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Promoting Collaborative Experiment of IPv6/Satellite Internet

Result of 26th AIC Conference in Hanoi

The 26th Conference of Asian Info-communications Council (AIC) was held during November 5 through 9, 2001, in Hanoi, Vietnam, bringing together 230 participants from telecommunications administrations, telecommunications carriers, communications equipment manufacturers, universities and research institutes of nine Asian countries (China, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand and Vietnam). It was the first AIC meeting in Vietnam, and from the country, some 100 participants, including Dr. Mai Liem Truc, Secretary-General, Department General of Posts and Telecommunications and Dr. CHu Hao, Deputy Minister of Science, Technology and Environment, attended.

Regarding the "future wireless Internet," the theme of the meeting, participants from Japan introduced the current status of the third-generation (3G) mobile communications systems (IMT-2000), whose service was launched as of the end of September 2001 in Japan, the R&D status and future schedules for 4G mobile communications systems and simplified wireless system for access to the Internet, all these presentations attracting much attention.

While countries made presentations on the next-generation mobile communications systems and broadband Internet access, countries participating agreed to coordinate international joint experiments utilizing the Asia-Pacific Information Infrastructure (APII) testbed for widespread use of IPv6. Japan proposed to conduct the international joint experiments with other AIC member states using the ultrahigh-speed Internet satellite which Japan is to launch in 2005, and invited specific R&D themes from member states. The satellite Internet, a satellite communications system with wide-area coverage, simultaneous multiple address and disaster-tolerant features, through realization of ultrahigh speed and high performance, will be made available as an ultrahigh-speed satellite Internet access networks in Japan and the Asia-Pacific region, complementing terrestrial networks. Under the international joint project, R&D on satellite-borne systems and optimum transmission systems, and joint research among countries in the Asia-Pacific region utilizing R&D satellite as a testbed will be carried out in order to standardize communications protocols for the ultrahigh-speed satellite Internet.

The 27th AIC Conference is scheduled to be held in Thailand in May 2002, whose themes will be chosen from service solution business models, IPv6, satellite projects, etc. that offer promises over the next several years.

For more information on AIC, visit: http://www.aic.or.jp

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"Basic Approach for Assessment of the Possibility of Hindrance to Securing of Fair Competition in Telecommunications Business" Published

Publication of "Basic Approach for Assessment of the Possibility of Hindrance to Securing of Fair Competition in Telecommunications Business, etc. in Relation to Approval for Expanding Business Scope of NTT East and NTT West" (Guidelines for Securing of Fair Competition in Relation to Approval for Expanding Business Scope of NTT East and NTT West)

MPHPT, in regard to the "Basic Approach for Assessment of the Possibility of Hindrance to Securing of Fair Competition in Telecommunications Business, etc. in Relation to Approval for Expanding Business Scope of NTT East and NTT West" (Guidelines for Securing of Fair Competition in Relation to Approval for Expanding Business Scope of NTT East and NTT West) announced in the proposal of October 30, 2001, have made a decision based on comments received from all directions.

For details refer to the Japanese web site
http://www.soumu.go.jp/s-news/2001/01211_1.html

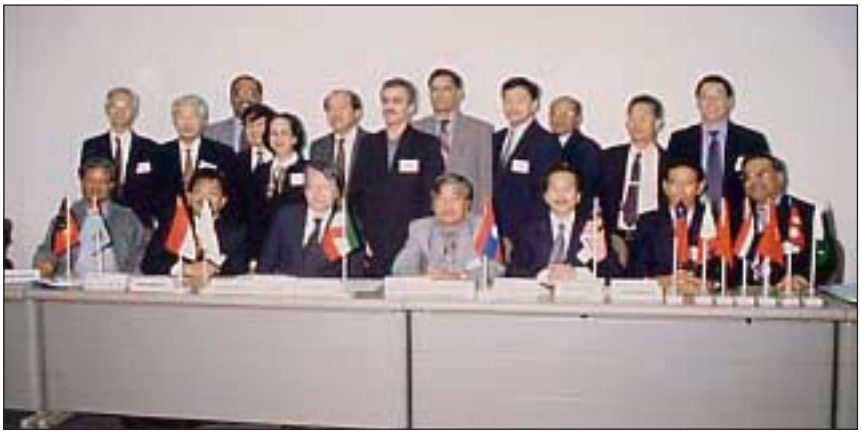
Participants from ITU-Workshop Visit MPHPT

On November 20, 2001, as part of a joint workshop held in Tokyo by Waseda University and the International Telecommunication Union (ITU), 16 senior government officials in charge of IT policy from 14 countries in the Asia-Pacific region visited MPHPT.

