

**MPHPT**

May 29, 2003, Vol. 14, No. 4

Please feel free to use the articles in this publication, with proper credits.

# COMMUNICATIONS NEWS

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

## Minister KATAYAMA Visits New Zealand and Australia; Senior Vice-Minister KATO Visits Thailand and Malaysia

Minister KATAYAMA visited New Zealand and Australia from April 28 through May 4, 2003, with the purposes of meeting with ministers in charge of ICT and postal administration, for exchanging opinions on local autonomy, e-government, etc. and making technical visits to related facilities in both New Zealand and Australia.

The outlines of the visits are as follows:

### 1. Meeting with Mr. Paul Swain, Minister of Communications and Information Technology

- 1) Date: April 30, 2003
- 2) Place: Wellington
- 3) Participants:

[Japanese side]

Mr. KATAYAMA, Minister for Public Management, Home Affairs, Posts and Telecommunications; Mr. ONO Shin-ichi, Director-General for Policy

Planning; and others  
[New Zealand side]

Mr. Paul Swain, Minister of Communications and Information Technology; and others

### 4) Main topics

The two ministers exchanged opinions on i) evaluation of the postal service reform in New Zealand, ii) future perspectives of the reform, and iii) measures for ensuring universal postal services. Both ministers reached a common recognition that in order to ensure universal postal

services, governments shall take the necessary measures.

### 2. Meeting with Mr. Richard Alston, Federal Minister for Communications, Information Technology and the Arts

- 1) Date: May 2, 2003
- 2) Place: Melbourne

## CONTENTS

- Minister KATAYAMA Visits New Zealand and Australia; Senior Vice-Minister KATO Visits Thailand and Malaysia ----- 1
- Outline of "International Network Interconnection Experiments for Promoting Advanced Use of IT in Asia" ----- 3
- "Principle of Media Ownership Rule" Pertaining to BS Digital Broadcasting to Be Relaxed ----- 5

International Policy Division,  
International Affairs Department,  
Ministry of Public Management, Home Affairs, Posts and Telecommunications  
1-2, Kasumigaseki 2-chome,  
Chiyoda-ku, Tokyo 100-8926, Japan

• We welcome your comments by:  
[feedback-newsletter@soumu.go.jp](mailto:feedback-newsletter@soumu.go.jp)  
Fax: +81-3-5253-5924  
Tel.: +81-3-5253-5920

• MPHPT information is available at:  
<http://www.joho.soumu.go.jp/eng/>



Minister KATAYAMA (center right) and Mr. Richard Alston (center left), Federal Minister for Communications, Information Technology and the Arts

## 3) Participants:

[Japanese side]

Mr. KATAYAMA, Minister for Public Management, Home Affairs, Posts and Telecommunications; Mr. ASAMI Hiroshi, Director, International Cooperation Division; and others

[Australian side]

Mr. Richard Alston, Federal Minister for Communications, Information Technology and the Arts; and others

## 4) Main topics

The two ministers agreed to i) implement information exchanges/cooperation on promotion of the "Asia Broadband Program," bridging the digital divide, promotion of e-government, etc. and ii) hold policy dialogues at the working level.

Mr. KATO Norifumi, Senior Vice-Minister for Public Management, Home Affairs, Posts and Telecommunications, visited Thailand and Malaysia from April 29 through May 3, 2003, with the purposes of attending the opening ceremony of the CRL Asia Research Center (CRL Asia) in Thailand and meeting with Malaysian Deputy Minister of Energy, Communications and Multimedia, for exchanging opinions on ICT and making technical visits to related facilities in both Thailand and Malaysia.

The outlines of the visits are as follows:

### 1. Opening ceremony of CRL Asia Research Center (CRL Asia)

1) Date: April 30, 2003

2) Place: CRL Asia in Bangkok

3) Participants:

[Japanese side]

Mr. KATO Norifumi, Senior Vice-Minister for Public Management, Home Affairs, Posts and Telecommunications; Mr. INADA Syuichi, Director, Technology Policy Division, Information and Communications Policy Bureau; Dr. IIDA Takashi, President, Communications Research Laboratory (CRL); and

others

[Thai side]

Mr. Pinij Jarusombat, Minister of Science and Technology; Mr. Surapong Suebwonglee, Minister of Information and Communication Technology; and others

## 4) Order of the ceremony

Senior Vice-Minister KATO attended the ceremony on behalf of MPHPT and gave a congratulatory address expressing hopes that tie-ups and joint research between CRL Asia and Asian research institutes shall be promoted and technological development shall emanate from Asian uniqueness. Prior to the ceremony, the Senior Vice-Minister and Thai key persons exchanged opinions on ICT policies and science/technology policies in both countries.

