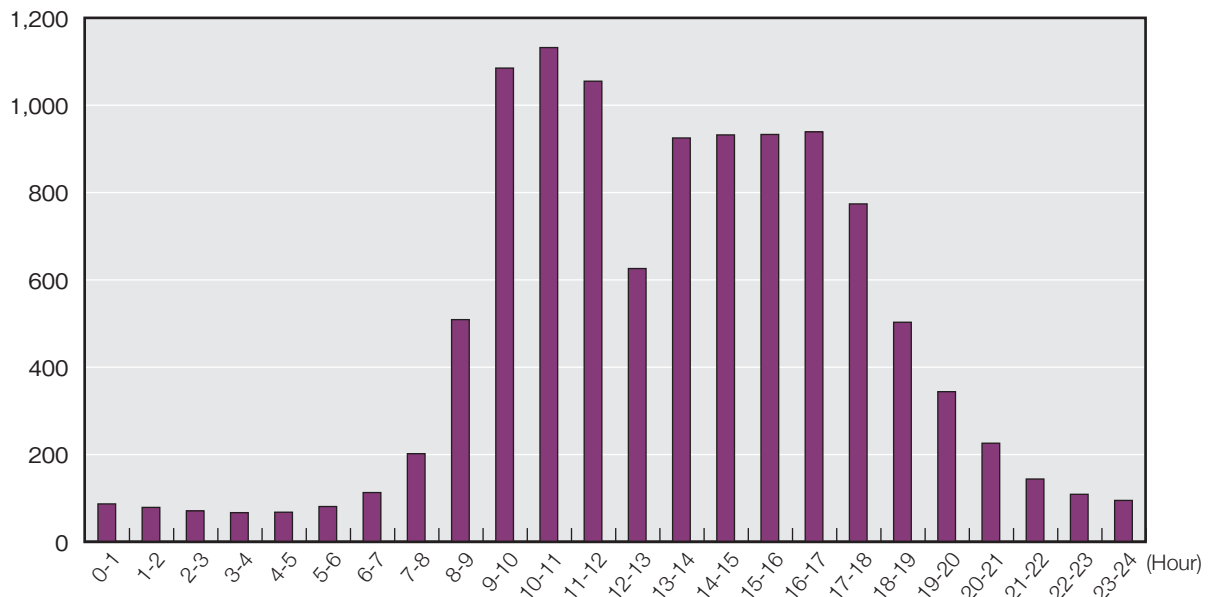
Number of Calls by Time Zone (FY2019)

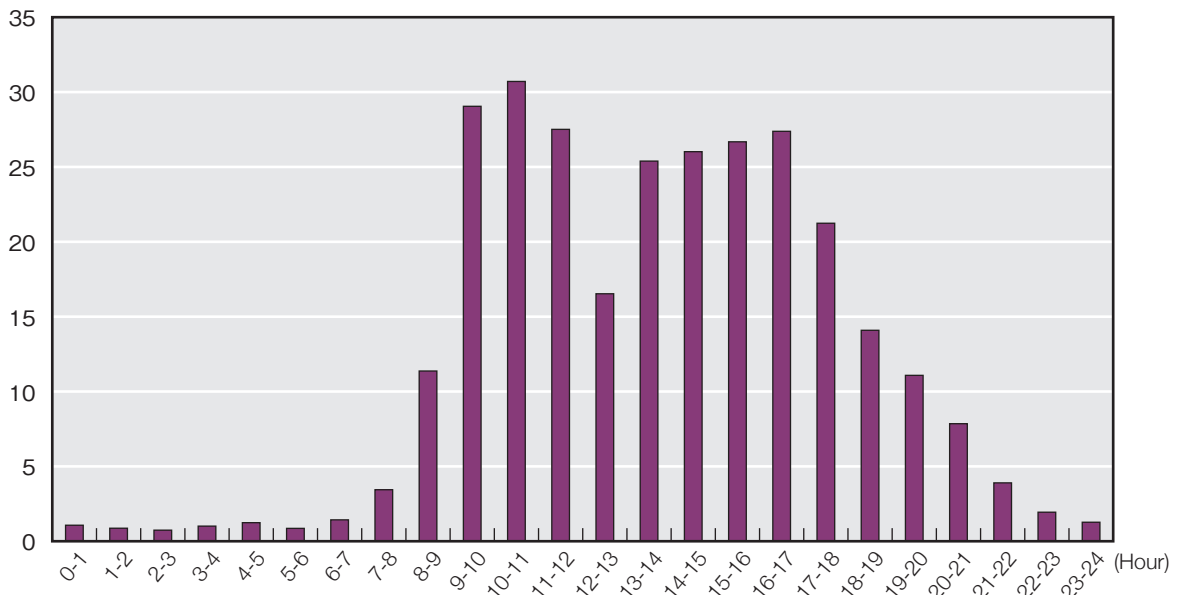*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-1-2   Duration by Time Zone

(Million hours)

Time Zone	FY2015	FY2016	FY2017	FY2018	FY2019
0-1	2.42	1.93	1.59	1.27	1.07
1-2	1.84	1.44	1.20	1.01	0.87
2-3	1.57	1.17	1.00	0.84	0.74
3-4	1.99	1.52	1.26	1.13	1.01
4-5	1.71	1.23	1.03	0.90	1.24
5-6	1.86	1.37	1.20	1.00	0.86
6-7	2.94	2.26	1.91	1.68	1.43
7-8	7.26	5.93	5.06	4.26	3.44
8-9	22.34	18.70	15.94	13.87	11.37
9-10	54.14	46.43	39.72	34.44	29.05
10-11	55.86	48.06	41.54	36.28	30.71
11-12	49.33	42.56	36.85	32.32	27.51
12-13	30.46	26.26	22.58	19.66	16.53
13-14	45.46	39.46	34.16	29.78	25.39
14-15	45.97	40.08	34.78	30.35	26.02
15-16	47.13	41.10	35.66	31.15	26.68
16-17	49.28	42.58	36.74	32.02	27.38
17-18	41.46	35.16	29.75	25.50	21.24
18-19	31.08	25.57	21.15	17.60	14.09
19-20	26.71	21.23	17.15	13.99	11.08
20-21	20.27	15.82	12.42	9.98	7.85
21-22	10.89	8.07	6.21	4.96	3.90
22-23	5.12	3.84	3.00	2.40	1.94
23-24	3.17	2.41	1.93	1.56	1.27
Total	**560.24**	**474.17**	**403.85**	**347.90**	**292.71**

Duration by Time Zone (FY2019)

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications
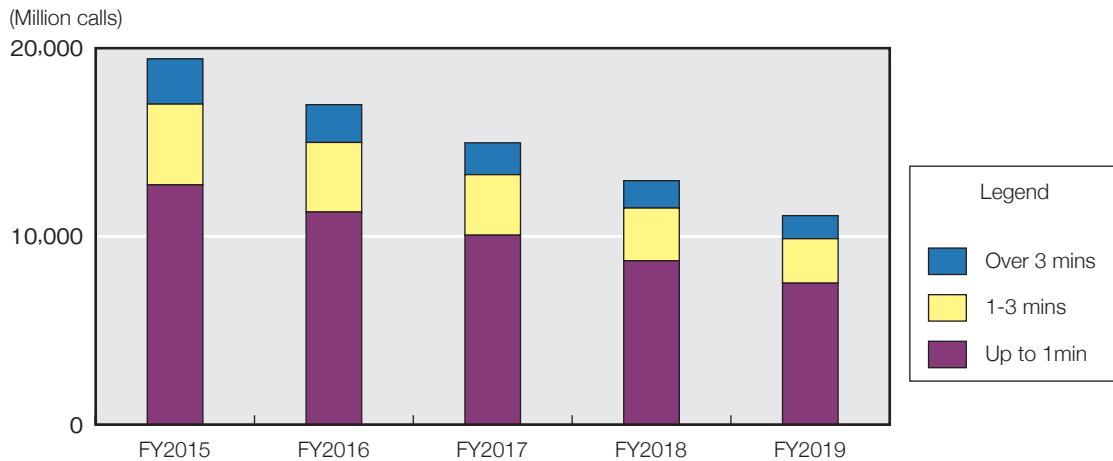
2-2-2-2 Number of Calls by Duration

2-2-2-2-1 Number of Calls by Duration

(Million calls)

Duration	FY2015	FY2016	FY2017	FY2018	FY2019
up to 1 min	12,739	11,297	10,064	8,709	7,515
1-3 mins	4,291	3,696	3,217	2,798	2,364
over 3 mins	2,402	2,008	1,693	1,454	1,225
Total	**19,434**	**17,003**	**14,975**	**12,961**	**11,103**

Number of Calls by Duration

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-2-2 Number of Calls Classified According to 10-second Steps (FY2019)

(Million calls)

Step	Total
～10 sec.	1,186
～20 sec.	1,595
～30 sec.	1,919
～40 sec.	1,368
～50 sec.	847
～60 sec.	600
～70 sec.	451
～80 sec.	346
～90 sec.	282
～100 sec.	237
～110 sec.	198
～120 sec.	171
～130 sec.	158
～140 sec.	131
～150 sec.	114
～160 sec.	101
～170 sec.	90
～180 sec.	85
180 sec. ～	1,225
Total	**11,103**
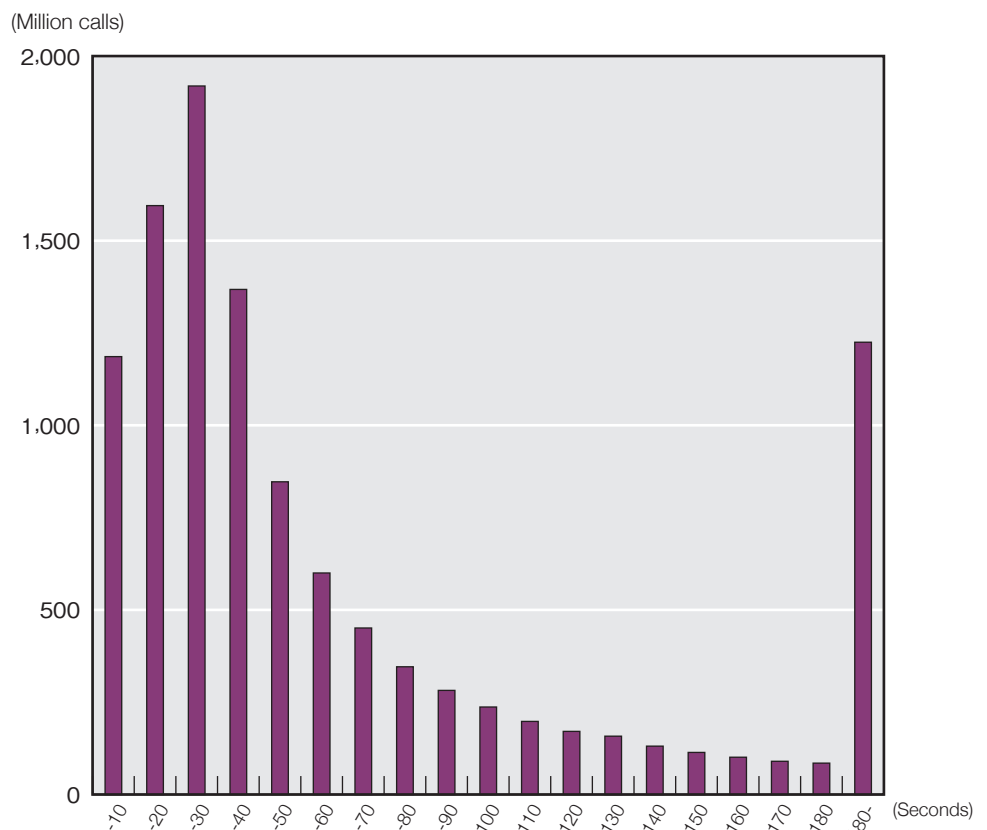
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-3 Situation of Calls by Prefecture

2-2-2-3-1   Ranking of Number of Outgoing and Incoming Calls by Prefecture (FY2019)

(Million calls)

Ranking	Outgoing			Incoming		
	Pref.	Number of outgoing calls	Ratio (%)	Pref.	Number of incoming calls	Ratio (%)
1	Tokyo	2,458	22.1	Tokyo	2,116	19.1
2	Osaka	1,098	9.9	Osaka	1,096	9.9
3	Kanagawa	699	6.3	Kanagawa	662	6.0
4	Aichi	598	5.4	Aichi	645	5.8
5	Saitama	520	4.7	Saitama	489	4.4
6	Hokkaido	469	4.2	Fukuoka	463	4.2
7	Fukuoka	451	4.1	Hokkaido	448	4.0
8	Chiba	408	3.7	Chiba	438	3.9
9	Hyogo	373	3.4	Hyogo	367	3.3
10	Shizuoka	275	2.5	Shizuoka	296	2.7
11	Hiroshima	231	2.1	Hiroshima	256	2.3
12	Miyagi	200	1.8	Kyoto	235	2.1
13	Kyoto	196	1.8	Miyagi	228	2.1
14	Niigata	171	1.5	Niigata	198	1.8
15	Ibaraki	169	1.5	Ibaraki	175	1.6
16	Nagano	150	1.3	Nagano	171	1.5
17	Gifu	137	1.2	Gifu	152	1.4
18	Okayama	136	1.2	Okayama	145	1.3
19	Fukushima	133	1.2	Gunma	143	1.3
20	Kagoshima	129	1.2	Fukushima	138	1.2
21	Gunma	128	1.2	Tochigi	127	1.1
22	Kumamoto	116	1.0	Kumamoto	123	1.1
23	Tochigi	113	1.0	Mie	121	1.1
24	Mie	112	1.0	Kagoshima	118	1.1
25	Yamaguchi	97	0.9	Iwate	99	0.9
26	Iwate	97	0.9	Yamaguchi	97	0.9
27	Nagasaki	93	0.8	Nagasaki	94	0.8
28	Aomori	92	0.8	Aomori	94	0.8
29	Shiga	85	0.8	Ehime	93	0.8
30	Ehime	85	0.8	Yamagata	89	0.8
31	Oita	81	0.7	Ishikawa	89	0.8
32	Okinawa	81	0.7	Okinawa	86	0.8
33	Ishikawa	80	0.7	Shiga	84	0.8
34	Yamagata	79	0.7	Oita	82	0.7
35	Kagawa	78	0.7	Toyama	82	0.7
36	Akita	75	0.7	Kagawa	81	0.7
37	Toyama	73	0.7	Akita	78	0.7
38	Miyazaki	72	0.7	Miyazaki	76	0.7
39	Nara	71	0.6	Nara	71	0.6
40	Wakayama	62	0.6	Shimane	66	0.6
41	Shimane	59	0.5	Wakayama	64	0.6
42	Kochi	49	0.4	Fukui	55	0.5
43	Yamanashi	49	0.4	Yamanashi	53	0.5
44	Fukui	47	0.4	Saga	52	0.5
45	Saga	46	0.4	Kochi	51	0.5
46	Tokushima	43	0.4	Tokushima	46	0.4
47	Tottori	39	0.4	Tottori	42	0.4
	Total	**11,103**	**100.0**	**Total**	**11,103**	**100.0**

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-3-2 Main Destination Prefectures by Originating Prefecture (FY2019)

