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COMMUNICATIONS NEWS

Biweekly Newsletter of the Ministry of Public Management, Home Affairs, Posts and Telecommunications, Japan

Japan-Korea Collaboration Confirmed in the Info-communications Field Including 4G

-- Results of the 10th Japan-Korea Bilateral Meeting --

On May 25, 2001, MPHPT and the Ministry of Information and Communication of the Republic of Korea held the "10th Japan-Korea Bilateral Meeting" in Seoul, exchanging a broad range of opinions on both countries' info-communications policies. At the meeting, it was agreed upon that collaboration between Japan and Korea will be further promoted on the following issues, toward realization of the next-generation info-communications user environment.

1. Realization of the fourth-generation mobile communications system (4G) and promotion of 4G global-standardization

Toward the realization and the global-standardization of 4G, which is identified as the next-generation mobile communications system after IMT-2000, Japan and Korea agreed upon that the two countries collaboratively promote the 4G through intensive information exchange.

2. Electronic signatures and certification service

For establishing an internationally harmonized system for electronic signatures and certification service as an infrastructure for promoting economic activities via an open e-commerce network, Japan and Korea confirmed that both sides will proceed with bilateral talks thereon. Within the Asia-Pacific region, both sides agreed upon to collaborate for the

standardization of the Public Key Infrastructure (PKI: an electronic certification method) in the Asia-Pacific Telecommunity Standardization Program (ASTAP).

3. Japan-Korea HDR Satellite Communications Experiments

Regarding Japan-Korea HDR (High Data Rate) Satellite Communications Experiments for establishing high-definition digital image transmission technology, both sides affirmed that both sides will collaborate in promoting the experiments, by adjusting with relevant organizations of both countries, with the goal of demonstrating the experiments at the 2002 World Cup.

4. The next-generation info-communications technology (photonic network technology, etc.)

The two countries agreed to promote collaboration concerning research and

development of the next-generation info-communications technology such as photonic network technology. The two sides confirmed that opinion exchanges between experts should be car-

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Japanese side (right) and Korean side



ried out from now on.

Outline of the meeting

1. IT strategy

Japan explained the "e-Japan Priority Policy Program" and Korea presented the "e-Korea." The two countries recognized the importance of promoting IT as national strategy.

2. Pro-competition policy

As Japan showed conditions of regulatory reforms such as amendments to the Telecommunications Business Law and Korean side presented its progress

in pro-competition policy, through exchanges of opinions.

3. Follow-up of Japan-Korea IT Cooperation Initiative (agreed upon in September 2000)

On the Japan-Korea IT Cooperation Initiative which was agreed upon at Japan-Korea summit of September 2000, explanations and opinion exchanges were made on electronic signatures and certification service, the HDR Satellite Communications Experiments, the next-generation info-communications technology (photonic network technology,

etc.) as well. The two countries confirmed that they will further promote collaboration between both countries .

[Reference]

Date: May 25, 2001

Place: Ministry of Information and Communication (Seoul)

Attendants: Japan: Mr. Kouji HAMADA, Vice-Minister for International Affairs, MPHPT, and other officials

Korea: Mr. KIM Dong-Sun, Vice Minister, Ministry of Information and Communication, and other officials

Introductory Phase Service of FOMA 3G Mobile Communications Launched

NTT DoCoMo, Inc., prior to full-scale service, launched the "introductory phase service" of "FOMA (Freedom Of Mobile multimedia Access)" third-generation (3G) mobile communications from May 30 to September 30, 2001. This FOMA "Introductory Phase Service" is provided to 4,500 monitors selected from some 147,000 applicants, in order to ensure smooth implementation of full-scale service in the future.

Outline of Introductory Phase Service

1. Purpose

Toward nationwide service deployment;

- 1) Improve the quality of service

(QoS) based on results of systems operations and opinions from monitors

- 2) Enhance service content through evaluation concerning user-friendliness, etc.

2. Period

From May 30 to September 30, 2001

3. Major service menu

Basic services: Voice communications, video phone, 64-kbps digital communications, packet communications, etc.