With the support of MPHPT, the first ITU-Workshop was held for the purpose of helping to develop human resources among public administrators and company executives in the IT field in the Asia-Pacific region. As part of the event, and with cooperation from Japanese industry, academia and government, several visits and lectures were arranged related to such areas as IT policy, state-of-the-art technology, Internet applications, electronic commerce and development of third-generation mobile communications systems.

During their visit to MPHPT, the participants paid a courtesy call on Vice-Minister Kaoru KANAZAWA and discussed MPHPT's IT policy and cooperation between Japan and countries in the Asia-Pacific region. Later, they learned more about Japan's basic guidelines for the development of IT, as well as the ongoing construction of one of the world's most advanced information and telecommunications networks. In addition, the visitors were able to discuss with MPHPT staff important issues such as network security, the development of IT human resources, and the promotion of electronic commerce and electronic government. Japan's involvement in ITU activities was also covered, such as its leadership and support for the ITU's study group promoting the development of new telecommunication technologies for rural applications.

The participants expressed great interest in a wide range of areas, and contributed valuable information from their own countries while also learning more about the status of IT in Japan.



FY2000 Japan's Communications Usage Trends in Traffic Surveyed

This material compiles and analyses reports on subscriber telephone, ISDN, mobile telephone, PHS and international calls in FY2000 (from April 1, 2000 to March 31, 2001), submitted by each Type I telecommunications carrier at the end of June 2001 (for international calls, the end of September 2001), based on the Rules for Reporting on Telecommunications Business.

1. Introduction

1) Background of survey

In order to study telecommunications service, which is indispensable for people's daily life and socioeconomic activities, it is necessary to grasp service usage trends based on objective and reliable data.

From such a perspective, MPHPT set up the Rules for Reporting on Telecommunications Business (MPT Ministerial Ordinance No. 46 of 1988) in 1988, and has been requiring Type I telecommunications carriers to report traffic data related to telecommunications services, and utilizing the reports upon formulating telecommunications policies, etc.

In addition, publication of the data has been contributing to consumer understanding concerning telecommunications services.

2) History of the survey

MPHPT has been receiving reports on traffic data since FY1988, and has been compiling, analyzing and publishing these since FY1990.

3) Carriers surveyed

Type I telecommunications carriers surveyed totaling 55 whose breakdown are as follows:

i) Domestic fixed carriers: 18
ii) Mobile carriers: 35
iii) International carriers: 7
(Carriers conducting both domestic and international services: -5)
iv) Total: 55

2. Summary of FY2000 survey

- Further acceleration of the trend from fixed to mobile and from voice to data (Internet)
- Among fixed carriers, NTT Group occupies more than 80% in total, although the share of new communications carriers (NCCs) has increased in all local, intraprefectural and interprefectural long-distance communications market.

1) In the report as of the end of FY2000, the total number of subscribers to mobile communications (mobile telephone plus PHS) has surpassed that of fixed communications (subscriber telephone plus ISDN). In preliminary figures as of the end of October 2001, the number of mobile telephone subscribers has exceeded that of fixed communications.

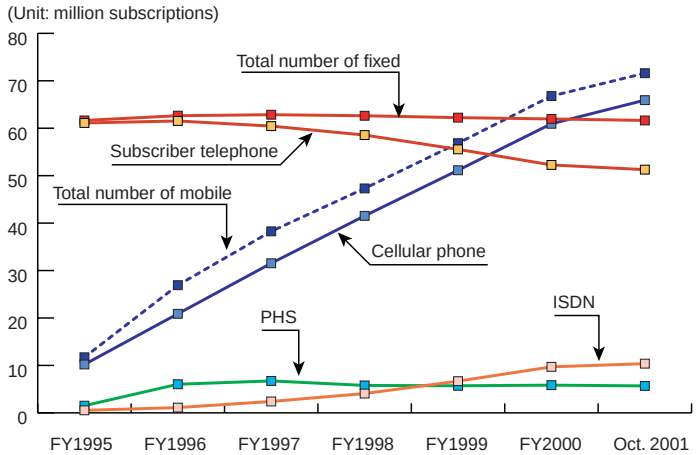
- Number of subscribers to fixed communications: 61.96 million Number of subscribers to mobile communications: 66.55 million
(as of the end of FY2000)
- Number of subscribers to fixed communications: 61.64 million Number of subscribers to mobile communications: 65.92 million
(preliminary figures as of the end of October 2001)

2) Since the end of FY1999, the number of subscribers to Internet access service using mobile telephone terminal as of the end of FY2000 has increased almost fivefold, the preliminary figure as of the end of October 2001 had grown by some six times, and the communications traffic (esti-