Outgoing	Total Number of Outgoing calls (million)	Incoming									
		1		2		3		4		5	
		Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)
Hokkaido	469	Hokkaido	74.3	Tokyo	8.1	Miyagi	2.2	Osaka	1.6	Kanagawa	1.5
Aomori	92	Aomori	73.8	Miyagi	7.2	Tokyo	5.8	Iwate	2.8	Akita	1.3
Iwate	97	Iwate	70.7	Miyagi	9.9	Tokyo	5.8	Aomori	2.5	Yamagata	1.8
Miyagi	200	Miyagi	63.5	Tokyo	10.1	Fukushima	4.4	Iwate	3.2	Yamagata	3.1
Akita	75	Akita	73.9	Miyagi	6.4	Tokyo	5.8	Yamagata	2.1	Aomori	1.6
Yamagata	79	Yamagata	71.7	Miyagi	8.7	Tokyo	6.6	Kanagawa	1.3	Fukushima	1.1
Fukushima	133	Fukushima	67.2	Tokyo	9.6	Miyagi	9.6	Kanagawa	1.4	Saitama	1.4
Ibaraki	169	Ibaraki	58.0	Tokyo	12.8	Chiba	7.7	Saitama	7.4	Tochigi	2.4
Tochigi	113	Tochigi	60.6	Tokyo	13.5	Saitama	6.8	Ibaraki	3.2	Gunma	2.9
Gunma	128	Gunma	57.8	Tokyo	13.3	Saitama	6.3	Niigata	4.1	Tochigi	3.3
Saitama	520	Saitama	45.8	Tokyo	20.6	Chiba	5.4	Kanagawa	3.5	Gunma	2.1
Chiba	408	Chiba	57.6	Tokyo	21.5	Saitama	4.0	Kanagawa	3.3	Ibaraki	1.8
Tokyo	2,458	Tokyo	52.1	Kanagawa	6.5	Saitama	5.2	Osaka	4.7	Chiba	3.9
Kanagawa	699	Kanagawa	53.6	Tokyo	21.9	Osaka	2.7	Saitama	2.6	Chiba	1.9
Niigata	171	Niigata	76.5	Tokyo	8.2	Saitama	1.6	Osaka	1.4	Kanagawa	1.3
Toyama	73	Toyama	68.1	Tokyo	5.9	Ishikawa	5.6	Osaka	4.4	Kyoto	2.7
Ishikawa	80	Ishikawa	63.7	Osaka	5.3	Toyama	5.2	Tokyo	5.2	Kyoto	3.4
Fukui	47	Fukui	69.4	Osaka	6.2	Tokyo	5.0	Ishikawa	4.5	Kyoto	3.3
Yamanashi	49	Yamanashi	61.8	Tokyo	13.6	Saitama	6.7	Shizuoka	4.5	Kanagawa	3.0
Nagano	150	Nagano	70.1	Tokyo	9.2	Niigata	3.8	Chiba	3.5	Aichi	2.3
Gifu	137	Gifu	62.1	Aichi	17.6	Tokyo	5.1	Osaka	3.9	Kanagawa	1.1
Shizuoka	275	Shizuoka	70.2	Tokyo	7.7	Aichi	7.6	Osaka	3.0	Kanagawa	2.8
Aichi	598	Aichi	66.4	Tokyo	7.1	Osaka	4.7	Hyogo	3.3	Gifu	3.2
Mie	112	Mie	65.9	Aichi	13.1	Osaka	5.3	Tokyo	5.1	Kanagawa	1.1
Shiga	85	Shiga	51.5	Osaka	16.5	Kyoto	11.7	Tokyo	5.0	Aichi	2.4
Kyoto	196	Kyoto	60.6	Osaka	15.7	Tokyo	5.9	Shiga	2.7	Hyogo	2.1
Osaka	1,098	Osaka	56.7	Tokyo	8.0	Hyogo	5.7	Aichi	3.5	Kyoto	3.1
Hyogo	373	Hyogo	52.1	Osaka	21.4	Tokyo	6.5	Kyoto	2.0	Aichi	1.8
Nara	71	Nara	53.1	Osaka	21.9	Kyoto	9.5	Tokyo	4.6	Hyogo	1.5
Wakayama	62	Wakayama	65.2	Osaka	13.4	Tokyo	5.3	Kyoto	4.5	Aichi	1.6
Tottori	39	Tottori	64.6	Shimane	8.6	Osaka	4.8	Tokyo	4.6	Hiroshima	4.5
Shimane	59	Shimane	65.5	Hiroshima	6.6	Tokyo	6.0	Osaka	5.4	Tottori	3.1
Okayama	136	Okayama	64.1	Hiroshima	8.8	Osaka	6.8	Tokyo	5.0	Hyogo	2.9
Hiroshima	231	Hiroshima	69.5	Osaka	5.4	Tokyo	4.9	Okayama	3.8	Yamaguchi	2.7
Yamaguchi	97	Yamaguchi	65.6	Fukuoka	9.6	Hiroshima	8.5	Tokyo	4.3	Osaka	3.8
Tokushima	43	Tokushima	68.4	Osaka	5.9	Kagawa	5.7	Tokyo	4.7	Hiroshima	3.8
Kagawa	78	Kagawa	61.6	Osaka	6.6	Tokyo	5.4	Ehime	4.5	Hiroshima	3.7
Ehime	85	Ehime	70.5	Osaka	5.3	Tokyo	5.1	Hiroshima	4.0	Kagawa	3.8
Kochi	49	Kochi	74.8	Osaka	4.4	Tokyo	4.3	Kagawa	3.3	Hiroshima	2.8
Fukuoka	451	Fukuoka	63.7	Tokyo	6.1	Osaka	5.2	Kumamoto	2.4	Saga	1.9
Saga	46	Saga	66.2	Fukuoka	16.4	Tokyo	3.9	Osaka	2.8	Nagasaki	2.7
Nagasaki	93	Nagasaki	71.1	Fukuoka	10.1	Tokyo	4.4	Osaka	3.0	Saga	1.6
Kumamoto	116	Kumamoto	69.2	Fukuoka	11.4	Tokyo	4.0	Osaka	3.3	Kagoshima	1.5
Oita	81	Oita	70.1	Fukuoka	12.4	Tokyo	3.7	Osaka	3.3	Kumamoto	1.9
Miyazaki	72	Miyazaki	72.9	Fukuoka	6.4	Tokyo	4.0	Kagoshima	3.1	Osaka	3.0
Kagoshima	129	Kagoshima	67.0	Fukuoka	6.1	Tokyo	3.9	Osaka	3.5	Miyazaki	2.4
Okinawa	81	Okinawa	68.9	Tokyo	7.0	Osaka	6.1	Fukuoka	4.5	Aichi	1.5

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications
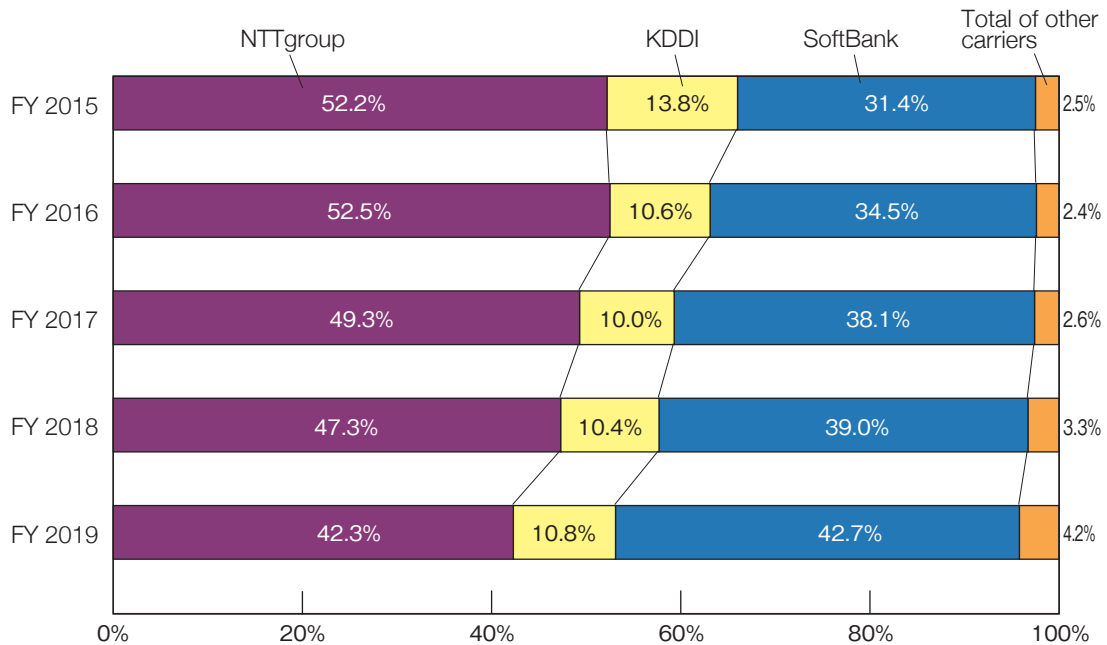
2-2-2-3-3   Main Originating Prefectures by Destination Prefecture (FY2019)

Incoming	Total number of incoming calls (million)	Outgoing									
		1		2		3		4		5	
		Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)
Hokkaido	448	Hokkaido	77.7	Tokyo	10.4	Osaka	1.8	Saitama	1.7	Kanagawa	1.6
Aomori	94	Aomori	72.8	Tokyo	9.3	Miyagi	3.9	Iwate	2.6	Saitama	1.8
Iwate	99	Iwate	69.4	Tokyo	9.5	Miyagi	6.5	Aomori	2.6	Saitama	1.9
Miyagi	228	Miyagi	55.7	Tokyo	11.2	Fukushima	5.6	Hokkaido	4.6	Iwate	4.2
Akita	78	Akita	70.3	Tokyo	9.9	Miyagi	3.6	Saitama	2.1	Iwate	1.8
Yamagata	89	Yamagata	63.9	Tokyo	10.7	Miyagi	6.9	Saitama	2.3	Iwate	2.0
Fukushima	138	Fukushima	65.1	Tokyo	12.3	Miyagi	6.4	Saitama	2.4	Kanagawa	1.8
Ibaraki	175	Ibaraki	55.9	Tokyo	18.1	Saitama	5.5	Chiba	4.3	Kanagawa	2.9
Tochigi	127	Tochigi	53.6	Tokyo	18.7	Saitama	6.2	Gunma	3.3	Kanagawa	3.2
Gunma	143	Gunma	51.7	Tokyo	17.5	Saitama	7.7	Kanagawa	3.9	Osaka	2.6
Saitama	489	Saitama	48.8	Tokyo	26.1	Kanagawa	3.7	Chiba	3.3	Ibaraki	2.6
Chiba	438	Chiba	53.6	Tokyo	21.6	Saitama	6.4	Kanagawa	3.1	Ibaraki	3.0
Tokyo	2,116	Tokyo	60.5	Kanagawa	7.2	Saitama	5.1	Osaka	4.1	Chiba	4.1
Kanagawa	662	Kanagawa	56.6	Tokyo	24.1	Osaka	2.8	Saitama	2.7	Chiba	2.0
Niigata	198	Niigata	66.2	Tokyo	11.7	Osaka	3.2	Nagano	2.9	Gunma	2.6
Toyama	82	Toyama	60.4	Tokyo	11.3	Osaka	5.9	Ishikawa	5.1	Aichi	2.6
Ishikawa	89	Ishikawa	57.6	Tokyo	10.1	Osaka	6.3	Toyama	4.6	Aichi	3.7
Fukui	55	Fukui	59.3	Tokyo	10.6	Osaka	7.8	Ishikawa	4.4	Aichi	2.6
Yamanashi	53	Yamanashi	57.0	Tokyo	21.2	Kanagawa	3.9	Saitama	2.7	Osaka	2.3
Nagano	171	Nagano	61.3	Tokyo	13.8	Osaka	5.6	Aichi	2.5	Kanagawa	2.5
Gifu	152	Gifu	56.1	Aichi	12.8	Tokyo	10.1	Osaka	5.3	Saitama	2.0
Shizuoka	296	Shizuoka	65.2	Tokyo	12.9	Aichi	4.5	Osaka	3.8	Kanagawa	3.5
Aichi	645	Aichi	61.5	Tokyo	10.7	Osaka	6.0	Gifu	3.7	Shizuoka	3.2
Mie	121	Mie	60.8	Aichi	10.7	Tokyo	9.8	Osaka	6.0	Hyogo	1.6
Shiga	84	Shiga	52.3	Osaka	14.1	Tokyo	10.2	Kyoto	6.4	Hyogo	2.5
Kyoto	235	Kyoto	50.6	Osaka	14.3	Tokyo	8.7	Shiga	4.3	Hyogo	3.1
Osaka	1,096	Osaka	56.9	Tokyo	10.6	Hyogo	7.3	Kyoto	2.8	Aichi	2.6
Hyogo	367	Hyogo	52.9	Osaka	17.1	Tokyo	9.9	Aichi	5.4	Kanagawa	2.1
Nara	71	Nara	52.8	Osaka	19.4	Tokyo	10.4	Hyogo	2.7	Kyoto	2.5
Wakayama	64	Wakayama	62.6	Osaka	15.1	Tokyo	9.3	Hyogo	2.0	Kanagawa	1.7
Tottori	42	Tottori	60.7	Tokyo	8.6	Osaka	6.2	Shimane	4.5	Hiroshima	4.0
Shimane	66	Shimane	58.3	Tokyo	9.7	Osaka	5.5	Tottori	5.1	Hiroshima	4.8
Okayama	145	Okayama	60.4	Tokyo	9.1	Osaka	7.5	Hiroshima	6.0	Hyogo	2.6
Hiroshima	256	Hiroshima	62.5	Tokyo	8.2	Osaka	5.1	Okayama	4.7	Yamaguchi	3.2
Yamaguchi	97	Yamaguchi	65.7	Tokyo	8.5	Hiroshima	6.4	Fukuoka	5.3	Osaka	3.6
Tokushima	46	Tokushima	64.3	Tokyo	9.3	Osaka	6.8	Kagawa	5.0	Hyogo	2.3
Kagawa	81	Kagawa	59.6	Tokyo	8.9	Osaka	7.3	Ehime	4.0	Tokushima	3.0
Ehime	93	Ehime	64.4	Tokyo	10.2	Osaka	6.4	Kagawa	3.8	Hiroshima	2.0
Kochi	51	Kochi	72.3	Tokyo	7.9	Osaka	4.8	Kagawa	3.2	Ehime	1.8
Fukuoka	463	Fukuoka	62.1	Tokyo	9.5	Osaka	4.2	Kumamoto	2.8	Oita	2.2
Saga	52	Saga	58.7	Fukuoka	16.8	Tokyo	7.8	Nagasaki	2.9	Osaka	2.9
Nagasaki	94	Nagasaki	70.1	Tokyo	8.7	Fukuoka	8.0	Osaka	2.5	Saitama	1.4
Kumamoto	123	Kumamoto	65.1	Fukuoka	8.9	Tokyo	8.6	Osaka	3.0	Kagoshima	2.4
Oita	82	Oita	69.5	Fukuoka	9.5	Tokyo	8.2	Osaka	2.5	Saitama	1.4
Miyazaki	76	Miyazaki	68.8	Tokyo	8.4	Fukuoka	6.0	Kagoshima	4.0	Osaka	2.6
Kagoshima	118	Kagoshima	73.2	Tokyo	7.7	Fukuoka	5.3	Osaka	2.4	Miyazaki	1.9
Okinawa	86	Okinawa	64.9	Tokyo	13.3	Osaka	4.3	Fukuoka	3.2	Kanagawa	1.9

