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## COMMUNICATIONS NEWS

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# Outline of "Guidelines for Radio Spectrum Reallocation"

On July 30, 2003, a report entitled the "mid- to long-term outlook of radio spectrum use and roles of the government" (Report on Inquiry No. 7: "Radio Policy Vision") was submitted by the Information and Communications Council (Chair: Mr. AKIYAMA Yoshihisa). Based on the report, in order to realize a ubiquitous network society through wireless broadband environment, MPHPT developed the guidelines for implementing a drastic review of spectrum allocation in the future.

The outline of the guidelines is as follows:

## I. Background and purposes

The Government:

- 1) aims at i) realizing a more comfortable and higher quality of life through realization of a wireless broadband environment, and ii) revitalizing Japan's industrial/economic activities through expansion of the ICT market;
- 2) upon realization of a ubiquitous network society, implements drastic review of spectrum allocation without adhering to the existing regulatory frameworks, so as to ensure spectra necessary for facilitating introduction of core radio systems comprising the wireless broadband environment; and
- 3) upon the implementation, prepares basic regulatory frameworks for the concrete revisions of "frequency assignment plan."

## II. Contents

Concrete contents of the "guidelines for spectrum reallocation" are as follows:

- 1) To ensure spectra necessary for facilitating introduction of the following core radio systems comprising a ubiquitous network society:
  - Mobile communications systems: Within five years, to ensure a bandwidth of 330 - 340 MHz mainly in the

1.7-GHz band and 2.5-GHz band. Within five to 10 years, to ensure a bandwidth of up to 1.38 GHz mainly in the 5 - 6 GHz band.

- Wireless LANs, NWA systems:

Within five years, to ensure spectra meeting demands for a bandwidth of 480 MHz mainly in the 5-GHz band. Within five to 10 years, to ensure spectra meeting demands for a bandwidth of up to 740 MHz mainly in the 5 GHz band to be ensured.

- RFID, UWB, household electric appliance with ICT functions, etc.

To be studied in consideration of needs, technical requirements, trends in R&D, etc.

- 2) Main issues of fundamental view for implementation of drastic review of spectrum allocation
  - Encourage licensees to return redundant spectra not being used efficiently
  - Reallocation of radio spectra, which are used for radio systems actually replaceable with fiber-optic cables, etc., to other radio systems such as mobile communications, for which radio spectrum use is indispensable
  - Swift reallocation of radio spectra to new radio systems with higher demand
- 3) To promote measures for facilitating spectrum reallocations
  - Should reallocation need to be completed in a short term, e.g. three years from the formulation of a radio spectrum reallocation plan, incumbent lic-

ensees will be forced to dismantle radio facilities that the licensees purchased and constructed in the past and to purchase and construct alternative facilities.

The Council recommends that MPHPT conduct studies on establishment of a scheme to compensate incumbent licensees for reallocation costs such as a portion of the remaining book value and the dismantling cost of the radio facilities, etc.

- Take leadership in discussions on radio spectrum at ITU, etc.

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## Guidelines for Radio Spectrum Reallocation

[Reports by the Information and Communications Council]  
Proposals regarding "Radio Policy Vision"

### Realization of Wireless Broadband Environment



Ideal Figure for Future Radio Policy

#### I. Drastic review of spectrum allocation

- Development of the **guideline for reallocation frequencies**
- Implement amendment of the "Frequency Assignment Plan"

- II. Policies for radio spectrum reallocation and radio spectrum use
- III. Reform of Spectrum User Fee
- IV. Promotion of R&D
- V. Facilitating smooth prevalence of radio equipment
- VI. Enhancing international strategy
- VII. Building a safer and securer environment for radio wave use

The following presents the basic policy for a concrete phased revision of the Frequency Assignment Plan. It is in accordance with the results from evaluation of the radio use investigation system.

### [FUTURE CORE RADIO SYSTEMS]

#### Mobile Radio Communications System

Large increase in demands for radio spectrum (based on forecast methods developed by ITU)

- 270 MHz bandwidth (current status)
- 330 - 340 MHz bandwidth (5 years later)
- 1,060 - 1,380 MHz bandwidth (10 years later)

#### Wireless LAN/NWA

Large increase in demands for radio spectrum (based on forecast methods developed by ITU)

- 200 MHz bandwidth (current status)
- Max. 480 MHz bandwidth (5 years later)
- Max. 740 MHz bandwidth (10 years later)

#### Terrestrial TV Broadcasting

Smooth penetration and development of digitalization

Digital broadcasting will start in December 2003 in the three major metropolitan areas (Kanto, Chukyo, Kinki); with introduction of digital broadcasting completed in all remaining areas by the end of 2006. Analog broadcasting will end in 2011.