### 2. Meeting with Deputy Minister Tan Chai Ho, Ministry of Energy, Communications and Multimedia (MECM)

1) Date: May 2, 2003

2) Place: Kuala Lumpur

## 3) Participants:

[Japanese side]

Mr. KATO Norifumi, Senior Vice-Minister for Public Management, Home Affairs, Posts and Telecommunications; Mr. INADA Syuichi, Director, Technology Policy Division, Information and Communications Policy Bureau; and others

[Malaysian side]

Deputy Minister Tan Chai Ho, Ministry of Energy, Communications and Multimedia (MECM); and others

## 4) Main topics

Senior Vice-Minister KATO and Deputy Minister Tan exchanged opinions on the current status and challenges in both countries, including practical efforts based upon the Joint statement announced by the ministers of Japan and Malaysia. Deputy Minister Tan acknowledged to Senior Vice-Minister KATO that technical cooperation projects and advisors offered and dispatched by the Japanese government respectively were appreciated.



Mr. KATO Norifumi, Senior Vice-Minister for Public Management, Home Affairs, Posts and Telecommunications (third from right) at opening ceremony of CRL Asia Research Center

# Outline of "International Network Interconnection Experiments for Promoting Advanced Use of IT in Asia"

## Successful results of Japan-Singapore large-volume international network interconnection experiments

### 1. Background

In consideration of Asia's characteristics such as a multilingual environment, MPHPT since FY2001 has been conducting international joint network interconnection experiments for developing technologies that enable transactions of large-volume video content, etc. over the Internet securely and easily. The purposes of the joint experiments are to put international e-transactions of large-volume video content into practical use and to contribute to widespread use of said technologies within Asia.

In order to realize international distribution/e-transactions, etc., it is vital to establish network technologies and application key technologies for supporting international distribution/e-transactions through international verification experiments. In FY2002, MPHPT in collaboration with the Infocomm Development Authority of Singapore (IDA) implemented the "International Network Interconnection Experiments for Promoting Advanced Use of IT in Asia."

### 2. Results achieved in FY2002

Based upon the results of FY2001, MPHPT in FY2002 carried out experiments on i) management technology of metadata for international distribution of large-volume video data, and ii) high-quality video IP multicast delivery technology.

Results of these experiments will be used not only for international e-transactions of large-volume video data, etc. but also for various fields including international distance learning (telelearning)/telemedicine; thus, advantages for the future such as multipurpose characteristics and appli-

cability are huge.

In addition, these key technologies will bring about foundations for creating new markets in the future and contribute to strengthening Japan's international competitiveness and promotion of structural reforms. Through use of the results of these experiments, it is anticipated that international distribution markets of large-volume video data, etc. will be formed and at the same time overseas deployment of Japan's video industries will be promoted, resulting in growth/expansion of those industries.

(See Figs)

### 3. Goal

The final purpose of these experiments is to put an international distribution model of large-volume video data, etc. over international networks mainly in Asia.