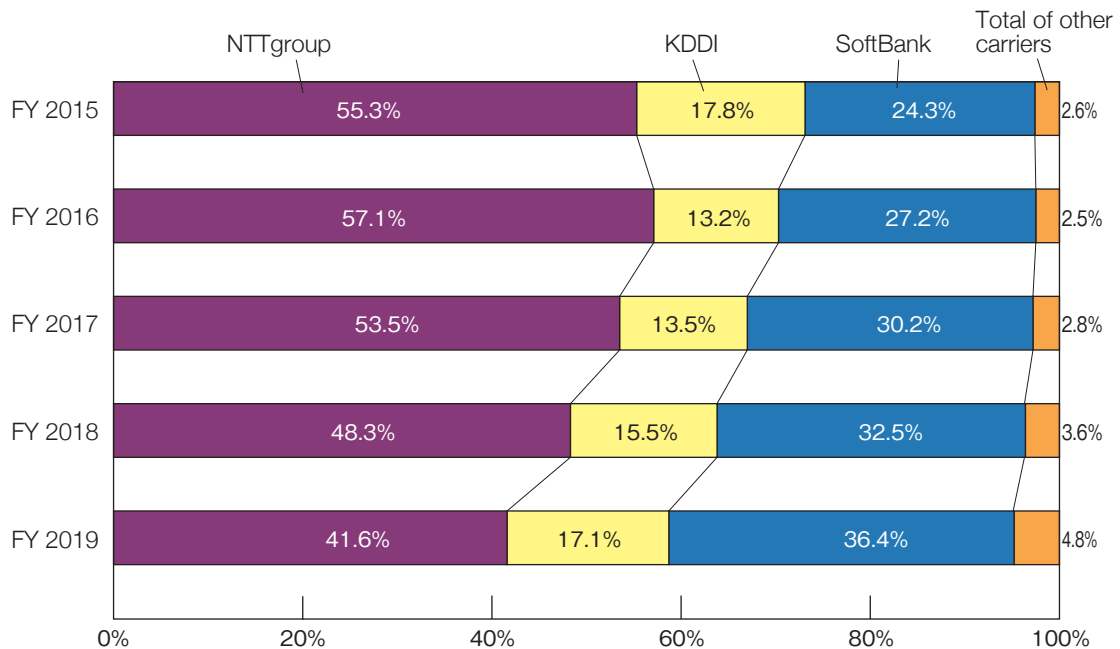*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-4 Share by Carrier in Calls Between Prefectures

2-2-2-4-1   Changes in the Ratio of Number of Calls by Carrier in Calls between Prefectures

	NTTgroup	KDDI	SoftBank	Total of other carriers
FY 2015	52.2%	13.8%	31.4%	2.5%
FY 2016	52.5%	10.6%	34.5%	2.4%
FY 2017	49.3%	10.0%	38.1%	2.6%
FY 2018	47.3%	10.4%	39.0%	3.3%
FY 2019	42.3%	10.8%	42.7%	4.2%

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-2-4-2   Changes in the Ratio of Call Hours by Carrier in Calls between Prefectures

	NTTgroup	KDDI	SoftBank	Total of other carriers
FY 2015	55.3%	17.8%	24.3%	2.6%
FY 2016	57.1%	13.2%	27.2%	2.5%
FY 2017	53.5%	13.5%	30.2%	2.8%
FY 2018	48.3%	15.5%	32.5%	3.6%
FY 2019	41.6%	17.1%	36.4%	4.8%

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-3 Traffic of IP Phones

2-2-3-1 Number of Telephone Numbers in Use and Communications Traffic

	FY2015		FY2016		FY2017		FY2018		FY2019	
Total number of numbers in use (million numbers)	38.47	(7.9%)	40.99	(6.5%)	42.55	(3.8%)	43.41	(2.0%)	44.13	(1.7%)
(0ABJ-IP phone)	30.77	(8.0%)	32.45	(5.5%)	33.64	(3.7%)	34.46	(2.4%)	35.21	(2.2%)
(050-IP phone)	7.70	(7.4%)	8.53	(10.8%)	8.91	(4.5%)	8.95	(0.4%)	8.92	(▲0.3%)
Number of calls (billion calls)	15.14	(1.5%)	15.65	(3.3%)	16.23	(3.8%)	16.53	(1.8%)	16.55	(0.1%)
From IP phones to subscriber telephones, ISDN, IP phones, mobile phones, and PHS phones	14.91	(1.8%)	15.49	(3.8%)	16.09	(3.9%)	16.40	(1.9%)	16.43	(0.2%)
From fixed-line services to IP phones	0.23	(▲15.3%)	0.16	(▲29.7%)	0.14	(▲11.7%)	0.13	(▲11.0%)	0.12	(▲9.2%)
Duration of calls (million hours)	497.6	(▲4.5%)	499.3	(0.3%)	494.6	(▲1.0%)	488.5	(▲1.2%)	477.7	(▲2.2%)
From IP phones to subscriber telephones, ISDN, IP phones, mobile phones, and PHS phones	488.6	(▲4.1%)	493.5	(1.0%)	489.5	(▲0.8%)	483.9	(▲1.1%)	473.5	(▲2.1%)
From fixed-line services to IP phones	9.0	(▲23.5%)	5.8	(▲35.6%)	5.1	(▲12.7%)	4.7	(▲7.9%)	4.2	(▲10.2%)

Notes:
1. Figures in parentheses indicate rates of increase/decrease over the previous fiscal year.
2. The total number of phone numbers in use shown for each fiscal year is accurate as of the end of the fiscal year.
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4 Traffic of Mobile and PHS Phone

2-2-4-1 Situation of Calls by Time Zone

2-2-4-1-1 Number of Calls by Time Zone

(Calls to and from mobile / PHS phones)   (Million calls)

Time Zone	FY2015	FY2016	FY2017	FY2018	FY2019
0-1	393	358	318	276	248
1-2	243	229	208	181	164
2-3	166	161	152	132	121
3-4	128	128	125	110	100
4-5	125	126	126	112	104
5-6	208	206	204	186	174
6-7	534	520	503	470	440
7-8	1,256	1,223	1,188	1,136	1,073
8-9	2,461	2,423	2,373	2,317	2,222
9-10	3,793	3,754	3,696	3,638	3,530
10-11	4,079	4,021	3,952	3,877	3,768
11-12	3,985	3,915	3,828	3,739	3,627
12-13	3,560	3,439	3,306	3,170	3,031
13-14	3,741	3,662	3,567	3,474	3,355
14-15	3,660	3,591	3,505	3,420	3,315
15-16	3,971	3,891	3,802	3,706	3,582
16-17	4,354	4,258	4,150	4,036	3,889
17-18	4,852	4,693	4,515	4,328	4,118
18-19	4,237	4,042	3,818	3,586	3,351
19-20	3,194	3,010	2,798	2,586	2,393
20-21	2,334	2,179	2,000	1,824	1,670
21-22	1,630	1,512	1,360	1,224	1,107
22-23	1,055	962	854	753	679
23-24	647	585	515	447	400
Total	**54,605**	**52,889**	**50,864**	**48,728**	**46,460**
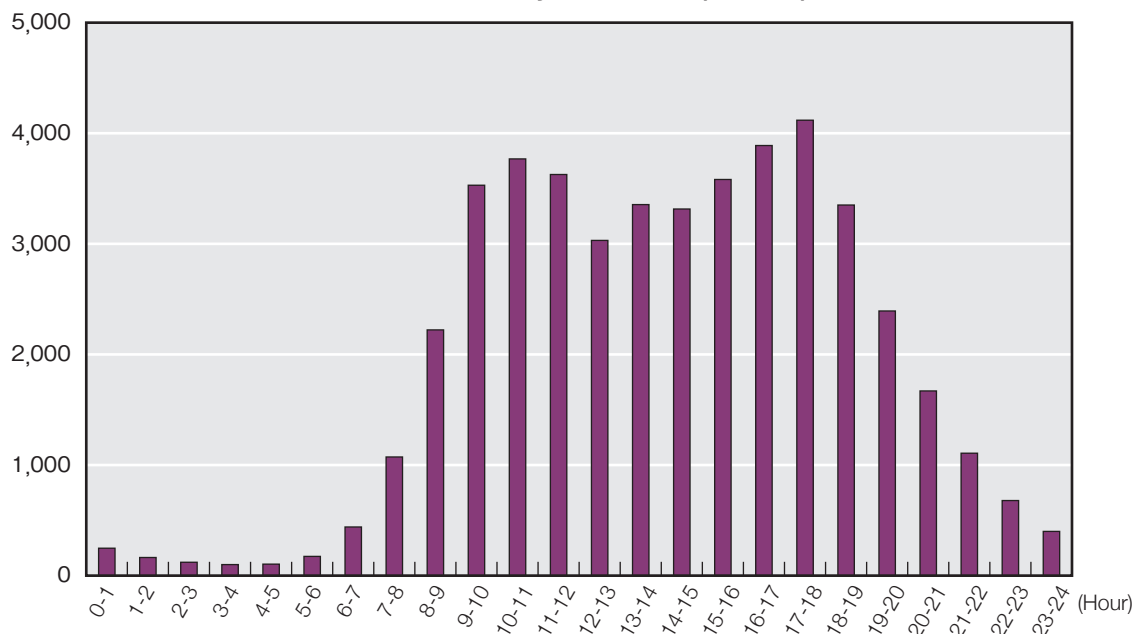
Number of Calls by Time Zone (FY2019)

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-1-2   Duration by Time Zone

(Calls to and from mobile / PHS phones)   (Million hours)

Time Zone	FY2015	FY2016	FY2017	FY2018	FY2019
0-1	46.49	43.18	37.46	32.19	30.05
1-2	28.17	26.38	23.18	20.03	19.16
2-3	17.72	17.27	15.90	14.11	13.95
3-4	12.61	12.77	12.35	11.28	11.47
4-5	11.78	12.69	12.71	11.47	11.70
5-6	12.39	13.04	13.33	12.79	13.27
6-7	21.70	22.50	22.84	22.32	22.51
7-8	45.42	46.53	46.97	46.37	45.82
8-9	85.24	86.83	87.08	86.83	85.60
9-10	136.03	138.35	138.44	138.73	137.77
10-11	147.91	149.94	149.92	150.16	149.92
11-12	139.10	140.59	140.16	140.20	140.24
12-13	125.66	125.15	122.82	120.95	119.31
13-14	129.41	130.64	129.82	129.57	129.27
14-15	130.35	132.10	131.71	131.97	132.58
15-16	141.72	143.48	143.41	143.68	143.77
16-17	155.83	157.49	157.23	157.15	156.77
17-18	175.45	175.87	173.56	171.32	168.87
18-19	166.11	164.82	160.32	155.87	151.42
19-20	148.78	146.66	141.41	136.20	131.66
20-21	140.06	137.82	131.51	125.06	120.12
21-22	123.32	120.17	111.93	104.41	98.99
22-23	97.84	93.22	84.52	76.19	71.44
23-24	71.27	66.43	58.46	50.97	47.36
Total	**2,310.35**	**2,303.94**	**2,247.02**	**2,189.83**	**2,153.00**
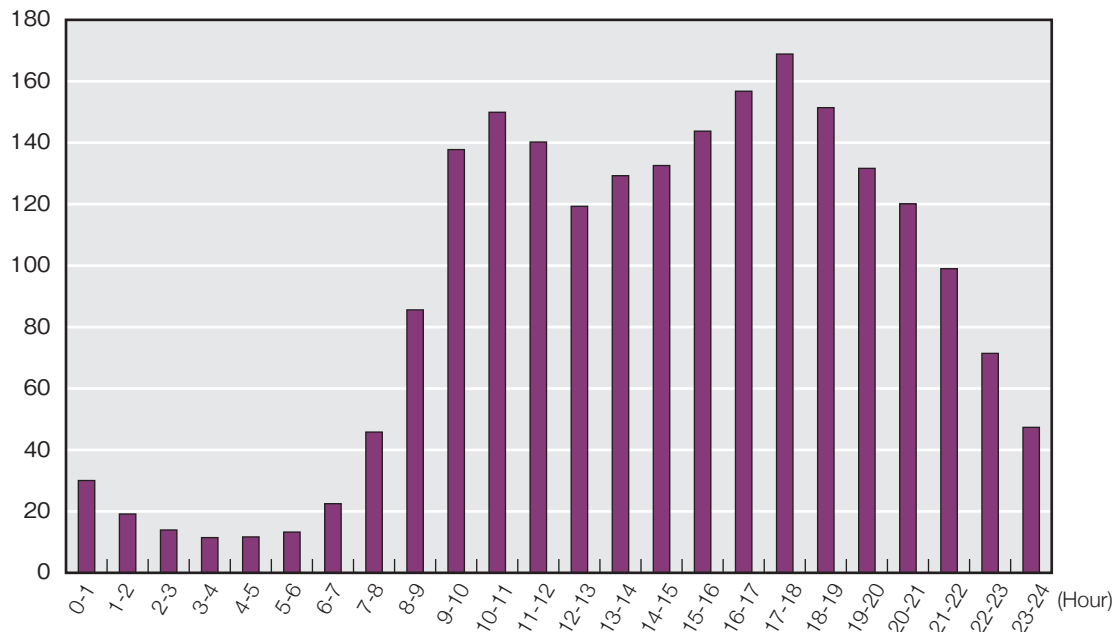
Duration by Time Zone (FY2019)

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-2 Situation of Number of Calls by Duration

2-2-4-2-1 Number of Calls by Duration

(Calls to and from mobile / PHS phones)   (Million calls)

Duration	FY2015	FY2016	FY2017	FY2018	FY2019
up to 1 min	30,396	29,177	27,701	26,235	24,894
1-3 mins	14,771	14,359	13,943	13,472	12,804
over 3 mins	9,437	9,352	9,219	9,020	8,763
Total	**54,605**	**52,889**	**50,864**	**48,728**	**46,460**

Number of Calls by Duration
(Calls to and from mobile / PHS phones)
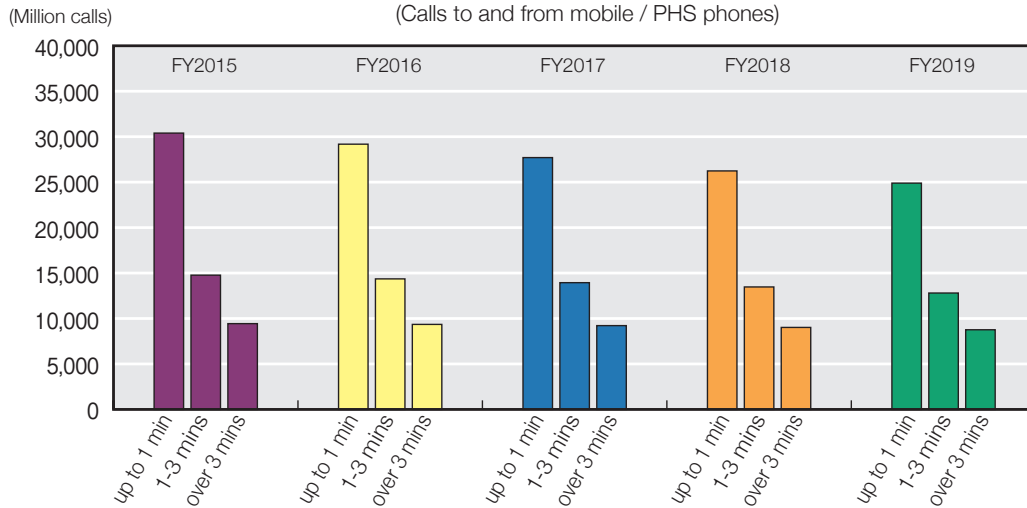
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-2-2 Number of Calls Classified According to 10-second Steps (FY2019)

（Million calls)

Step	Calls to and from mobile/PHS phones
～10 sec.	5,562
～20 sec.	5,103
～30 sec.	4,746
～40 sec.	3,866
～50 sec.	3,089
～60 sec.	2,528
～70 sec.	2,101
～80 sec.	1,782
～90 sec.	1,513
～100sec.	1,305
～110sec.	1,134
～120sec.	991
～130sec.	871
～140sec.	769
～150sec.	684
～160sec.	611
～170sec.	548
～180sec.	495
180sec.～	8,763
Total	**46,460**