Additional services: i-mode, M-stage visual (image distribution service)

4. Service areas

Tokyo 23 wards, Yokohama and Kawasaki (limited areas)

5. Terminals

Standard, visual and data-card types

6. Communications charges

Basic monthly charge and additional function usage charge are not billed.

Monitors shall pay communications charges.

7. Others

Full-scale FOMA service will start from October 1, 2001, after systems improvement based on the results of introductory phase service.

MPHPT Requested NTT to Formulate Voluntary Action Plans to Promote Competition in the Telecommunications Market

In accordance with the "e-Japan Priority Policy Program" (decided upon by the IT Strategic Headquarters on March 29, 2001) and the "Three-Year Program for Promoting Deregulation" (Cabinet Decision on March 30, 2001), the NTT Group is expected to formulate voluntary action plans to promote competition. Accordingly, on May 8, 2001, MPHPT requested Nippon Telegraph and Telephone Corp. (NTT) to formulate and announce voluntary action plans

and report on the progress being made.

MPHPT will take appropriate measures after receiving these plans taken into full consideration promotion of competition in the telecommunications market.

[References]

I. "e-Japan Priority Policy Program" (decided upon by the IT Strategic Headquarters on March 29, 2001)

- i) Ruling of conditions for fair competition

- (ii) Introduction of incentive-based pro-competitive policy toward NTT

The government expects the NTT Group to voluntarily implement certain competition promotion measures such as the thorough opening of their local networks.

II. "Three-Year Program for Promoting Deregulation" (Cabinet Decision of March 30, 2001)

- 7) The status of NTT

a) From the viewpoints of improving the efficiency of the NTT Group management and ensuring fair competition, the government expects NTT holding company, NTT East and NTT West to formulate voluntary implementation plans and publicize thereof. Those plans shall include certain competition promotion measures such as i) the thorough opening of their local networks, ii) realization of competition among NTT Group companies, including reduction of the NTT holding company's equity share in NTT Communications Corp. and NTT DoCoMo, Inc., iii) improvement of efficiency in NTT East and NTT West. Then, the government will

watch the progress of implementation thereof.

III. "First Report on Desirable Pro-Competitive Policies in the Telecommunications Business Field for Promoting the IT Revolution" (December 21, 2000)

3 NTT

(11) Conclusion (excerpt)

The government expects NTT holding company, NTT East and NTT West to submit voluntary action plans describing schedules and specific contents on the opening up of their local networks and promotion of competition among the NTT Group companies, to ensure that the "incentive-based pro-competitive policy measures" can be successful.

(8) "Incentive-based pro-competitive policy measures" for NTT

The voluntary action plans which the NTT Group is expected to formulate are set out as follows:

- a) Measures to thoroughly open up the *de facto* monopoly local networks of NTT East and NTT West
- b) Measures to encourage NTT Communications' entry into local telecommunications markets and thoroughly open up the local networks of NTT East and NTT West
- c) Measures to improve the business efficiency of NTT East and NTT West, which will lead to an early reduction in interconnection charges and installation charges

CRYPTREC Advisory Committee Held

On May 16, 2001, MPHPT and the Ministry of Economy, Trade and Industry (METI) jointly held the "CRYPTREC (Cryptography Research and Evaluation Committee) Advisory Committee," in order to promote information security measures through widespread use of cryptography.

The studies will continue until the end of March 2002.

1. Purpose

The "e-Japan Priority Policy Program" (decided upon by the Strategic Headquarters for the Promotion of Advanced Information and Telecommunications Network Society: IT Strategic Headquarters on March 29, 2001), based on the Basic Law on the Formation of an Advanced Information and Telecommunications Network Society, stipulates that the government shall implement a range of measures for minimizing service suspensions caused by threats over advanced information and telecommunications networks, so that Japan's se-

curity and reliability of advanced information and telecommunications networks can benefit the world's leading IT nation.