#### [Outline of experiments]

Results of verification experiments in

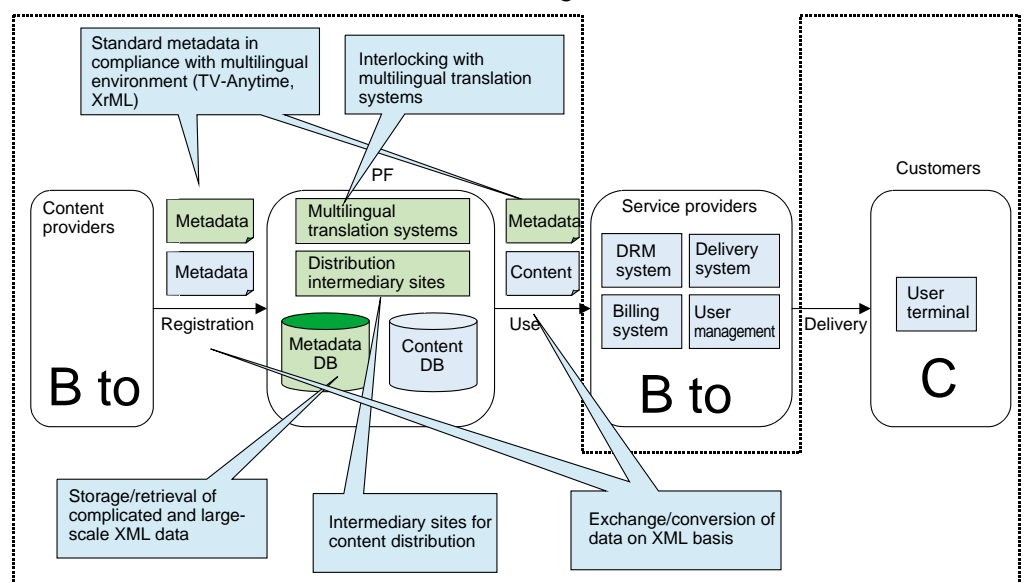
FY2002 are as follows:

#### (1) Experiments on management technology of metadata for international distribution of large-volume video data

At present, there is a business model for content distribution. For these experiments, technology verification focuses upon international distribution of large-volume video data under a multilingual environment.

More specifically, recognizing that it is essential to cope with a multilingual environment, particularly in Asia, i) metadata management technology (the first attempt to be compliant with the specification "Metadata (Normative)"<sup>\*1</sup> as defined by the "TV-Anytime Forum,"<sup>\*2</sup> an association of organizations which seeks to develop specifications) and multilingual translation technology were technologically combined, ii) a BtoBtoC model environment<sup>\*3</sup> which manages/distributes large-volume video data over

Experiments on metadata management technology for international distribution of large-volume video data



Scope of experiments

international networks was constructed, then, iii) pseudo-transactions and -delivery of content were realized.

**(2) High-quality video IP multicast delivery technology**

i) Verification of optimal delivery system

The Protocol Independent Multicast - Sparse Mode (PIM-SM)<sup>\*4</sup>, one of Internet Protocol (IP) multicast<sup>\*5</sup> protocol delivery technologies, was verified. As the world's first attempt, international high-quality video IP multicast delivery between Japan and Singapore was realized utilizing the PIM-SSM (Protocol Independent Multicast - Source Specific Multicast)<sup>\*6</sup>, the latest version of PIM-SM. Through these experiments, it was verified that PIM-SSM could be put into practical use for a broadcasting-type content delivery service model, suitable for international content delivery networks (iCDN), under a fluctuating delivery environment on a daily basis.

For these experiments, i) a model that delivers high-quality video (6 Mbps) from Japan and receives the video at multiple points in Singapore was constructed, ii) under the environment of the model, data were delivered through the above-mentioned two multicast protocols, iii) at the same time, influences were verified caused by new entries into/withdrawals from networks and route changes upon network faults, iv) comparison of PIM-SM and PIM-SSM was carried out, and v) data evaluations were conducted on the delivery status under various conditions, including influences of dynamic route recovery, etc. Through these experiments, proposals were made on standard designs for high-quality video IP multicast delivery toward realization of international content distribution networks.

ii) Verification of affinity for existing public networks

IP multicast delivery, as an "iCDN compliant with IP multicast," was realized from Japan to end users subscribing to Internet service providers (ISPs) through Singaporean domestic public networks (non-compliant with IP multicast).