Calls to and from mobile / PHS phones
Number of Calls Classified According to 10-second Steps (FY2019)
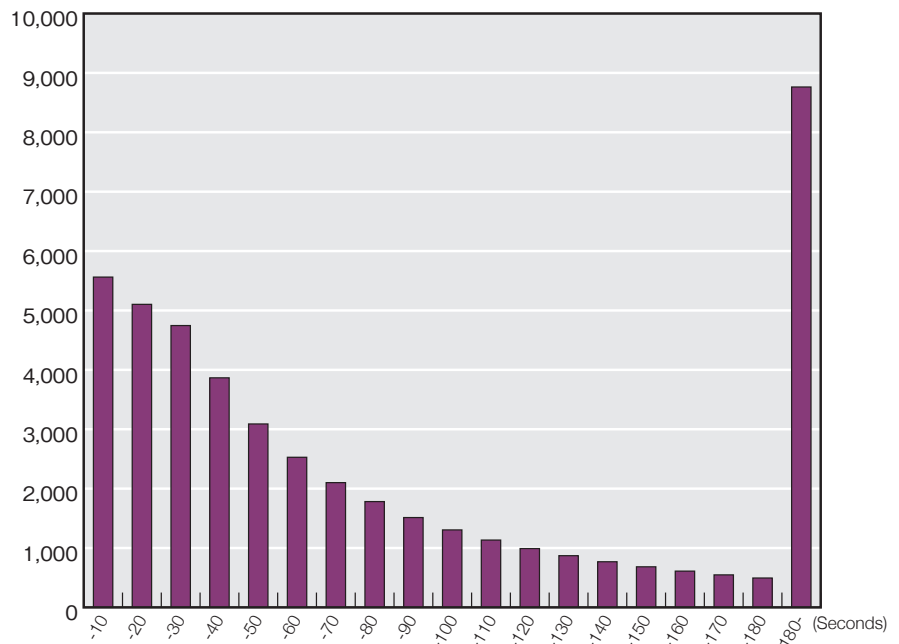
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-3 Situation of Calls by Prefecture

2-2-4-3-1 Ranking of Number of Outgoing and Incoming Calls by Prefecture (FY2019)

(Million calls)

Ranking	Outgoing			Incoming		
	Pref.	No. of Outgoing	Ratio (%)	Pref.	No. of Incoming	Ratio (%)
1	Tokyo	6,360	13.7	Tokyo	6,865	14.8
2	Osaka	3,652	7.9	Osaka	3,724	8.0
3	Kanagawa	2,626	5.7	Kanagawa	2,642	5.7
4	Aichi	2,607	5.6	Aichi	2,613	5.6
5	Fukuoka	2,226	4.8	Fukuoka	2,244	4.8
6	Saitama	2,105	4.5	Saitama	2,048	4.4
7	Chiba	1,951	4.2	Chiba	1,944	4.2
8	Hyogo	1,799	3.9	Hyogo	1,721	3.7
9	Hokkaido	1,700	3.7	Hokkaido	1,682	3.6
10	Shizuoka	1,252	2.7	Shizuoka	1,252	2.7
11	Hiroshima	1,055	2.3	Hiroshima	1,057	2.3
12	Ibaraki	1,037	2.2	Ibaraki	1,015	2.2
13	Kyoto	877	1.9	Kyoto	871	1.9
14	Miyagi	823	1.8	Miyagi	837	1.8
15	Kumamoto	758	1.6	Okinawa	755	1.6
16	Okinawa	756	1.6	Kumamoto	750	1.6
17	Okayama	750	1.6	Okayama	741	1.6
18	Kagoshima	719	1.6	Kagoshima	713	1.5
19	Nagano	700	1.5	Nagano	701	1.5
20	Tochigi	700	1.5	Mie	692	1.5
21	Mie	695	1.5	Tochigi	689	1.5
22	Niigata	685	1.5	Niigata	685	1.5
23	Fukushima	682	1.5	Fukushima	674	1.5
24	Gunma	670	1.4	Gifu	668	1.4
25	Gifu	665	1.4	Gunma	664	1.4
26	Ehime	529	1.1	Ehime	525	1.1
27	Nagasaki	515	1.1	Nagasaki	511	1.1
28	Oita	484	1.0	Oita	483	1.0
29	Yamaguchi	471	1.0	Yamaguchi	467	1.0
30	Shiga	464	1.0	Shiga	459	1.0
31	Miyazaki	448	1.0	Miyazaki	445	1.0
32	Nara	426	0.9	Nara	420	0.9
33	Kagawa	389	0.8	Kagawa	396	0.9
34	Ishikawa	386	0.8	Ishikawa	395	0.9
35	Wakayama	383	0.8	Wakayama	380	0.8
36	Iwate	365	0.8	Iwate	364	0.8
37	Aomori	360	0.8	Aomori	360	0.8
38	Yamagata	354	0.8	Yamagata	354	0.8
39	Saga	345	0.7	Yamanashi	337	0.7
40	Yamanashi	340	0.7	Saga	330	0.7
41	Toyama	319	0.7	Toyama	318	0.7
42	Kochi	301	0.6	Kochi	298	0.6
43	Akita	294	0.6	Akita	295	0.6
44	Tokushima	293	0.6	Tokushima	290	0.6
45	Fukui	284	0.6	Fukui	281	0.6
46	Shimane	230	0.5	Shimane	230	0.5
47	Tottori	198	0.4	Tottori	197	0.4
	Total	**46,381**	**100.0**	**Total**	**46,381**	**100.0**

Note: Compiled from data on calls to and from mobile and PHS phones.
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-3-2 Main Destination Prefectures by Originating Prefecture (FY2019)

Outgoing	Total number of outgoing calls (million)	Incoming									
		1		2		3		4		5	
		Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)
Hokkaido	1,700	Hokkaido	91.5	Tokyo	3.6	Kanagawa	0.5	Osaka	0.5	Saitama	0.4
Aomori	360	Aomori	86.4	Tokyo	3.1	Miyagi	2.2	Iwate	2.1	Hokkaido	0.9
Iwate	365	Iwate	82.8	Miyagi	5.0	Tokyo	3.1	Aomori	2.1	Akita	1.2
Miyagi	823	Miyagi	82.3	Tokyo	3.9	Fukushima	2.6	Iwate	2.0	Yamagata	1.5
Akita	294	Akita	86.2	Tokyo	3.1	Miyagi	2.5	Iwate	1.5	Aomori	1.1
Yamagata	354	Yamagata	85.4	Miyagi	3.8	Tokyo	3.3	Fukushima	1.2	Kanagawa	0.7
Fukushima	682	Fukushima	83.0	Tokyo	4.4	Miyagi	3.9	Ibaraki	1.2	Tochigi	0.9
Ibaraku	1,037	Ibaraki	78.4	Tokyo	6.8	Chiba	4.3	Saitama	2.4	Tochigi	2.3
Tochigi	700	Tochigi	78.4	Tokyo	5.7	Ibaraki	3.5	Saitama	2.9	Gunma	2.8
Gunma	670	Gunma	79.4	Tokyo	5.6	Saitama	5.0	Tochigi	3.0	Kanagawa	1.0
Saitama	2,105	Saitama	69.4	Tokyo	16.7	Chiba	2.4	Kanagawa	2.0	Gunma	1.7
Chiba	1,951	Chiba	75.5	Tokyo	12.2	Saitama	2.6	Ibaraki	2.2	Kanagawa	1.9
Tokyo	6,360	Tokyo	72.9	Kanagawa	5.7	Saitama	4.6	Chiba	3.4	Osaka	1.8
Kanagawa	2,626	Kanagawa	75.1	Tokyo	14.3	Saitama	1.4	Chiba	1.4	Shizuoka	1.0
Niigata	685	Niigata	87.3	Tokyo	4.1	Saitama	1.0	Nagano	0.8	Kanagawa	0.8
Toyama	319	Toyama	83.4	Ishikawa	4.7	Tokyo	3.0	Osaka	1.3	Aichi	1.1
Ishikawa	386	Ishikawa	83.7	Toyama	3.2	Tokyo	2.4	Fukui	2.0	Osaka	1.7
Fukui	284	Fukui	83.3	Ishikawa	3.3	Tokyo	2.6	Osaka	2.2	Aichi	1.3
Yamanashi	340	Yamanashi	82.2	Tokyo	7.2	Kanagawa	2.1	Nagano	1.6	Shizuoka	1.6
Nagano	700	Nagano	85.2	Tokyo	4.3	Aichi	1.7	Saitama	1.0	Kanagawa	0.9
Gifu	665	Gifu	78.5	Aichi	11.9	Tokyo	2.1	Osaka	1.1	Mie	0.9
Shizuoka	1,252	Shizuoka	84.7	Tokyo	3.8	Aichi	3.3	Kanagawa	2.1	Osaka	0.9
Aichi	2,607	Aichi	83.8	Tokyo	3.2	Gifu	3.0	Mie	1.7	Osaka	1.5
Mie	695	Mie	82.0	Aichi	6.9	Osaka	2.0	Tokyo	1.7	Gifu	0.9
Shiga	464	Shiga	75.6	Kyoto	6.1	Osaka	5.9	Tokyo	2.5	Aichi	1.4
Kyoto	877	Kyoto	73.7	Osaka	9.6	Shiga	3.2	Tokyo	3.2	Hyogo	2.3
Osaka	3,652	Osaka	78.4	Tokyo	4.8	Hyogo	4.5	Kyoto	2.1	Nara	1.5
Hyogo	1,799	Hyogo	76.0	Osaka	12.5	Tokyo	3.0	Kyoto	1.2	Okayama	0.7
Nara	426	Nara	72.1	Osaka	13.1	Tokyo	3.6	Kyoto	2.9	Hyogo	1.5
Wakayama	383	Wakayama	82.7	Osaka	8.3	Tokyo	2.4	Nara	1.0	Hyogo	1.0
Tottori	198	Tottori	81.8	Shimane	4.4	Tokyo	2.4	Hiroshima	2.1	Okayama	2.0
Shimane	230	Shimane	82.4	Hiroshima	4.1	Tottori	3.8	Tokyo	2.1	Osaka	1.4
Okayama	750	Okayama	83.2	Hiroshima	3.9	Tokyo	2.7	Osaka	1.9	Hyogo	1.6
Hiroshima	1,055	Hiroshima	83.7	Tokyo	3.1	Okayama	2.4	Yamaguchi	1.9	Osaka	1.6
Yamaguchi	471	Yamaguchi	82.0	Hiroshima	4.6	Fukuoka	4.0	Tokyo	2.6	Osaka	1.1
Tokushima	293	Tokushima	85.1	Kagawa	3.3	Tokyo	2.4	Osaka	1.9	Hyogo	1.4
Kagawa	389	Kagawa	82.2	Tokyo	2.7	Ehime	2.6	Osaka	2.2	Tokushima	2.1
Ehime	529	Ehime	85.4	Tokyo	3.0	Kagawa	2.4	Osaka	1.5	Hiroshima	1.4
Kochi	301	Kochi	87.3	Tokyo	2.5	Kagawa	2.1	Ehime	1.8	Osaka	1.4
Fukuoka	2,226	Fukuoka	83.9	Tokyo	3.0	Saga	2.0	Kumamoto	1.7	Oita	1.4
Saga	345	Saga	72.6	Fukuoka	15.8	Nagasaki	3.2	Tokyo	2.4	Kumamoto	1.1
Nagasaki	515	Nagasaki	85.1	Fukuoka	4.9	Tokyo	2.5	Saga	2.0	Kumamoto	0.8
Kumamoto	758	Kumamoto	84.9	Fukuoka	5.3	Tokyo	2.5	Kagoshima	1.2	Miyazaki	0.8
Oita	484	Oita	84.4	Fukuoka	6.3	Tokyo	2.5	Kumamoto	1.1	Osaka	0.7
Miyazaki	448	Miyazaki	85.3	Kagoshima	3.0	Fukuoka	3.0	Tokyo	2.6	Kumamoto	1.3
Kagoshima	719	Kagoshima	86.7	Fukuoka	2.7	Tokyo	2.6	Miyazaki	2.1	Kumamoto	1.2
Okinawa	756	Okinawa	91.1	Tokyo	3.5	Fukuoka	1.0	Osaka	0.7	Kanagawa	0.4

Note: Compiled from data on calls to and from mobile and PHS phones.
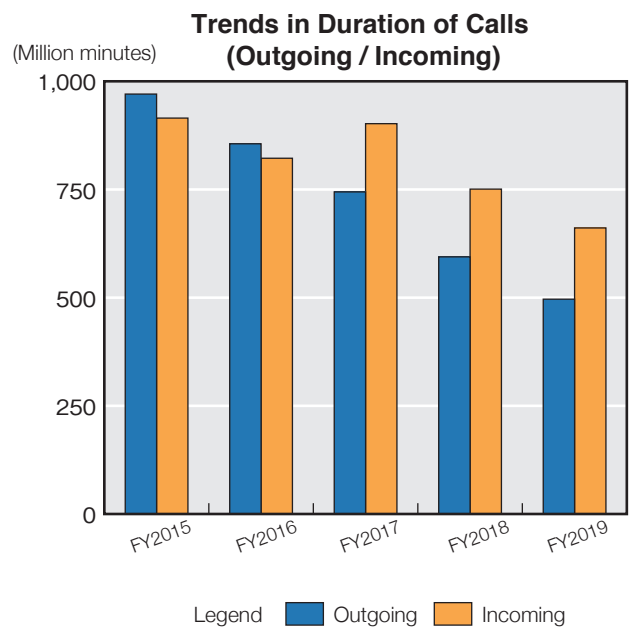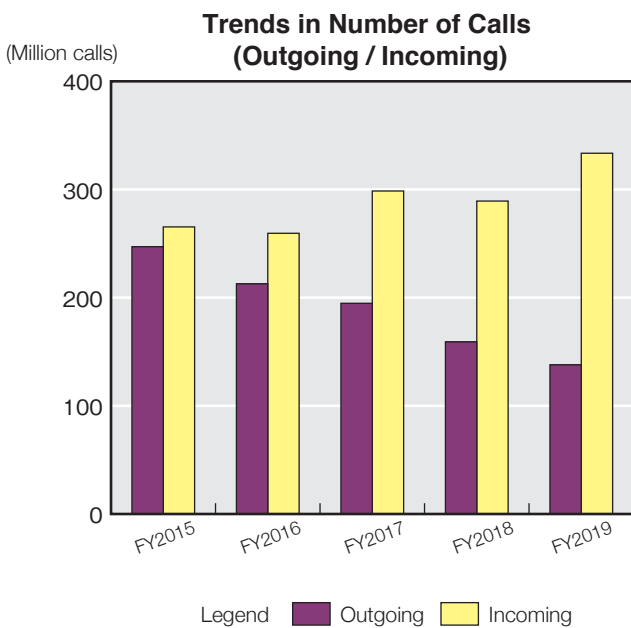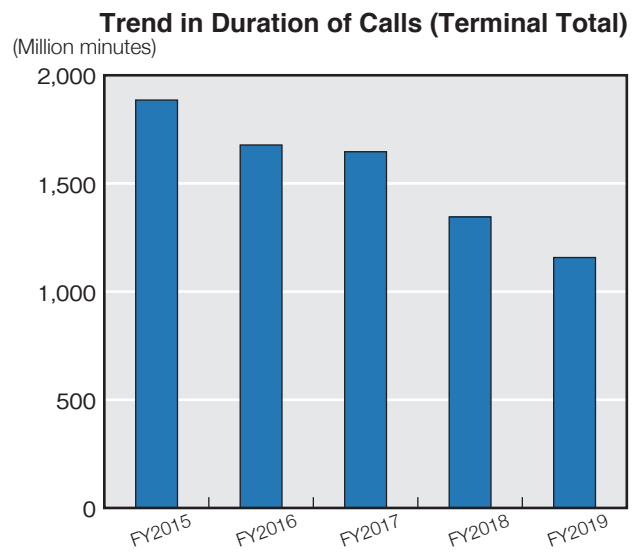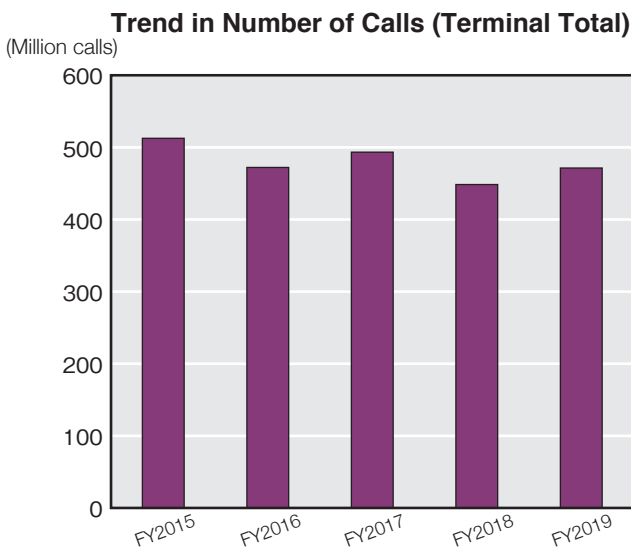*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-4-3-3   Main Originating Prefectures by Destination Prefecture (FY2019)