Table NCCs' traffic share

NCCs' traffic share (number of calls)	Ref.: NCCs' share in "MYLINE" sign-up (the end of October 2001)
- Interprefectural calls (FY1999: 45.4% ⇨ FY2000: 46.5%)	(42.0%)
- Intraprefectural calls (FY1999: 25.9% ⇨ FY2000: 31.4%)	(31.8%)
- Local calls (FY1999: 3.5% ⇨ FY2000: 4.5%)	(25.6%)
- International calls (except KDDI) (FY1999: 42.5% ⇨ FY2000: 45.1%)	(75.5%) (except KDDI)
- Mobile telephone (FY1999: 42.0% ⇨ FY2000: 37.1%)	

Fig. 1 Transition in number of subscriptions



	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	Oct. 2001
Subscriber telephone	61.11	61.53	60.45	58.56	55.55	52.26	51.27
ISDN	0.53	1.11	2.40	4.07	6.68	9.70	10.37
Total number of fixed	61.64	62.64	62.85	62.63	62.23	61.96	61.64
Cellular phone	10.20	20.88	31.53	41.53	51.14	60.94	65.92
PHS	1.51	6.03	6.73	5.78	5.71	5.84	5.68
Total number of mobile	11.71	26.91	38.26	47.31	56.85	66.78	71.60

mated) has grown by about eleven times.
- The number of subscribers to Internet access service using mobile telephone terminal (number of subscribers to i-mode, EZweb and J-SKY)

From 7.5 million at the end of FY1999 to 34.57 million at the end of FY2000 and 44.94 million (preliminary figure) at the end of September 2001
- Internet access service traffic using mobile telephone terminal (estimate)

From 113 billion packets at the end of FY1999 to 10,255.2 billion packets (estimate) at the end of FY2000

3) While the share of fixed-to-fixed in total calls is decreasing, the share of mobile-to-mobile has increased by more than 20%.
- Fixed-to-fixed (FY1999: 63.9% to FY2000: 59.5%)
- Mobile-to-mobile (FY1999: 18.2% to FY2000: 22.4%)

4) The share of subscriber telephone-to-fixed was below 50% in total call duration and below 40% in total calls.
- Share of subscriber telephone-to-fixed (total call duration) (FY1999: 55.5% to FY2000: 49.6%)
- Share of subscriber telephone-to-fixed (total calls) (FY1999: 47.6% to FY2000: 39.6%)

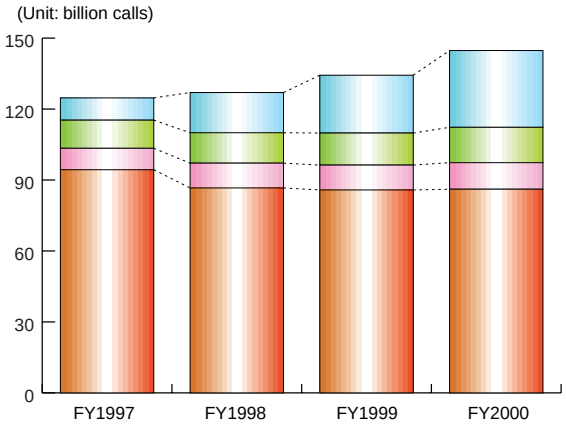
5) In fixed communications, the growth rate of call duration is bigger than that of calls, which means that transition from conventional voice telephony to data communications and the Internet is taking place.
- Calls of fixed-to-fixed: a 0.4% growth from the previous fiscal year
- Call duration of fixed-to-fixed: a 12.6% growth from the previous fiscal year

6) In fixed communications, the share of NCCs (except NTT Group) has increased in local, intraprefectural and interprefectural long-distance markets, but in the total number of calls, NTT Group (NTT East, NTT West and NTT Communications) occupies a share of more than 80%.

Nevertheless, as the introduction of carrier preselection service "MYLINE" in May 2001 revealed the differences between traffic share and the "MYLINE" share in local and international markets, future trends shall be closely scrutinized.