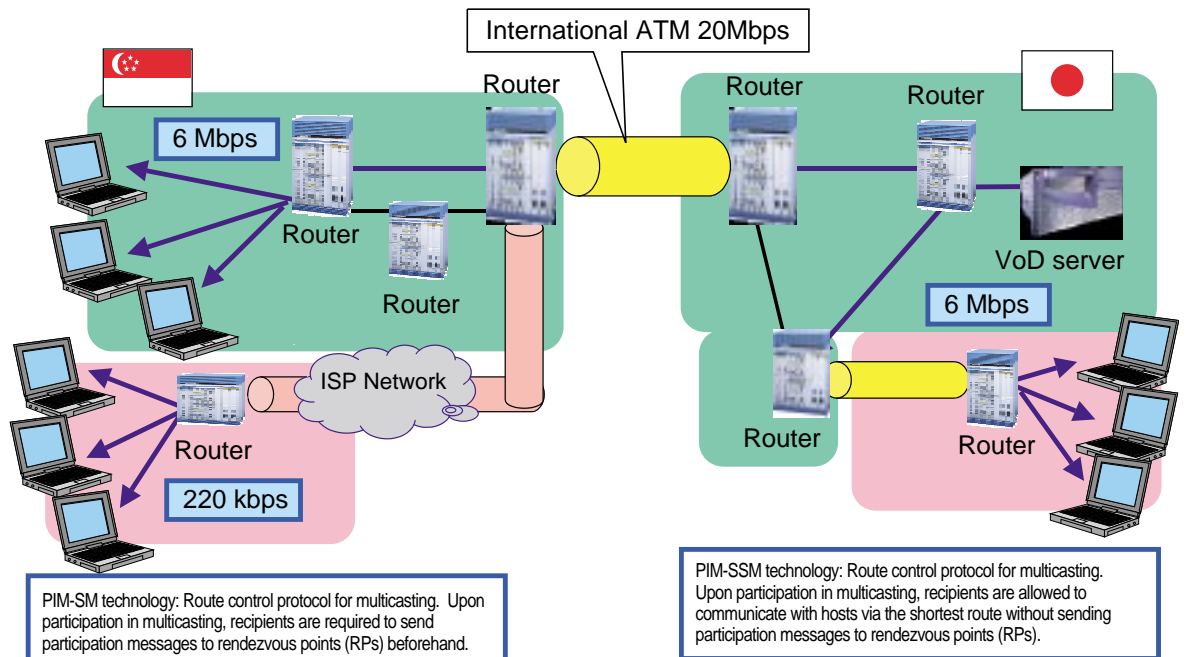
With these experiments, it was verified that it is possible to deliver large-volume digital content from Japan to general subscribers by interconnecting Singaporean existing public networks via Singaporean ISPs.

- Notes: 1. Metadata: Data concerning data (content)  
 2. TV-Anytime Forum: This Forum was formed at an inaugural meeting held in the U.S. (California), in September 1999. It has started work to develop open specifications designed to manage content on such platforms as broadcasting, the Internet, storage in an integrated manner through use of metadata.  
 3. BtoBtoC model environment: An experimental environment set and verified in these experiments. Under this experimental model, it is assumed that content holders (B) in Japan deliver content to Singaporean viewers (C) via Singaporean ISPs (A). See Fig. In these experiments, on this model environment, i) an experiment on global retrieval/browsing technologies utilizing metadata, ii) an experiment on

interconnectivity with multilingual translation systems, and iii) an experiment on distribution management technology for managing metadata, were carried out.

4. PIM-SM: A method for a computer (receiver) connected to the Internet to join networks by sending to points (routers) called "rendezvous points" the participation messages (packets) for taking part in multicast services. This method allows recipients, after sending packets to rendezvous points, to receive content via the shortest route to senders.
5. IP multicast: To simultaneously transmit the same data to specified multiple recipients. A content delivery system that i) specifies multiple addresses on the network, ii) sends a single stream of data, iii) reduces traffic burdens by making routers on the communications route of the stream to replicate and retransmit the stream according to destination addresses, and thereby iv) enables effective communications.
6. PIM-SSM: An extended function of PIM-SM that enables flexible measures for coping with network changes without using rendezvous points. This method is a route control protocol that enables the shortest route communications of IP multicast without sending participation messages (packets). PIM-SSM is suitable for broadcasting-type communications upon delivery of content from already known sender to multiple destinations.