Incoming	Total number of Incoming calls (million)	Outgoing									
		1		2		3		4		5	
		Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)	Pref.	Ratio (%)
Hokkaido	1,682	Hokkaido	92.4	Tokyo	2.3	Kanagawa	0.5	Saitama	0.4	Osaka	0.4
Aomori	360	Aomori	86.4	Tokyo	2.6	Iwate	2.1	Miyagi	1.9	Hokkaido	0.9
Iwate	364	Iwate	83.1	Miyagi	4.6	Tokyo	2.6	Aomori	2.1	Akita	1.2
Miyagi	837	Miyagi	80.9	Fukushima	3.1	Tokyo	3.1	Iwate	2.2	Yamagata	1.6
Akita	295	Akita	85.8	Tokyo	2.8	Miyagi	2.1	Iwate	1.5	Aomori	1.1
Yamagata	354	Yamagata	85.4	Miyagi	3.5	Tokyo	2.6	Fukushima	1.2	Kanagawa	0.8
Fukushima	674	Fukushima	84.0	Miyagi	3.1	Tokyo	2.9	Ibaraki	1.3	Saitama	1.0
Ibaraki	1,015	Ibaraki	80.1	Tokyo	5.0	Chiba	4.2	Tochigi	2.4	Saitama	2.4
Tochigi	689	Tochigi	79.6	Tokyo	4.2	Ibaraki	3.5	Saitama	3.0	Gunma	3.0
Gunma	664	Gunma	80.1	Saitama	5.4	Tokyo	4.2	Tochigi	3.0	Kanagawa	1.0
Saitama	2,048	Saitama	71.4	Tokyo	14.4	Chiba	2.4	Kanagawa	1.9	Gunma	1.6
Chiba	1,944	Chiba	75.8	Tokyo	11.0	Saitama	2.6	Ibaraki	2.3	Kanagawa	2.0
Tokyo	6,865	Tokyo	67.5	Kanagawa	5.5	Saitama	5.1	Chiba	3.5	Osaka	2.5
Kanagawa	2,642	Kanagawa	74.7	Tokyo	13.7	Saitama	1.6	Chiba	1.4	Shizuoka	1.0
Niigata	685	Niigata	87.2	Tokyo	3.4	Saitama	1.2	Nagano	0.9	Kanagawa	0.8
Toyama	318	Toyama	83.7	Ishikawa	3.9	Tokyo	3.0	Osaka	1.1	Aichi	1.1
Ishikawa	395	Ishikawa	81.9	Toyama	3.8	Tokyo	2.7	Fukui	2.4	Osaka	1.5
Fukui	281	Fukui	84.3	Ishikawa	2.7	Tokyo	2.2	Osaka	1.9	Aichi	1.3
Yamanashi	337	Yamanashi	82.9	Tokyo	6.1	Kanagawa	2.2	Shizuoka	1.6	Nagano	1.6
Nagano	701	Nagano	85.0	Tokyo	4.0	Aichi	1.3	Saitama	1.1	Kanagawa	1.0
Gifu	668	Gifu	78.2	Aichi	11.7	Tokyo	2.2	Mie	1.0	Osaka	1.0
Shizuoka	1,252	Shizuoka	84.7	Tokyo	3.7	Aichi	3.0	Kanagawa	2.2	Osaka	0.8
Aichi	2,613	Aichi	83.6	Gifu	3.0	Tokyo	2.6	Mie	1.8	Shizuoka	1.6
Mie	692	Mie	82.4	Aichi	6.4	Osaka	1.9	Tokyo	1.8	Gifu	0.9
Shiga	459	Shiga	76.4	Kyoto	6.1	Osaka	5.2	Tokyo	2.0	Aichi	1.5
Kyoto	871	Kyoto	74.3	Osaka	8.9	Shiga	3.2	Hyogo	2.4	Tokyo	2.4
Osaka	3,724	Osaka	76.9	Hyogo	6.1	Tokyo	3.0	Kyoto	2.3	Nara	1.5
Hyogo	1,721	Hyogo	79.5	Osaka	9.5	Tokyo	2.1	Kyoto	1.2	Okayama	0.7
Nara	420	Nara	73.1	Osaka	13.1	Kyoto	3.0	Tokyo	1.8	Hyogo	1.6
Wakayama	380	Wakayama	83.3	Osaka	8.0	Tokyo	1.4	Hyogo	1.2	Nara	1.1
Tottori	197	Tottori	81.9	Shimane	4.4	Okayama	2.1	Osaka	2.0	Tokyo	2.0
Shimane	230	Shimane	82.4	Tottori	3.8	Hiroshima	3.4	Tokyo	1.8	Osaka	1.8
Okayama	741	Okayama	84.3	Hiroshima	3.4	Osaka	2.0	Tokyo	1.8	Hyogo	1.6
Hiroshima	1,057	Hiroshima	83.5	Okayama	2.8	Yamaguchi	2.0	Tokyo	1.9	Osaka	1.5
Yamaguchi	467	Yamaguchi	82.8	Hiroshima	4.3	Fukuoka	4.0	Tokyo	1.7	Osaka	1.1
Tokushima	290	Tokushima	86.0	Kagawa	2.8	Osaka	2.0	Tokyo	1.6	Hyogo	1.5
Kagawa	396	Kagawa	80.7	Ehime	3.2	Tokushima	2.4	Tokyo	2.0	Osaka	1.9
Ehime	525	Ehime	86.1	Tokyo	2.3	Kagawa	1.9	Osaka	1.4	Hiroshima	1.3
Kochi	298	Kochi	88.3	Ehime	1.8	Tokyo	1.6	Kagawa	1.4	Osaka	1.3
Fukuoka	2,244	Fukuoka	83.2	Saga	2.4	Tokyo	2.1	Kumamoto	1.8	Oita	1.4
Saga	330	Saga	75.9	Fukuoka	13.2	Nagasaki	3.2	Tokyo	1.5	Kumamoto	1.0
Nagasaki	511	Nagasaki	85.8	Fukuoka	4.5	Saga	2.1	Tokyo	1.6	Kumamoto	0.8
Kumamoto	750	Kumamoto	85.8	Fukuoka	4.9	Tokyo	1.6	Kagoshima	1.2	Miyazaki	0.8
Oita	483	Oita	84.7	Fukuoka	6.4	Tokyo	1.5	Kumamoto	1.1	Miyazaki	0.7
Miyazaki	445	Miyazaki	86.0	Kagoshima	3.3	Fukuoka	2.3	Tokyo	1.7	Kumamoto	1.3
Kagoshima	713	Kagoshima	87.5	Fukuoka	2.2	Miyazaki	1.9	Tokyo	1.8	Kumamoto	1.3
Okinawa	755	Okinawa	91.2	Tokyo	1.9	Fukuoka	0.8	Osaka	0.6	Kanagawa	0.4

Note: Compiled from data on calls to and from mobile and PHS phones.
*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-5 Traffic of International Telephone Services

2-2-5-1 Number and Duration of International Telephone Calls

(Million calls, Million minutes)

Category		FY2015	FY2016	FY2017	FY2018	FY2019
Number of Calls	Outgoing	247.1	212.8	194.8	159.1	137.9
	Incoming	265.4	259.5	298.6	289.3	333.5
	Total	**512.6**	**472.2**	**493.4**	**448.5**	**471.4**
Duration of calls	Outgoing	970.5	855.6	744.4	594.3	496.5
	Incoming	915.0	822.2	902.1	750.9	661.1
	Total	**1,885.5**	**1,677.8**	**1,646.5**	**1,345.2**	**1,157.6**

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

Trend in Number of Calls (Terminal Total)
(Million calls)

Trend in Duration of Calls (Terminal Total)
(Million minutes)

Trends in Number of Calls (Outgoing / Incoming)
(Million calls)

Legend ◼ Outgoing ◻ Incoming

Trends in Duration of Calls (Outgoing / Incoming)
(Million minutes)

Legend ◼ Outgoing ◼ Incoming

2-2-5-2 Duration of International Calls by Main Country

2-2-5-2-1   Trends in Share of Outgoing Call Duration by Country

Ranking	FY2015		FY2016		FY2017		FY2018		FY2019	
1	China	22.32%	China	22.58%	China	20.93%	U.S.A. (mainland)	19.33%	U.S.A. (mainland)	19.83%
2	U.S.A. (mainland)	12.54%	U.S.A. (mainland)	14.52%	U.S.A. (mainland)	17.79%	China	17.75%	Hong Kong	19.19%
3	Philippines	11.88%	Philippines	12.31%	Hong Kong	10.80%	Hong Kong	15.84%	China	16.46%
4	Korea	6.02%	Korea	6.99%	Philippines	8.46%	Philippines	6.36%	Korea	5.16%
5	Thailand	4.52%	Hong Kong	4.53%	Korea	6.01%	Korea	6.06%	Thailand	3.49%
6	Hong Kong	4.09%	Thailand	4.06%	Thailand	3.63%	Thailand	3.74%	Philippines	3.34%
7	Taiwan	3.92%	Taiwan	3.45%	Taiwan	3.11%	Taiwan	3.19%	Taiwan	3.02%
8	Indonesia	2.55%	Singapore	2.50%	Singapore	2.83%	Singapore	2.80%	Singapore	2.85%
9	Brazil	2.39%	Macau	2.19%	India	2.34%	India	2.49%	India	2.69%
10	Nepal	2.38%	India	2.15%	Vietnam	1.76%	Germany	1.80%	U.K.	2.01%

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-5-2-2   Trends in Share of Incoming Call Duration by Country

Ranking	FY2015		FY2016		FY2017		FY2018		FY2019	
1	U.S.A. (mainland)	15.14%	Korea	16.66%	U.S.A. (mainland)	18.75%	China	22.43%	China	25.12%
2	China	12.72%	U.S.A. (mainland)	15.06%	China	18.50%	U.S.A. (mainland)	20.30%	U.S.A. (mainland)	20.12%
3	Korea	11.99%	China	13.28%	Korea	12.60%	Korea	18.48%	Korea	18.92%
4	Luxembourg	9.15%	Hong Kong	6.03%	Hong Kong	8.82%	Hong Kong	12.73%	Hong Kong	14.03%
5	Hong Kong	6.10%	Taiwan	5.09%	Taiwan	4.26%	Canada	2.33%	Canada	3.16%
6	Taiwan	5.66%	Luxembourg	4.57%	Luxembourg	3.29%	Singapore	2.14%	Singapore	2.45%
7	U.K.	4.56%	Singapore	3.71%	Germany	2.87%	Luxembourg	1.75%	Taiwan	1.23%
8	Thailand	3.62%	Indonesia	3.20%	Thailand	2.83%	France	1.73%	Australia	1.20%
9	Singapore	3.45%	Thailand	3.20%	France	2.70%	Taiwan	1.70%	Germany	1.15%
10	France	3.01%	U.K.	3.15%	Singapore	2.69%	Germany	1.66%	Macau	1.08%

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-2-5-2-3 Outgoing and Incoming Call Duration by Country (FY2019)

Country (descending order according to outgoing duration)	Ranking in outgoing 2019	Ranking in outgoing 2018	Volume of outgoing (Million minutes)	Increase or decrease ratio over previous year (%)	Share (%)	Accumulated share (%)	Ranking in incoming 2019	Ranking in incoming 2018	Volume of outgoing (Million minutes)	Increase or decrease ratio over previous year (%)	Share (%)	Accumulated share (%)
	Outgoing from Japan						**Incoming to Japan**					
U.S.A. (mainland)	1	(1)	98.5	▲14.29%	19.83%	19.83%	2	(2)	133.0	▲12.73%	20.12%	20.12%
Hong Kong	2	(3)	95.3	1.22%	19.19%	39.02%	4	(4)	92.7	▲3.00%	14.03%	34.15%
China	3	(2)	81.7	▲22.52%	16.46%	55.47%	1	(1)	166.0	▲1.40%	25.12%	59.27%
Korea	4	(5)	25.6	▲28.82%	5.16%	60.64%	3	(3)	125.1	▲9.84%	18.92%	78.19%
Thailand	5	(6)	17.3	▲22.01%	3.49%	64.13%	12	(12)	6.9	▲37.12%	1.05%	79.24%
Philippines	6	(4)	16.6	▲56.10%	3.34%	67.47%	23	(18)	2.4	▲57.63%	0.36%	79.60%
Taiwan	7	(7)	15.0	▲20.92%	3.02%	70.49%	7	(9)	8.1	▲36.48%	1.23%	80.83%
Singapore	8	(8)	14.1	▲15.02%	2.85%	73.34%	6	(6)	16.2	0.71%	2.45%	83.28%
India	9	(9)	13.3	▲10.03%	2.69%	76.02%	20	(22)	3.5	▲7.29%	0.52%	83.81%
U.K	10	(11)	10.0	▲3.72%	2.01%	78.03%	16	(19)	4.5	▲0.59%	0.68%	84.49%
Germany	11	(10)	9.8	▲8.18%	1.98%	80.01%	9	(10)	7.6	▲39.36%	1.15%	85.63%
Bangladesh	12	(24)	8.0	296.95%	1.61%	81.61%	48	(51)	0.2	▲2.54%	0.03%	85.66%
Australia	13	(15)	8.0	2.47%	1.60%	83.22%	8	(15)	8.0	▲4.14%	1.20%	86.86%
France	14	(14)	7.8	▲7.97%	1.56%	84.78%	13	(8)	5.9	▲54.64%	0.89%	87.76%
Macau	15	(12)	7.3	▲27.22%	1.47%	86.25%	10	(13)	7.1	▲27.03%	1.08%	88.83%
Vietnam	16	(13)	6.9	▲22.56%	1.39%	87.63%	17	(16)	4.4	▲42.03%	0.67%	89.50%
Indonesia	17	(16)	6.2	▲19.11%	1.25%	88.89%	15	(14)	4.9	▲47.42%	0.74%	90.25%
Malaysia	18	(18)	4.6	▲19.95%	0.92%	89.81%	11	(11)	7.0	▲36.58%	1.06%	91.31%
Hawaii (U.S.A.)	19	(20)	4.1	▲2.74%	0.82%	90.63%	24	(25)	1.6	▲9.23%	0.24%	91.55%
Canada	20	(19)	3.7	▲29.47%	0.74%	91.36%	5	(5)	20.9	19.20%	3.16%	94.71%
Italy	21	(21)	3.0	▲7.16%	0.60%	91.96%	29	(28)	0.8	▲42.09%	0.12%	94.83%
Brazil	22	(17)	2.5	▲58.40%	0.51%	92.47%	30	(29)	0.8	▲37.27%	0.12%	94.95%
Iceland	23	(134)	1.9	5833.10%	0.39%	92.86%	14	(78)	5.1	8020.11%	0.77%	95.72%
Nepal	24	(22)	1.8	▲32.42%	0.36%	93.22%	80	(74)	0.1	▲19.50%	0.01%	95.73%
Netherlands	25	(25)	1.8	▲7.97%	0.35%	93.58%	38	(26)	0.4	▲75.37%	0.06%	95.80%
New Zealand	26	(30)	1.7	12.47%	0.34%	93.92%	22	(24)	2.4	26.88%	0.37%	96.16%
UAE	27	(26)	1.6	▲12.31%	0.32%	94.24%	18	(20)	3.8	▲6.30%	0.57%	96.73%
Sri Lanka	28	(23)	1.5	▲42.67%	0.30%	94.54%	26	(27)	1.2	▲16.77%	0.18%	96.91%
Belgium	29	(33)	1.4	7.54%	0.28%	94.82%	19	(23)	3.6	21.37%	0.54%	97.45%
Switzerland	30	(28)	1.4	▲12.72%	0.28%	95.10%	28	(34)	1.0	47.33%	0.14%	97.60%
Total of other countries	—	—	24.3		4.90%	100.00%	—	—	15.9		2.40%	100.00%
Total of all countries	—	—	**496.5**		—	—	—	—	**661.1**		—	—