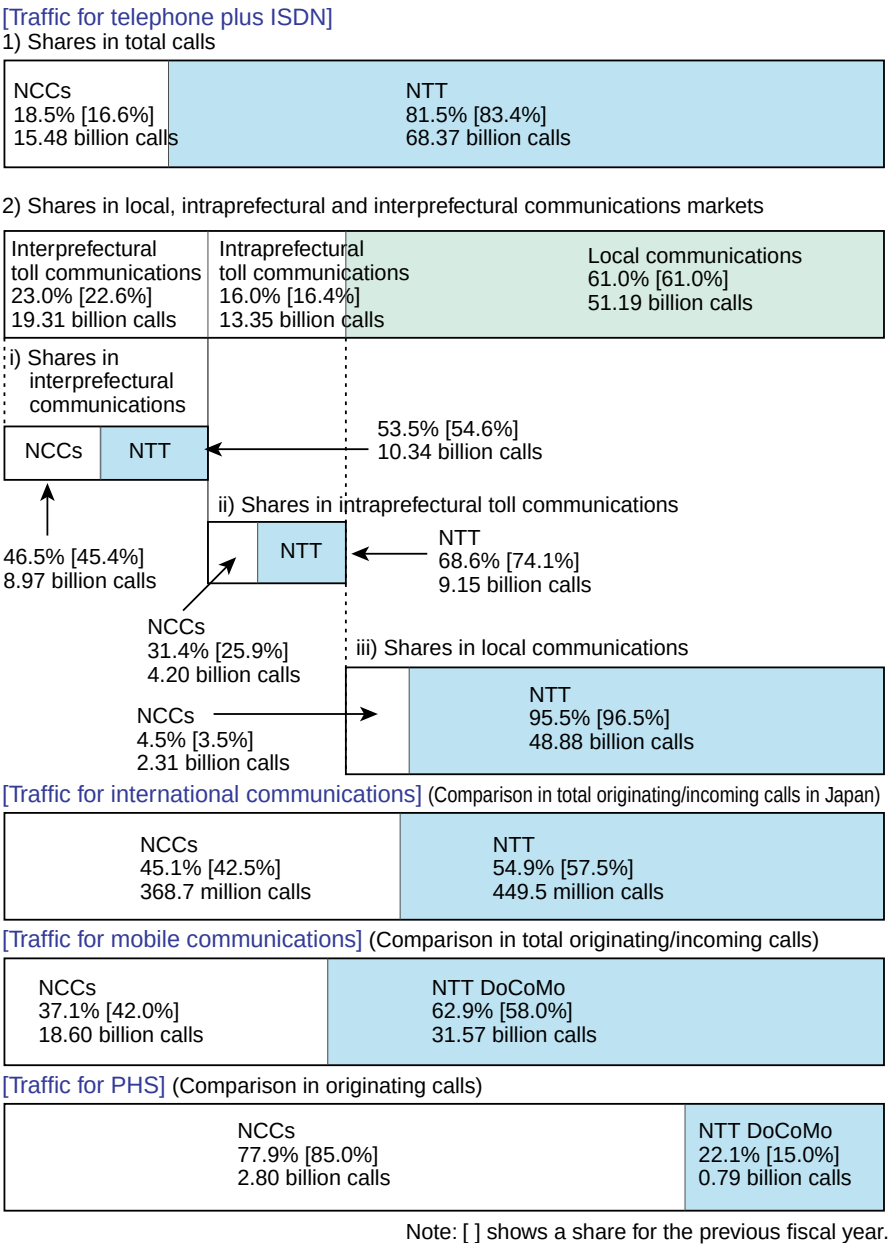
In the mobile telephone market, NTT DoCoMo's share has increased.

Fig. 2 Transition in number of calls between fixed and mobile phones



	FY1997	FY1998	FY1999	FY2000
Total number of calls	12.47	12.70	13.34	14.47
Fixed-to-fixed	94.35	86.65	85.80	86.11
Fixed-to-mobile	9.06	10.48	10.51	11.22
Mobile-to-fixed	11.90	12.86	13.55	14.95
Mobile-to-mobile	9.41	17.00	24.45	32.47

Fig. 3 Traffic shares of NCCs and NTT



Note: [ ] shows a share for the previous fiscal year.

Introduction of Airborne Collision Avoidance System (ACAS) for Small Airplanes

Partial Report of the Telecommunications Council

On November 26, 2001, MPHPT received a partial report from the Telecommunications Council (Chair: Mr. Yoshihisa AKIYAMA) on "technical conditions for radio facilities of airborne collision avoidance system" in response to Inquiry No. 10 "on technical problems of aeronautic radio communications." The outline is as follows:

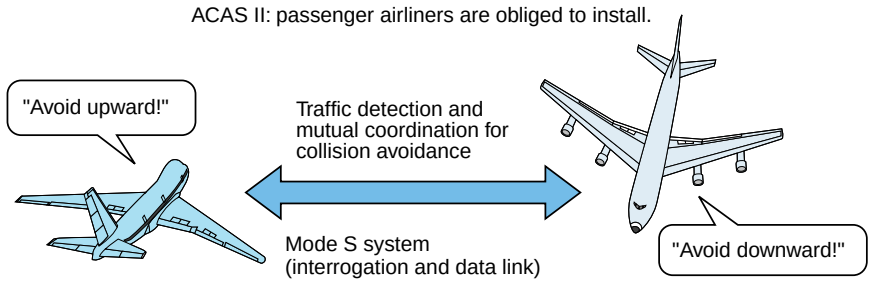
The airborne collision avoidance system (ACAS), an airborne system for monitoring proximity traffic (nearby airplanes) and providing location information thereof, etc., to flight crews when judged to be dangerous, is classified into two categories: "ACAS I," which provides location information on nearby aircraft, and, "ACAS II," which gives vertical flight commands in cases of airborne collision threats, in addition to the location information. In Japan, ACAS II is being introduced mainly on passenger airliners (with installation of the system being mandated under the Aviation Law).

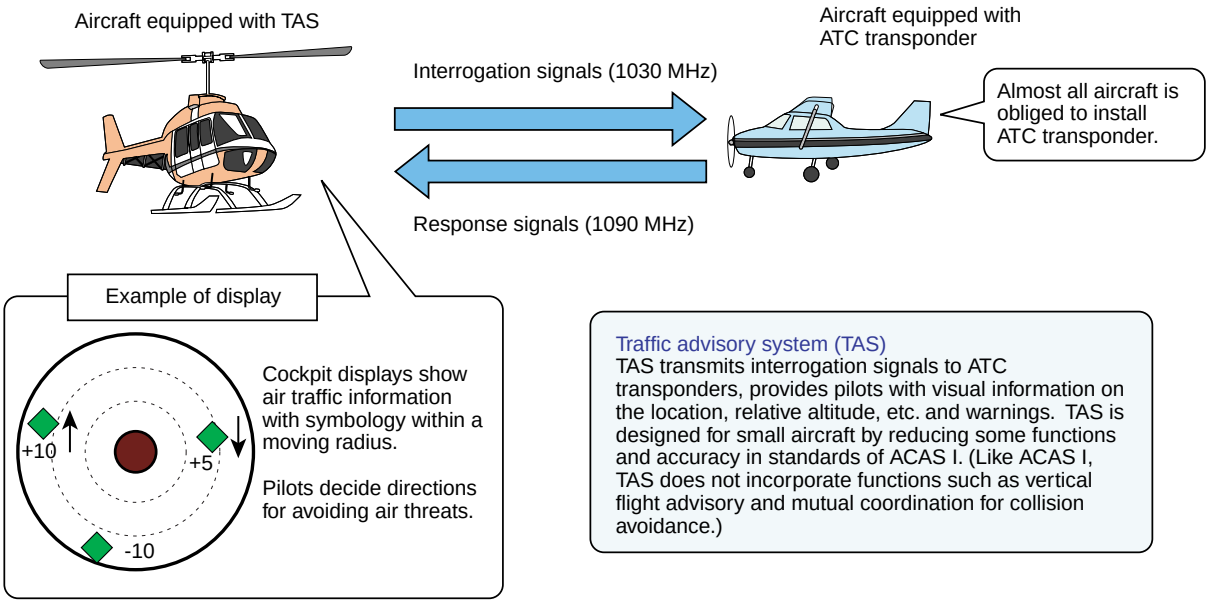
On the other hand, the use of ACAS on small aircraft without such an obligation has not been diffused because the existing ACAS units are so expensive as equipment installed on small aircraft, etc. However, consecutive small airplane accidents accelerated demands for introducing traffic advisory system (TAS) for small aircraft, which have been introduced rapidly in the U.S. and Europe.

Under these circumstances, the Telecommunications Council has been deliberating on "technical conditions for radio facilities of airborne collision avoidance system," taking into consideration the revisions of international standards, etc. of ACAS I and ACAS II, and has submitted the report thereon.

Fig. Traffic advisory system (TAS)

Airborne Collision Avoidance System (ACAS)
A system, which transmits radio waves and receives responses from ATC transponders on nearby airplanes, thereby judges relative altitudes and distances, provides pilots with location information, etc. There are two types:
ACAS I: provides only location information
ACAS II: provides location information and vertical flight advisory





Traffic advisory system (TAS)
TAS transmits interrogation signals to ATC transponders, provides pilots with visual information on the location, relative altitude, etc. and warnings. TAS is designed for small aircraft by reducing some functions and accuracy in standards of ACAS I. (Like ACAS I, TAS does not incorporate functions such as vertical flight advisory and mutual coordination for collision avoidance.)