**Experiments on high-quality video IP multicasting technology**



# "Principle of Media Ownership Rule" Pertaining to BS Digital Broadcasting to Be Relaxed

-- In Line with Radio Regulatory Council Report and Public Comments --

On May 14, 2003, MPHPT received a report from the Radio Regulatory Council (Chair: Prof. YASUDA Yasuhiko, School of Science and Engineering, Waseda University), stating that proposed amendments to the Regulations for Enforcement of the Broadcast Law (Radio Regulatory Commission Rules No. 10 of 1950) and the Essential Standards for Establishing Broadcasting Stations (Radio Regulatory Commission Rules No. 21) are appropriate. Those amendments include relaxation of the "Principle of Media Ownership Rule" pertaining to BS digital broadcasting, with the purposes of strengthening managerial foundation of BS digital broadcasters, improving their capabilities of program production and thereby promoting diffusion of BS digital broadcasting.

During the period from March 19 through April 15, 2003, MPHPT invited public comments on the draft amendments to the ministerial ordinances and the "Examination Standards concerning the Broadcast Law (MPHPT Instruction No. 68 of 2001)." In response to the invitation, five parties including broadcasters submitted comments. Outlines of these comments and the view of MPHPT are described in Annex. There is no objection against the draft amendments.

MPHPT will, paying due consideration to this report and results of public comments, prepare provisions without delay.

## 1. Background

The Final Report (announced on February 27, 2003) of the "Study Group on Broadcasting Policy" (Chair: Prof. SHIONO Hiroshi, Department of Correspondence Graduate Studies, University of East Asia) says that regarding the "Principle of Media Ownership Rule," it

is appropriate to relax the current upper limit of capital investment in BS digital program-supplying broadcasters by terrestrial broadcasters from "less than one-third of voting rights" to "one-half of voting rights or less." Following the Final Report, after comprehensive consideration on influences, etc. derived from the review of the "Principle of Media Ownership Rule," MPHPT reached a conclusion that in order to strengthen managerial foundations, improve program production capabilities and thereby encourage diffusion of BS digital broadcasting, it is indispensable to relax the "Principle of Media Ownership Rule" without delay. Thus, MPHPT will amend the "Regulations for Enforcement of the Broadcast Law," etc.

## 2. Outline of amendments

- (1) With respect to the term "control" under the provisions related to the "Principle of Media Ownership Rule," the control of a BS digital program-supplying broadcaster through possession of voting rights by a terrestrial broadcaster (including persons controlling such terrestrial broadcaster; hereinafter the same shall apply) shall mean that a terrestrial broadcaster possesses more than one-half of voting rights of a BS digital program-supplying broadcaster.
- (2) Other provisions shall be prepared.

## 3. Outline of draft amendments

- (1) Regulations for Enforcement of the Broadcast Law

As a result of obtaining approval, etc. of program-supplying operations, a BS digital program-supplying broadcaster comes to be controlled by a terrestrial broadcaster, in cases where voting rights of said BS digital program-supplying broadcaster possessed by said terrestrial broadcaster possesses are less than one-

half of the voting rights, approval, etc. of program-supplying operations may be granted to said BS digital program-supplying broadcaster.

- (2) Essential Standards for Establishing Broadcasting Stations

In cases where opening a broadcasting station for conducting terrestrial broadcasting operations, if a terrestrial broadcaster pertaining to said broadcasting station controls a BS digital program-supplying broadcaster, where voting rights of said BS digital program-supplying broadcaster possessed by said terrestrial broadcaster possesses are less than one-half of the voting rights, said broadcasting station may be opened.

- (3) Examination Standards concerning the Radio Law

With regard to treatment of possession (indirect possession) through subsidiaries, etc. pertaining to a BS digital program-supplying broadcaster, in line with the amendment to the Regulations for Enforcement of the Broadcast Law, relevant provisions shall be prepared.

## [Related press releases]

"Partial amendments to the Regulations for Enforcement of the Broadcast Law and the Essential Standards for Establishing Broadcasting Stations -- On relaxation of Principle of Media Ownership Rule pertaining to BS digital broadcasting --" (March 19, 2003)

[http://www.soumu.go.jp/s-news/2003/030319\\_9.html](http://www.soumu.go.jp/s-news/2003/030319_9.html)

"Invitation of public comments on partial amendments to the Regulations for Enforcement of the Broadcast Law, etc. -- On relaxation of Principle of Media Ownership Rule pertaining to BS digital broadcasting --" (March 19, 2003)

[http://www.soumu.go.jp/s-news/2003/030319\\_10.html](http://www.soumu.go.jp/s-news/2003/030319_10.html)