*Compiled by TCA based on data publicized by the Ministry of Internal Affairs and Communications

2-3 Movements of Services and Charges

2-3-1 Fixed Telephone

2-3-1-1 Progress of Rates

2-3-1-1-1 Progress of Telephone Rates of NTT

1985	A three-minute call to the longest distance zone covering over 320km cost ¥400.
July 1986	First reduction of rates after NTT privatization was implemented. The Saturday discount was introduced, which applied, as was the case with holidays and nighttime, 40% discount from the normal rates for weekdays.
February 1988	NTT reduced the longest distance rate for weekday daytime calls to a level of ¥360 for 3 minutes.
February 1989	NTT reduced the longest distance rate for weekday daytime calls to a level of ¥330 for 3 minutes. It also cut rates for calls to the adjacent distance zone and areas within a radius of 20km from a level of ¥30 to ¥20 for 3 minutes (First reduction for short-distance calls since 1972).
March 1990	NTT reduced the longest distance rate for weekday daytime calls to a level of ¥280 for 3 minutes. It also introduced late-night discounts for local, short- and middle-distance calls.
March 1991	Distance segments covering over 160km were consolidated into a single longest distance zone, and the longest distance rate for weekday daytime calls was reduced to a level of ¥240 for 3 minutes. NTT also reduced rates for weekday daytime calls to areas within 20-30km radiuses to a level of ¥40 for 3 minutes. Late-night discount time period was extended by two hours to cover from 11 p.m. to 8 a.m. in the next morning.
June 1992	NTT reduced the longest distance rate for weekday daytime calls to a level of ¥200 for 3 minutes.
October 1993	NTT streamlined the distance segments covering 30-100km to two from four steps, and reduced rates for portions exceeding 30km by ¥10-60. The longest distance rate for weekday daytime calls was reduced to a level of ¥180 for 3 minutes.
March 1996	The rate for longest distance calls was lowered to ¥140 per 3 minutes in the daytime on weekdays.
February 1997	The rate for long-distance calls over 100 km was lowered to ¥110 per 3 minutes in the daytime on weekdays.
February 1998	Distances of over 100km were incorporated into the longest distance rate zone, and the longest distance rate for weekday daytime calls was reduced to a level of ¥90 for 3 minutes.
July 1999	With the reorganization of NTT, NTT East and NTT West took charge of intra-prefecture calls, and NTT Communications took inter-prefectures calls.
October 2000	NTT East and West lowered the toll call rate over 20 km in distance. The rate per 3 minutes in the daytime on weekdays was lowered to ¥30 for 20 to 60 km, and to ¥40 for over 60 km.
January 2001	NTT East reduced the local call rates to ¥9 per 3 minutes.
May 2001	NTT East and West lowered the local call rate to ¥8.5 per 3 minutes both in the daytime and at night.

2-3-1-1-2 Progress of Rates of Long-Distance and International NCCs

September 1987	Three new long-distance carriers stated services. DDI CORPORATION, JAPAN TELECOM CO., LTD. and Teleway Japan Corporation started services. They offer charges about 25% below those of NTT. A 3-minute weekday daytime call to the longest distance zone of 340km cost ¥300 (in the case of NTT-established local portion charge being ¥20).
February 1988	These NCCs reduced evening and late-night rates, and introduced evening discounts into short-distance rates.
February 1989	Rates applicable to all the distance zones were reduced, bringing the longest distance rate for weekday daytime calls down to a level of ¥280 for 3 minutes.
March 1990	The longest distance rate for weekday daytime calls was reduced to a level of ¥240 for 3 minutes. Rates for calls to all the distance zones for evening, Saturdays, Sundays and holidays were reduced.
March 1991	Distance zones covering over 170km were consolidated into the longest distance zone, and the longest distance rate for weekday daytime calls was reduced to a level of ¥200 for 3 minutes. Evening, Saturday, Sunday, and holiday rates were also reduced.
April 1992	The longest distance rate for weekday daytime calls was reduced to a level of ¥180 for 3 minutes.
November 1993	In response to the introduction of the end-to-end charging (that was established by NCCs on an end-to-end basis for the entirety from the calling party through the called party including the local portion) in place of the add-on charging so far applied (total of the charge for trunk portion established by NCCs, and the charge for local portion established by NTT), an overall reduction of rates was implemented. As a result, the longest distance rate for weekday daytime calls was reduced to a level of ¥170 for 3 minutes. The late-night discount time zone (from 11 p.m. to 8 a.m. in the next morning) was established, and the distance zones covering from 60km up to 100km were combined from two to one.
April 1994	The charge for the end portion provided by NTT was changed from the user charge to the cost-based inter-carriers settlement charge (access charge).
March 1996	In response to the reduction of the inter-carrier settlement charges paid by NCCs to NTT relating to the local portion provided by NTT (so-called "access charge"), the longest distance (over 170km) rate for weekday daytime calls was reduced to a level of ¥130 for 3 minutes from ¥170. In addition, the distance zone for short-distance calls, which had been set up in terms of "up to 60km" was divided into two zones, "up to 30km" and "over 30km up to 60km", and the rate-cut was made for "up to 30km" weekday daytime calls, and "up to 30km" and "over 30km up to 60km" late-night and early morning calls.
February 1997	The longest distance rate for weekday daytime calls was reduced to a level of ¥100 for 3 minutes.
February 1998	The longest distance rate for weekday daytime calls was reduced to a level of ¥90 for 3 minutes (The reduction brought NCCs' rates to the same level as NTT's). The distance zones for the adjacent zone and the inside radius of 20km were established.
July 1998	KDD made a full-scaled inroad into domestic telephone markets, setting the longest distance rate for weekday daytime calls at a level of ¥69 for 3 minutes.
April 2000	Daytime and evening rates, etc to 20 - 30km and 30 - 60km distance zones were reduced NTT Communications reduced daytime and evening rates for calls to 30 - 60km and 60 - 100km distance zones, and evening and midnight rates for 60 - 100km and over 100km distance zones.
October 2000	KDD, DDI and IDO merged into KDDI. New Intra-prefecture rates were established at a level of ¥40 for 3-minute weekday daytime call to the 60km or longer distance zone.

December 2000	C&W IDC fully entered the local domestic telephone market, and started the service setting, at a level of ¥45, its remotest distance rate applicable to 3-minute calls of 100km or longer distances for all day.
March 2001	The rate to the remotest distance zone was reduced to a level of ¥80 for 3-minute weekday daytime call, and the rate applicable to the 60-100km distance zone to a level of ¥60 for 3-minute weekday daytime call. NTT Communications reduced rates applicable to the 20 - 30km distance zone for all day, the 30 - 60km distance zone during evening and midnight, the 60 - 100km distance zone during midnight, and the more than 100km distance zone during daytime and midnight.
April 2001	Fusion Communications started IP telephone service, establishing its rate at ¥20 for 3-minute irrespective of distance throughout Japan.
May 2001	NTT Communications entered the local call market in Tokyo, Aichi, and Osaka. The rate is ¥8.5 per 3 minutes. KDDI and Japan Telecom entered the local call market. Their local call rate is ¥8.5 for 3-minute weekday daytime call.
December 2004	Japan Telecom started "OTOKU Line" fixed telephone service.
February 2005	KDDI started "Metal Plus" telephone service.
June 2006	Japan Telecom Co. Ltd. took over telecommunications business from Heisei Denden Corp. and Heisei Denden Communications Corp.
October 2006	Japan Telecom Co. Ltd. changed its company name to SoftBank Telecom Corp.
April 2015	SoftBank Mobile Corp., SoftBank BB Corp., SoftBank Telecom Corp., and Ymobile Corporation merged together to form SoftBank Mobile Corp.
July 2015	SoftBank Mobile Corp. changed its company name to SoftBank Corp.
December 2015	Fusion Communications Corp. changed its company name to Rakuten Communications Corp.
June 2016	KDDI terminated its "Metal Plus" telephone service.
July 2019	Rakuten Communications Corp. transferred its domestic telephone service (MYLINE) and the Rakuten Denwa phone service to Rakuten Mobile, Inc. through a company split.

(Reference) Carriers Participating in MYLINE

(As of October 2021)

Call Catogory / Carrier	ID number of telephone company	Local	Intra-pref long-distance	Outside of Prefecture	International	Registration available in
NTT East CORPORATION	0036	○	○			Eastern Japan
NTT West CORPORATION	0039	○	○			Western Japan
NTT Communications Corporation	0033	○	○	○	○	Nationwide
KDDI CORPORATION	0077 001 (International call)	○	○	○	○	Nationwide
SoftBank Corp.	0088 0061 (International call)	○	○	○	○	Nationwide
Rakuten Mobile, Inc.	0038	○	○	○	○	Nationwide
ARTERIA Networks Corporation	0060	○	○	○	○	Tokyo and 17 prefectures

*MY LINE Website : http://www.myline.org/index_e.html

2-3-1-1-3 Progress of Rates of Regional and Cable TV Operators

May 1988	Tokyo Telecommunication Network Company Inc. (called TTNet hereafter, later reformed to the present Poweredcom), a regional common carrier, started direct subscriber telephone service.
June 1997	Cable TV operator, TITUS COMMUNICATIONS CORPORATION, started subscriber telephone services. For call billing the Hudson charging method in units of 20 seconds was introduced.

July 1997	Suginami Cable TV Co., Ltd. (currently J-COM Tokyo) started subscriber telephone services.
January 1998	TTNet started relay telephone services with the rate of ¥9 for 3 minutes intra-zone calls, and the longest distance rate set at ¥72 for 3 minutes on weekday daytime calls.
March 1998	TTNet reduced the longest distance rate for weekday daytime calls to a level of ¥63 for 3 minutes.
April 1999	Kyushu Telecommunication Network Co., LTD. (hereafter, QTNet) started relay telephone services with the rate of ¥9 for intra-zone calls for 3 minutes on weekdays during the daytime, and ¥70 for the longest distance.
May 2000	TTNet reduced the rate for 3-minute weekday daytime call to 60 - 100km distance zone from ¥54 to ¥45.
November 2000	QTNet established new intra-prefecture rate, setting weekday daytime rate for call to a 60km or longer distance zone at a level of ¥27 for 3-minute.
May 2001	TTNet reduced the charges for calls to all the distance zones. The charge applicable to the remotest distance zone was reduced to a level of ¥54 for 3-minute daytime call, ¥36 for 3-minute daytime call to a 60 -100km distance zone, and ¥8.4 for local calls, respectively. QTNet reduced the rate for intra-zone calls to ¥8.4 for three minutes during the day on weekdays.
April 2003	POWEREDCOM merged with TTNet, and the new company was named POWEREDCOM, Inc.
July 2004	The telephone business of POWEREDCOM is merged with FUSION COMMUNICATIONS CORP.
June 2018	QTnet (formerly Kyushu Telecommunication Network) terminated its relay telephone services.
April 2019	K-Opticom Corporation changed its company name to OPTAGE Inc.

2-3-1-1-4   Progress of ISDN Service Provision

April 1988	NTT inaugurated ISDN service.
October 1995	Osaka Media Port and Shikoku Information and Telecommunication Network inaugurated ISDN service.
February 1996	NTT started "INS Telehodai", a fixed rate service to selected telephone numbers in the midnight to early morning time zone.
March 1996	HOKKAIDO TELECOMMUNICATION NETWORK and Tohoku Intelligent Telecommunication inaugurated ISDN service.
April 1996	Chubu Telecommunications inaugurated ISDN service.
April 1997	TTNet and QTNet inaugurated ISDN service.
July 1997	NTT inaugurated ISDN service free of the facilities installation charge, "INS Net 64 Lite".
October 1997	Chugoku Telecommunication Network inaugurated ISDN service.
December 1997	Osaka Media Port started interconnection with NTT.
July 2000	NTT East and NTT West inaugurated fixed rate IP connection service, "FLET'S ISDN".
July 2003	Chugoku Telecommunication Network merged with Chugoku Information System Service and reorganized as Energia Communications.
April 2010	Tohoku Intelligent Telecommunication terminated ISDN service.
March 2011	Energia Communications terminated ISDN service.
December 2013	QTNet terminated its ISDN service.

• Change in NTT's Call Rates (weekday daytime for 3 minutes)

Time of Revision	Number of Distance Zone	Within Zone	Adjacent Zone up to 20km	-30km	-40km	-60km	-80km	-100km	-120km	-160km	-240km	-320km	-500km	-750km	Over 750km
Before Aug. 1983	14	10	30	50	60	90	120	140	180	230	280	360	450	600	720
Aug. 1983	14	10	30	50	60	90	120	140	180	230	280	360	450	520	600
Jul. 1985	12	10	30	50	60	90	120	140	180	230	280	360	400		
Jul. 1986	10	10	30	50	60	90	120	140	180		260		400		
Feb. 1988	10	10	30	50	60	90	120	140	180		260		360		
Feb. 1989	10	10	30	50	60	90	120	140	180		260		330		
Mar. 1990	10	10	30	50	60	90	120	140	180		260		280		
Mar. 1991	9	10	30	40	60	90	120	140	180		240				
Jun. 1992	9	10	30	40	60	90	120	140	180		200				
Oct. 1993	7	10	30	40	50		80		140		180				
Mar. 1996	6	10	30	40	50		80		140						
Feb. 1997	6	10	30	40	50		80		110						
Feb. 1998	6	10	30	40	50		80		90						
(inter-Pref.) NTT Com — Apr. 2000	—	—	20	40			70		90						
(inter-Pref.) NTT Com — Mar. 2001	—	—	20	40			60		80						
(intra-Pref.) NTT East & West — Oct. 2000	—	10	20	30			40								
(intra-Pref.) NTT East & West — Jan. 2001	—	9 *	20	30			40								
May. 2001	—	8.5	20	30			40								

Shadowed columns are revised.   *In January 2001 only NTT East reduced the local call rates.