In particular, objective assessment and standardization of cryptography as a key infrastructure will become essential to ensuring security and reliability of advanced information and telecommunications networks along with the widespread use of authentication such as electronic signatures and the formation of the e-government. To this end, MPHPT and METI held the committee for assessment, etc. consisting of cryptography experts, with the aim of employing the study results into the policy measures of both ministries.

2. Items to be studied

- 1) Assessment and evaluation of cryptography to be used in accordance with the Law Concerning Electronic Signatures and Certification Services (advice for cryptography for electronic signatures, etc.)

- 2) Assessment and evaluation of cryptography to be used in the government (advice for cryptography for Government Public Key Infrastructure (GPKI), etc.)
- 3) Assessment and evaluation of cryptography concerning international standardization (support for standardization activities carried out at international standardization organizations, including ISO, ITU, etc.)
- 4) Other issues concerning assessment and evaluation of cryptography (study on guidelines for use of cryptography)

[Remark]

CRYPTREC advisory committee keeps cooperative works with CRYPTREC executive committee that is held by Telecommunications Advancement Organization of Japan (TAO) and Information-technology Promotion Agency, Japan (IPA).

TAO and IPA plan to invite cryptographies for assessment and evaluation.

Conformity of Existing Mobile Telephone Terminals with Radio-Radiation Protection Guidelines Confirmed

On June 1, 2001, MPHPT promulgated a ministerial ordinance to amend relevant ministerial ordinances, in order to introduce the Radio-Radiation Protec-

tion Regulation*¹ to existing mobile telephone terminals operating in close proximity to the side portion of the human head.

Upon introduction of this regulation, MPHPT commissioned the Telecom Engineering Center (TELEC) to conduct conformance confirmation tests of 76

mobile telephone terminals, which are currently sold on the market. In these conformance confirmation tests, all the terminals were proven to be in conformance with the Radio-Radiation Protection Guidelines through measurement of the Specific Absorption Rate (SAR)^{*2}.

Outline of the conformance confirmation tests

1. Purpose

To grasp real SAR data of existing mobile telephone terminals

2. Object terminals

76 mobile telephone terminals (as of the end of January 2001)

3. Measurement method

To measure SAR data of mobile telephone terminals purchased on the market, based upon the “Measurement method of SAR from mobile phone terminals and other terminals that are intended for use in close proximity to the side of the head” (Partial Report of the Telecommunications Technology Council in 2000). Each terminal was measured in eight positional conditions (combination of i) antenna extended/retracted, ii) cheek position/tilted position, iii) left-side/right-side of the phantom^{*3}).

4. Results

It is confirmed that the results of measured SAR data of 76 terminals satisfied the SAR data of 2.0 W/kg under the Radio-Radiation Protection Guidelines.

The tests are conducted based upon

the Partial Report of the Telecommunications Technology Council in 2000. However, the shape of phantom used this time is slightly different from the shape that is stipulated in the Partial Report. Because the terminals tested are one single unit per each type distributed on the market, in general this may cause deviations in SAR data due to deviations derived from the production process of each terminal. Accordingly, the test results do not necessarily determine the SAR data of said terminals.

[Analysis of the test results]

1. In comparison of 800MHz- and 1.5GHz-band mobile terminals, the SAR data for 1.5GHz band mobile terminals tend to be higher than that of 800MHz. It is inferred that because 1.5GHz-band radio waves do not penetrate human bodies that deeply but concentrate surface thereon accordingly the maximum SAR data are measured on the surface of human body (phantom) in line with the measurement method this time under which the maximum SAR data are tested.
2. In comparison of the cheek position and the tilted position, as regards the SAR data for 1.5GHz-band mobile terminals, the tilted position, which means antennas are closer to the head of the phantom, tends to be higher than that of the cheek position. It is shown that the SAR data are greatly

- decreased by moving the terminal’s antenna away from the temporal part.
3. For both 800MHz- and 1.5GHz-band mobile terminals, the SAR data in the any positional conditions with the antenna retracted tend to be higher than those in the any positional conditions with the antenna extended.