[Discout System by Day of the Week and Time Zone]

Nov. 1980	• Expansion of evening discount system
	• Establishment of midnight discount system
	  ⌈• 60% discount for calls to more-than-320km zones⌉
	  ⌊• 9p.m.- 6a.m.⌋

Aug. 1981	• Establishment of Sunday/Holiday discount system ⌈• 40% discount for Sunday/Holiday daytime calls to more-than-60km zones⌉
Jul. 1986	• Establishment of Saturday discount system ⌈• 40% discount for Saturday daytime calls to more-than-60km zones⌉

Mar. 1990	• Expansion of midnight discount system
	  ⌈• 25% discount for intra-zone and short-distance calls⌉
	  │• 45% discount for medium- and long-distance calls│
	  ⌊• 11p.m. - 6a.m.⌋

Mar. 1991	• Expansion of midnight discount system ⌈• 11p.m. - 8a.m.⌉
Oct.1993	• Expansion of midnight discount rate ⌈• 50 - 55% discount for medium- and long-distance calls⌉
Oct. 2000	• Expansion of midnight discount system ⌈• 20% discount for calls to 20 - 60km section⌉

2-3-2 Mobile Phone and PHS Services

2-3-2-1 Progress of Service Provision and Movements of Carriers — Mobile Phones

December 1979	NTT Public Corp. inaugurated automobile telephone service in 23 Tokyo Metropolitan wards.
April 1987	NTT inaugurated cellular telephone service.
December 1988	Nippon Idou Tsushin Corp. (IDO) inaugurated mobile services based on the NTT large-capacity system.
July 1989	KANSAI CELLULAR TELEPHONE COMPANY inaugurated mobile services based on the TACS system.
July 1992	NTT split up its mobile communications business division, establishing NTT Mobile Communications Network, Inc. (NTT DOCOMO).
March 1993	NTT DOCOMO inaugurated mobile services based on the 800MHz band PDC system.
July 1993	NTT DOCOMO was regionally divided into 9 regional companies under the one-region-one-company system.
October 1993	NTT DOCOMO abolished the deposit money (¥100,000) system.
April 1994	The mobile terminal COAM (Customer Owned and Maintained) system was introduced. Tokyo Digital Phone Co., Ltd. and TU-KA Phone Kansai Co., Ltd. inaugurated mobile services based on the 1.5GHz band PDC system. NTT DOCOMO inaugurated mobile services based on the 1.5GHz band PDC system in Tokyo Metropolitan 23 wards.
June 1994	IDO inaugurated mobile services based on the TACS system.
January 1996	Digital TU-KA Kyushu Co., Ltd. inaugurated mobile services based on the 1.5GHz band PDC system.
December 1996	The prior notification system of mobile communications rate was started. The new subscription fee was abolished.
March 1997	NTT DOCOMO inaugurated packet communications service, "DoPa."
July 1998	DDI Cellular Group started "cdmaOne" service in Kansai, Kyushu and Okinawa.
October 1998	TU-KA Phone Kansai Co., Ltd. inaugurated prepaid cellular telephone service.
January 1999	The 11-digit numbering system was introduced to the mobile telephone service.
February 1999	NTT DOCOMO inaugurated Internet connection service, "i-mode."
March 1999	NTT DOCOMO and IDO terminated mobile services based on the NTT large-capacity system.
April 1999	DDI Cellular Group and IDO extended service areas of "cdmaOne" to cover the whole nation, and inaugurated Internet connection service, "EZweb/EZaccess."
December 1999	J-Phone Group inaugurated Internet connection service, "J-Sky."
January 2000	DDI Cellular Group and IDO inaugurated packet communications service, "PacketOne."
April 2000	DDI Cellular Group and IDO started international roaming service "GLOBAL PASSPORT".
September 2000	DDI Cellular Group and IDO terminated mobile services based on the TACS system.
October 2000	DDI, KDD and IDO merged as DDI CORPORATION (KDDI). Nine J-Phone Group companies are merged for reorganization into J-Phone East Co., Ltd., J-Phone Central Co., Ltd. and J-Phone West Co., Ltd.
November 2000	Seven companies excluding OKINAWA CELLULAR TELEPHONE of DDI Cellular Group merged as au Corp.
October 2001	KDDI merged with au.
October 2001	NTT DOCOMO started full-scale services for IMT-2000 based on the W-CDMA system.

November 2001	J-Phone Co. Ltd. as the holding company merged with J-Phone East Co., Ltd., J-Phone Central Co., Ltd. and J-Phone West Co., Ltd., and the new company was named J-Phone Co., Ltd.
November 2001	KDDI and Okinawa Cellular Telephone Company launched the cellular telephone with GPS navigation function for the first time in the Japanese market.
April 2002	KDDI and Okinawa Cellular Telephone Company started CDMA2000 1x service.
December 2002	J-Phone Co., Ltd. started 3G service using 3GPP-based W-CDMA system, and international roaming with GSM-based networks.
June 2003	NTT DOCOMO started international roaming with GSM-based networks.
October 2003	J-Phone Co., Ltd. was renamed as Vodaphone K.K.
October 2003	Vodafone inaugurated "Vodafone live!" as the 3G Internet connection service, which is also available at overseas locations.
November 2003	KDDI and Okinawa Cellular Telephone Company launched CDMA 1X WIN service.
January 2004	NTT DOCOMO inaugurated "i mode Disaster Message Board Service".
May 2004	KDDI and Okinawa Cellular Telephone launched CDMA-based international data roaming services.
July 2004	NTT DOCOMO started to provide "i-mode FeliCa" service.
October 2004	Vodafone Holdings K.K. and Vodafone K.K. were merged into new Vodafone K.K.
December 2004	Vodafone launched international video telephone roaming services.
December 2004	NTT DOCOMO launched W-CDMA type 3G mobile network services based on 3GPP, packet roaming services with GSM (GPRS) networks to make overseas i-mode connection possible, and international video telephone roaming services.
September 2005	KDDI and Okinawa Cellular Telephone Company started to provide "EZ FeliCa" service.
September 2005	KDDI and Okinawa Cellular Telephone Company started au IC card service and international roaming with GSM-based networks.
September 2005	Vodaphone started 3G data card international roaming service.
September 2005	NTT DOCOMO started to provide the "i-channel" service based on "Flash Cast".
October 2005	KDDI merged with three Tu-Ka companies.
October 2005	Vodaphone launched "Vodaphone live! NAVI", a new navigation service allowing use of network-assisted GPS function not only in Japan but also abroad.
November 2005	Vodaphone started to provide "Vodaphone live! NAVI".
November 2005	NTT DOCOMO started to provide "Push-talk" voice communication service making use of the packet network.
November 2005	KDDI and Okinawa Cellular Telephone Company started "Hello Messenger" service.
November 2005	EMOBILE Ltd. received a radio frequency license for the 1.7GHz frequency band from the Ministry of Internal Affairs and Communications and entered into mobile phone business based on the W-CDMA system.
December 2005	KDDI and Okinawa Cellular Telephone Company launched the terminal compatible with "One-Seg" ground digital telecasting service for mobile and cellular telephones.
December 2005	NTT DOCOMO started to provide a new mobile credit brand "iD".
January 2006	KDDI and Okinawa Cellular Telephone started to provide "au LISTEN MOBILE SERVICE (LISMO)".
March 2006	NTT DOCOMO launched mobile telephone terminals conforming to the one segment terrestrial digital TV service.
April 2006	NTT DOCOMO started to provide "DCMX" credit service.
April 2006	Vodafone joined the SoftBank group.
May 2006	Vodafone released a cellular phone terminal conforming to the one-segment terrestrial

	digital TV service.
August 2006	NTT DOCOMO launched "HSDPA" conforming to high-speed packet communications.
	NTT DOCOMO started to provide the "music channel" service.
September 2006	KDDI and Okinawa Cellular started "EZ Channel Plus" and "EZ News Flash" utilizing the "BCMCS".
October 2006	Vodafone changed its company name to SoftBank Mobile Corp. SoftBank Mobile started a new portal site "Yahoo! Keitai". SoftBank Mobile launched "3G high speed".
October 2006	Three cellular phone companies started a mobile number portability system.
December 2006	KDDI and Okinawa Cellular Telephone started "EV-DO Rev.A" service.
March 2007	EMOBILE started the "EM mobile broadband" HSDPA data communication service.
May 2007	NTT DOCOMO started to provide the "2in1" service, where a single mobile phone unit has the functions of two mobile phone units.
December 2007	NTT DOCOMO started to provide the "Area Mail" service.
March 2008	KDDI terminated its Tu-Ka service. KDDI and Okinawa Cellular Telephone Company started GSM-based international data-roaming service.
March 2008	EMOBILE started voice communication service based on W-CDMA, and the "EMnet" internet connection service for cellular phone terminals.
June 2008	NTT DOCOMO started to provide the "Home U" service, which allows the use of mobile phones in a broadband environment such as in the home.
July 2008	SoftBank Mobile started to provide the "Double Number" service, which allows a single mobile phone unit to manage two phone numbers and e-mail addresses.
November 2008	EMOBILE started a High-Speed Uplink Packet Access (HSUPA) data communication service.
March 2009	SoftBank Mobile started a high-speed mobile data communication service for PCs.
July 2009	EMOBILE started a High-Speed Packet Access Plus (HSPA+) data communication service.
June 2010	KDDI inaugurated ISP for smartphones "IS NET".
September 2010	NTT DOCOMO inaugurated ISP for smartphones "sp mode".
December 2010	NTT DOCOMO inaugurated LTE high-speed data communication service with maximum 75Mbps download traffic speed "Xi (crossy) service".
December 2010	EMOBILE inaugurated high-speed packet communication service with maximum 42Mbps download traffic speed "EMOBILE G4".
February 2011	SoftBank Mobile inaugurated high-speed packet communication service with maximum 42Mbps download traffic speed "ULTRA SPEED".
March 2011	NTT DOCOMO and KDDI started to provide "Disaster Message Board Service" for smartphones.
April 2011	NTT DOCOMO inaugurated SIM unlock.
May 2011	eAccess started selling EMOBILE terminals with SIM unlock.
July 2011	Inter-carrier settlement for Short Message Service (SMS) is inaugurated.
January 2012	SoftBank Mobile began providing Disaster Info.
January 2012	KDDI began providing disaster and evacuation information through its Early Warning Mail services.
January 2012	KDDI began providing mobile NFC services.
February 2012	SoftBank Mobile began providing its "SoftBank 4G" high-speed data communication service with a maximum downstream speed of 110 Mbps.
February 2012	NTT DOCOMO began delivering early warning Area Mails (tsunami warnings).
March 2012	NTT DOCOMO began providing Disaster Voice Messaging Service.

March 2012	eAccess began providing its "EMOBILE LTE" high-speed data communication service with a maximum downstream speed of 75 Mbps.
March 2012	NTT DOCOMO began selling its "Mobacas" V-High multimedia broadcasting compatible terminals (first such attempt in Japan).
March 2012	KDDI began providing tsunami warnings in its Early Warning Mail services.
March 2012	NTT DOCOMO terminated its PDC service.
April 2012	KDDI introduced the EV-DO Advanced, a technology to ease data communication congestion at wireless base stations.
June 2012	KDDI began providing a Disaster Voice Messaging Service.
July 2012	SoftBank Mobile began providing a Disaster Voice Messaging Service.
July 2012	SoftBank Mobile began providing services using the 900 MHz band.
August 2012	SoftBank Mobile began providing tsunami warnings.
August 2012	Telecommunications carriers began "all-carrier search services" for mobile phone and PHS disaster message board services and NTT EAST/WEST Disaster Message Board (web171).
September 2012	KDDI began providing the 4G LTE service based on the next-generation high-speed communication standard, LTE (Long Term Evolution).
October 2012	Business alliance between SoftBank Mobile and eAccess.
February 2013	NTT DOCOMO, China Mobile and KT developed common requirements for NFC international roaming.
February 2013	SoftBank Mobile began providing its SoftBank satellite phone service.
March 2013	eAccess began providing emergency earthquake warnings, tsunami warnings, and disaster and evacuation information through its Early Warning Mail services.
March 2013	eAccess began providing the FeliCa service.
March 2013	NTT DOCOMO, KDDI, SoftBank Mobile, and eAccess began providing mobile phone services throughout the entire Toei Subway Lines.
April 2013	NTT DOCOMO, KDDI, Okinawa Cellular, and SoftBank Mobile enabled interoperability of the Disaster Voice Messaging Service across the four mobile phone carriers.
July 2013	NTT DOCOMO, KDDI, and SoftBank Mobile began providing the LTE service at Mt. Fuji.
September 2013	SoftBank Mobile began providing international LTE roaming services.
September 2013	KDDI began providing international LTE roaming services.
October 2013	KDDI adopted the IEEE802.11ac next-generation wireless LAN standard for its au Wi-Fi SPOT public wireless LAN services.
November 2013	NTT DOCOMO, KDDI, Okinawa Cellular, SoftBank Mobile, and eAccess began using mobile phone numbers starting with 070.
November 2013	NTT DOCOMO developed a multi-band indoor base station and antenna.
January 2014	Six mobile phone and PHS carriers enabled interoperability of the Disaster Voice Messaging Service across these carriers.
March 2014	NTT DOCOMO began providing international LTE roaming services.
April 2014	NTT DOCOMO, KDDI, Okinawa Cellular, and SoftBank Mobile began delivering information on the protection of the people using the early warning Area Mails and Early Warning Mail services.
May 2014	Six mobile phone and PHS carriers standardized the number and varieties of pictographs used in text messages, including SMS, exchanged between carriers.
May 2014	KDDI introduced Carrier Aggregation, an LTE-Advanced technology based on the next-generation high-speed communication standard LTE, with a maximum receiving speed of 150 Mbps for the first time in Japan.
May 2014	NTT DOCOMO released guidelines for video distribution utilizing the next-generation

	video compression technology, HEVC.
June 2014	eAccess Ltd. and Willcom, Inc. merged.
June 2014	NTT DOCOMO developed the world's first new SIM-based authentication mini device, called Portable SIM.
June 2014	NTT DOCOMO began providing Japan's first VoLTE call service.
July 2014	eAccess Ltd. changed its company name to Ymobile Corporation.
August 2014	Ymobile started its new Y!mobile service.
October 2014	Number portability between mobile and PHS phones began.
November 2014	NTT DOCOMO started Japan's first international outbound roaming service on a TD-LTE network.
December 2014	KDDI began providing the au VoLTE next-generation voice calling service, utilizing the 4G LTE network.
December 2014	SoftBank Mobile began providing voice communication services using the VoLTE technology, a technology that enables voice communication over the LTE high-speed data communication network.
March 2015	NTT DOCOMO began providing LTE-Advanced services under the name "PREMIUM 4G" with a maximum downlink of 225 Mbps, which was the fastest in Japan.
April 2015	SoftBank Mobile Corp., SoftBank BB Corp., SoftBank Telecom Corp., and Ymobile Corporation merged together.
May 2015	The revised SIM unlocking guidelines came into effect, and NTT DOCOMO, KDDI, and SoftBank Mobile began providing SIM unlocking services based on the new guidelines.
July 2015	SoftBank Mobile Corp. changed its company name to SoftBank Corp.
October 2015	NTT DOCOMO became Japan's first telecommunications carrier to provide an international VoLTE roaming service.
March 2016	NTT DOCOMO began providing services using the world's first network function virtualization (NFV) technology that can run Evolved Packet Core (EPC) software from multiple vendors on its commercial network.
June 2016	KDDI began providing international VoLTE roaming services.
September 2016	SoftBank began providing the world's first commercial service with Massive MIMO (spatial multiplexing technology).
March 2017	NTT DOCOMO began providing communication service with a maximum downlink of 682 Mbps by introducing two new technologies: 256 QAM and 4×4 MIMO.
September 2017	KDDI began providing communication service with a maximum downlink of 708 Mbps by introducing 265 QAM and 4×4 MIMO.
May 2018	NTT DOCOMO, KDDI, and SoftBank began providing the +Message service, a new service as an extension of SMS, based on the GSMA specifications.
June 2018	NTT DOCOMO, in collaboration with China Mobile, commercialized the world's first IoT multi-vendor eSIM solution based on the GSMA 3.1 specifications.
October 2018	NTT DOCOMO, SoftBank, and KDDI each began providing services for VoLTE interconnection between different carriers.
October 2019	Rakuten Mobile began providing commercial service with the world's first end-to-end fully virtualized cloud-native network.
March 2020	NTT DoCoMo, KDDI, and SoftBank each began providing communication service using the fifth-generation mobile communication system (5G).
April 2020	Rakuten Mobile launched full-scale mobile carrier service.
September 2020	Rakuten Mobile began providing communication service using the fifth-generation mobile communication system.
October 2020	KDDI completed its succession of UQ mobile's business.
March 2021	SoftBank launched a new online-only plan under the brand name "LINEMO."

March 2021   KDDI launched a new online-only plan under the brand name "povo."

March 2021   NTT DOCOMO launched a new online-only plan under the brand name "ahamo."

Note: The transmission speeds referred to in the chronology are those at the time of the introduction of the corresponding services by the relevant companies.

2-3-2-2 Progress of Service Provision and Movements of Carriers — PHS

July 1995	DDI TOKYO POCKET TELEPHONE, Inc. DDI HOKKAIDO POCKET TELEPHONE Inc., NTT Central Personal Communications Network Inc., and NTT Hokkaido Personal Communications Network Inc. inaugurated services. After October 1995, 7 companies of DDI POCKET TELEPHONE Group, 7 companies of NTT Personal Communications Network Group and 10 companies of ASTEL Group inaugurated services.
February 1997	The new subscription fee was abolished.
December 1998	Nine companies of NTT Personal Communications Network Group assigned their business to nine companies of NTT DOCOMO Group.
April 1999	ASTEL Tokyo Corporation was merged into Tokyo Telecommunication Network Co., Inc. NTT DOCOMO Group inaugurated 64kbps data communications service.
November 1999	ASTEL Hokkaido Corporation assigned its business to HOKKAIDO TELECOMMUNICATION NETWORK CO., Inc.
January 2000	Nine companies of DDI POCKET TELEPHONE Group were amalgamated as DDI POCKET Inc.
September 2000	ASTEL Tohoku Corporation assigned its business to Tohoku Intelligent Telecommunication Co., Inc.
November 2000	ASTEL Chubu and CHUBU TELECOMMUNICATIONS CO., INC. merged. ASTEL KANSAI CORPORATION assigned its business to K-Opticom Corporation.
April 2001	ASTEL KYUSHU assigned its business to Kyushu Telecommunication Network Co., Inc.
August 2001	DDI Pocket Inc. inaugurated fixed-rate data communication service.
October 2001	Astel Chugoku Corporation assigned its business to Chugoku Information System Service Co., Inc.
December 2001	Astel Hokuriku Corporation assigned its business to Hokuriku Telecommunication Network Co., Inc.
March 2002	Astel Shikoku Corporation assigned its business to Shikoku Information and Telecommunication Network Company, Incorporated.
April 2002	Shikoku Information and Telecommunication Network Company, Incorporated changed the company name to STNet Incorporated.
August 2002	Tokyo Telecommunication Network Company, Incorporated assigned its PHS business to Magic Mail Inc.
October 2002	Magic Mail Inc. was merged with Yozan Inc.
April 2003	NTT DOCOMO group inaugurated fixed-rate data communication service.
July 2003	Chugoku Telecommunication Network merged with Chugoku Information System Service and reorganized as Energia Communications.
November 2003	Kyushu Telecommunications Network Co., Inc. terminated their PHS telephone service.
March 2004	Hokkaido Telecommunications Network Co., Inc. terminated their PHS telephone service.
May 2004	Hokuriku Telecommunications Network Co., Inc. terminated their PHS telephone service.
September 2004	K-Opticom Corporation terminated the PHS voice telephone service out of their PHS services.
October 2004	DDI Pocket, Inc. became independent from the KDDI group.
December 2004	Energia Communications ceased to provide PHS voice telephone service out of their PHS services.
January 2005	Astel Okinawa transferred goodwill to WILLCOM Okinawa.

February 2005	DDI Pocket, Inc. changed the name to WILLCOM, Inc.
May 2005	STNet ceased to provide their PHS telephone service.
May 2005	Chubu Telecommunications Co., Inc. ceased to provide their PHS communication service.
May 2005	Willcom started "Willcom Teigaku Plan" fixed-rate service.
June 2006	YOZAN terminated its PHS telephone service.
December 2006	Tohoku Intelligent Telecommunication terminated its PHS telephone service.
October 2007	Energia Communications terminated PHS services.
January 2008	NTT DOCOMO Group terminated their PHS services.
December 2010	Willcom started the "Fixed Rate with Anyone" service.
September 2011	K-Opticom terminated its PHS service.
June 2014	Willcom merged with eAccess (eAccess Ltd.).
January 2021	SoftBank terminated its PHS service.

2-3-3 International Telephone Services

2-3-3-1 Progress of Service Provision and Movements of Carriers

• In October 1989, International Telecom Japan Inc. (ITJ) and International Digital Communications Inc. (IDC) introduced services with 23% lower rates than those of Kokusai Denshin Denwa Co.,Ltd. (KDD)

• From 1989 through 1996 KDD implemented rate reductions eight times, and ITJ and IDC five times, resulting in a steady shift toward less expensive rates.

October 1998	DDI Corporation (DDI) started international telephone services with the level of charge set at ¥240 for a daytime 3-minute call to U.S. MCI Worldcom Japan, Inc. (WCOM) started international telephone services with the level of charge set at ¥248 for a daytime 3-minute call to U.S.
December 1998	KDD reduced charges for calls to all destinations (230 countries and areas). The average reduction rate was about 10.6%. As the result, a daytime 3-minute call to U.S. cost ¥240. Japan Telecom (JT) reduced charges for calls to 28 destinations. The average reduction rate was about 8.6%. A daytime 3-minute call to U.S. cost ¥240. IDC reduced charges for calls to 23 destinations. The average reduction rate was about 9.0%. A daytime 3-minute call to U.S. cost ¥240. WCOM reduced charges. A daytime 3-minute call to U.S. cost ¥150.
January 1999	DDI reduced charges for calls to 25 destinations. The average reduction rate was about 8.4%. A daytime 3-minute call to U.S. cost ¥168. JT reduced charges for calls to 97 destinations. The average reduction rate was about 2.2%. IDC reduced charges for calls to 51 destinations. The average reduction rate was about 3.5%.
March 1999	DDI reduced charges for calls to 27 destinations, with a main target of reduction on calls placed during 23:00 to 08:00 of the following day. The average reduction rate was about 5.8%.
July 1999	Tokyo Telecommunication Network Co.,Inc. (TTNet) started international telephone services with the level of charge set at ¥168 for a daytime 3-minute call to U.S.
October 1999	JT reduced charges for all destinations (223 countries and areas). The average reduction rate was about 10.3%. A daytime 3-minute call to U.S. cost ¥180. Cable & Wireless IDC reduced charges for calls to 192 destinations. The average reduction rate was about 10.9%. A daytime 3-minute call to U.S. cost ¥180. NTT Communications Corp. started international telephone services with the level of charge set at ¥180 for a daytime 3-minute call to U.S.
November 1999	KDD reduced charges for calls to all destinations (231 countries and areas). The average reduction rate was about 11.1%. A daytime 3-minute call to U.S. cost ¥180. DDI reduced charges for calls to 38 destinations. The average reduction rate was about 8.4%. A daytime 3-minute call to U.S. cost ¥156. TTNet reduced charges for calls to 58 destinations. The average reduction rate was about 11%. A daytime 3-minute call to U.S. cost ¥132.
December 1999	KDD reduced charges for cellular/PHS-originated calls to all destinations (231 countries/areas). The average reduction rate was about 11.9%.
February 2000	KDD reduced charges for calls to 17 destinations (Taiwan, China, U.K., France, Germany, etc.). The average reduction rate was about 1.4%.
October 2000	DDI, KDD and IDO were merged as KDDI.
April 2001	Fusion Communications started international telephone services, establishing the all-time flat rate system. The charge for 3-minute calls to U.S. is ¥90.
September 2001	Fusion Communications Corporation reduced the charges for calls to all destinations (230 countries and areas). A three-minute call to the U.S. cost ¥45.

April 2003	POWEREDCOM merged with TTNet, and the new company was named POWEREDCOM, Inc.
July 2004	The telephone business of POWEREDCOM is merged with FUSION COMMUNICATIONS CORP.
October 2006	Japan Telecom Co. Ltd. changed its company name to SoftBank Telecom Corp.
April 2015	SoftBank Mobile Corp., SoftBank BB Corp., SoftBank Telecom Corp., and Ymobile Corporation merged together to form SoftBank Mobile Corp.
July 2015	SoftBank Mobile Corp. changed its company name to SoftBank Corp.
December 2015	Fusion Communications Corp. changed its company name to Rakuten Communications Corp.
July 2019	Rakuten Communications Corp. transferred its international telephone service to Rakuten Mobile, Inc. through a company split.

2-3-4 Leased Circuit and Data Transmission Services

2-3-4-1 Progress of Service Provision and Movements of Carriers

・Progress of Leased Circuit Service Provision

(NTT)

December 1997	NTT started "Digital Access 128" as short-distance economy service.
April 1998	NTT started "Digital Access 1500" service.
August 1998	NTT started "Digital Reach" as medium- and long-distance economy service.
December 1998	NTT started "ATM SHARE LINK" as partial band assurance type exclusively for ATM.
October 1999	NTT Communications started "Gigaway" service.
March 2000	NTT Communications started "Air Access" service.
April 2001	NTT East and West started "Digital Access 6000" service.
November 2001	NTT East started "Metro High Link" service.
June 2002	NTT East started "Super-high Link" service.
July 2002	NTT West started "Giga Data Link" service.
October 2002	NTT Communications started "EtherArcstream" service.
June 2004	NTT Communications started "GIGASTREAM" service.
December 2008	NTT Communications started "GIGASTREAM Premium Ether" service.
May 2011	NTT Communications started to provide "Arcstar Universal One".

(Long-Distance and International Carriers)

April 1998	KDDI (TWJ) started to provide leased circuit service for ATM.
October 1998	Long-distance and International NCCs started economy services.
September to October 1999	Long-distance and International NCCs acquired rate setting right and started end-to-end rate services.
January 2000	Global Access started domestic and international leased circuit service.
July 2000	Japan Telecom started domestic wide-band leased circuit service.
October 2002	Japan Telecom started international wide-band leased circuit service.

(Regional Carriers)

April 1997	Nine electric power companies started joint high-speed digital transmission service.
January 1998	TTNet started FDDI leased circuit service.
April 1998	TTNet started leased circuit service for ATM.
May 1998	Ten electric power companies completed nationwide linkage of high-speed digital transmission services.
October 1998	Nine electric power companies started linkage of ATM leased circuit services.
August 1999	Ten electric power companies completed nationwide linkage of economy services.
April 2001	TTNet started to provide "PeneLink (leased circuit)" (Ethernet leased circuit service).
September 2001	Keio Network Communications started to provide "Express-Ether" service.
April 2002	Osaka Media Port started Ether leased circuit service.
June 2002	Chubu Telecommunication started optical fiber leased circuit service.
April 2003	Osaka Media Port started Ether Network service (W-Link).

(Regional CATV)

April 2002	Katch Network started optical fiber leased circuit service.
December 2002	Himawari Network started optical fiber leased circuit service.
December 2002	My Television started regional LAN services.

• Progress of Data Transmission Service Provision

(NTT)

December 1996	NTT started OCN service.
August 1999	NTT Communications started to provide OBN (Open Business Network) service.
September 1999	NTT Communications started to provide "Arcstar Value Access" service.
May 2000	NTT East and West started to provide Wide LAN Service.
July 2000	NTT Communications started "Super VPN (current Arcstar IP-VPN)" service.
July 2000	NTT DOCOMO and NTT Communications jointly started to provide "RALS (Remote Access Line Service)".
September 2000	NTT East started to provide FLET's Office".
October 2000	NTT Communications started to provide "Broadband Access" service.
October 2000	NTT East and West started to provide "Mega Data Nets" service.
December 2000	NTT Communications started to provide "Giga Ether Platform" service.
January 2001	NTT Communications started to provide "Arcstar Global IP-VPN" service.
March 2001	NTT East started to provide "Metro Ether" service.
April 2001	NTT Communications started to provide "e-VLAN" service.
May 2001	NTT West started to provide "Urban Ether" service.
March 2002	NTT East started to provide "FLET's Group Access" service.
March 2002	NTT East started to provide "Super Wide LAN Service".
March 2002	NTT West started to provide "Wide LAN Plus" service.
March 2003	NTT East started to provide "FLET's Office Wide" service.
April 2003	NTT Communications started to provide "Super HUB" service.
May 2003	NTT Communications started to provide "FLEXGIGAWAY" service.
July 2003	NTT East started to provide "Flat Ether" service.
October 2003	NTT West started to provide "Flat Ether" service.
December 2003	NTT East started to provide the Smart Ether service.
June 2004	NTT Communications started to provide the "Group-VPN" service.
April 2006	NTT West started to provide the "Business Ether" service.
May 2006	NTT East started to provide the "Business Ether" service.
July 2009	NTT Communications started to provide the "Group-Ether" service.
May 2011	NTT Communications started to provide "Arcstar Universal One".

(Long-Distance and International Carriers)

April 1997	Long-distance and International NCCs sequentially started to provide computer network services.
April 1999	Japan Telecom started to provide international cell relay service.
April 2000	Japan Telecom started to provide Solteria (IP-VPN) service.
October 2000	KDDI started to provide ANDROMEGA IP-VPN service.
February 2001	Fusion Communications started to provide FUSION IP-VPN service.
October 2001	Japan Telecom started to provide "Wide-Ether" (wide-area LAN).
December 2001	Cable & Wireless IDC started to provide "High-speed Ethernet Service".

December 2001   KDDI started to provide "Ether-VPN" service.

September 2002   Cable & Wireless IDC started to provide "IP-VPN QoS" service.

November 2002   Japan Telecom started to provide "ASSOCIO (MLPS Traffic Switching Service)".

August 2012   SoftBank Telecom began providing its White Cloud SmartVPN service.

(Regional Carriers)

From September 1997   Power company based NCCs sequentially started to provide computer network services.

March 2001   Hokkaido Telecommunication Network, Inc started to provide wide-area Ethernet service "L2L".

April 2001   Poweredcom started to provide "Powered Ethernet" wide-area Ethernet connection service.

April 2001   TTNet started to provide "Pene-Link (Multi-access)" (wide-area Ethernet connection service).

June 2001   K-Opticom started to provide IP-VPN service.

July 2001   Poweredcom started to provide "Powered-IP MPLS" (IP-VPN connection service).

August 2001   Chugoku Telecommunication Network started to provide Ethernet communication network service "V-LAN".

June 2002   Keio Network Communications started to provide "Multi-Express Ether" service.

July 2003   Chugoku Telecommunication Network merged with Chugoku Information System Service and reorganized as Energia Communications.

January 2003   Chubu Telecommunication started to provide band-assured type Ether network service "CTC Ether Link".

June 2005   Chubu Telecommunication started to provide "CTC Ether DIVE" wide-area Ethernet service.

(Regional CATV)

December 1995   Himawari Network started to provide cell relay service.

November 1997   Katch Network started to provide cell relay service.

April 1998   MICS Network started to provide ATM switching service.

September 1999   MICS Network started to provide wide-area LAN service.