- Notes:
1. Radio-Radiation Protection Regulation: The SAR at the side of the head shall be limit (2W/kg) from radio facilities of “land mobile stations conducting mobile radio communications” and “mobile earth stations, which conduct mobile satellite communications through relaying with an artificial satellite station established on a non-geostationary satellite.” However, radio facilities with an average antenna power of 20mW or less and radio facilities to which application of the provision under the regulation is thought to be irrational are excluded.
 2. Specific Absorption Rate (SAR): The energy flow absorbed by the unit mass of the human tissue exposed to an electromagnetic field. In this case, it is the SAR data averaged over any ten gram of tissue in 6 minutes (average time.) The SAR is expressed in units of W/kg.
 3. Phantom: An anthropomorphic model of the human body used to estimate SAR on an experimental basis. This measurement employs a phantom consisting of a shell (container) that represents the shape of the human body and a homogeneous liquid material that fills the shell.

Fig. 1 Distribution of SAR data for 800MHz-band mobile terminals (average value: 0.656 W/kg, standard deviation: 0.217)

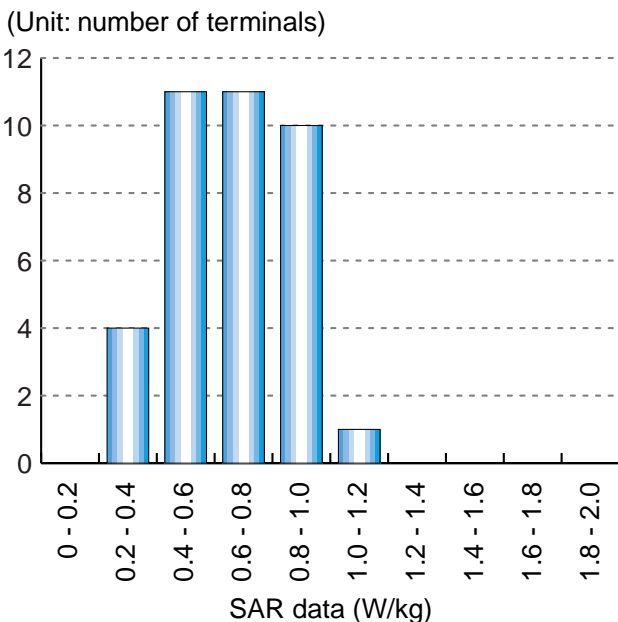
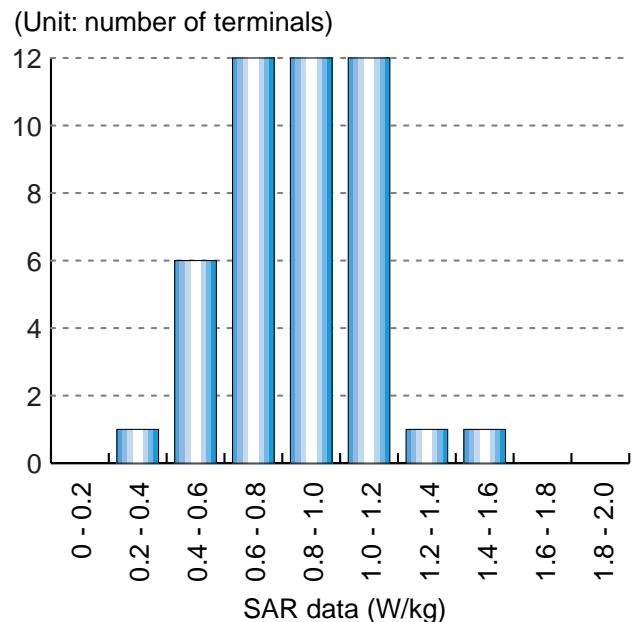


Fig. 2 Distribution of SAR data for 1.5GHz-band mobile terminals (average value: 1.04 W/kg, standard deviation: 0.261)



Note: These figures indicate the maximum SAR data in 800MHz and 1.5GHz bands under the eight positional conditions.