#### RFID (Electronic tags)

Advanced utilization of electronic tags will evolve in diversified fields such as physical distribution, such as IC cards and product control.

#### UWB, ITS, Quasi-Zenith Satellite System, Intelligent Home Appliances, etc.

Development of these radio systems will progress.

### [GUIDELINE FOR SPECTRUM REALLOCATION]

- 1) Within 5 years, to ensure 330-340 MHz bandwidth, mainly in the 1.7 GHz and 2.5 GHz bands.
  - **800 MHz band** (at present, used by MCA, etc.): 8 MHz bandwidth
  - **1.7/2.5 GHz bands** (at present, used by national government fixed communication, private sector satellites, etc.): part of the bands
  - **2 GHz band**: 15 MHz bandwidth
  - Others
- 2) Within 5 to 10 years, to ensure approx. 1.38 GHz bandwidth at maximum, mainly in the 5 to 6 GHz band and below:
  - **VHF/UHF bands** (at present, used for broadcasting): part of the bands
  - **800 MHz band** (at present, used by regional disaster prevention radio and airport radio telephone): 10 MHz bandwidth
  - **1.5 GHz band** (at present, used by MCA, etc.): 18 MHz bandwidth
  - **3.5 GHz band** (at present, used by fixed services for broadcast): part of 200 MHz bandwidth
  - **4/5 GHz bands** (at present, used by fixed services for telecommunications): part of the bands

- 1) Within 5 years, to ensure MAX 480 MHz bandwidth at maximum, mainly in the 5 GHz band, to respond to spectrum demand.
  - **4.9-5.0 GHz band** (at present, used by telecommunications carrier fixed communications): 100 MHz bandwidth
  - **5.25-5.35 GHz band** (at present, used by meteorological radars of national government and electric power companies, etc.): 100 MHz bandwidth
  - **5.47-5.725 GHz band** (at present, used by national government radar, etc.): part of the band
- 2) Within 5 to 10 years, to ensure max. 740 MHz bandwidth, mainly in the 5 GHz band, to respond to spectrum demand.
  - **5 GHz band** (at present, used by fixed services for telecommunications): part of the band
  - Expansion in utilization of the **sub-millimeter wave band**, and development and introduction of technology utilizing the **millimeter wave band (59-66 GHz)**.

- 1) Spectrum allocation for prompt development of digital broadcasting.
- 2) From 2012 onward, the **UHF band** will be utilized by mobile radio communications systems, etc.
- 3) From 2011 onward, the **VHF band** will be assigned to the systems such as digital terrestrial sound broadcasting and mobile radio communication, taking into account the demands for these systems.

At present, 135 kHz band (10-135 kHz), 13.5 MHz band (13.553-13.567 MHz), 2.4 GHz band (2.4-2.4835 GHz), etc. are ensured. In addition to these bands, ensuring new frequency bands near the **950 MHz band** is also taken into consideration to respond to various needs.

- 1) UWB wireless system: Information and Communications Council has studied the technical requirement of UWB wireless system (**3.1 - 10.6 GHz**) so that it is scheduled to be introduced during next fiscal year.
- 2) ITS related radio wave system: More efficient use of allocated spectrum **in the 5.8 GHz band** and study the advancement of the system will be promoted.
- 3) Quasi-zenith satellite system: Details such as frequency and bandwidth will be studied, taking into consideration for spectrum allocation to broadcast satellite-service (sound) in the 2.6 GHz band in according to the WRC-03 decision and communications and GPS, R&D trends.
- 4) Household electric appliances with ICT functions: Based on the results of surveys on actual radio spectrum and market needs, details such as frequency assignment (**around the 5 GHz band**) and the necessary bandwidth is being taken into consideration.

Gradually implement amendment of the "Frequency Assignment Plan"

#### [Terminologies]

NWA system: NWA is the abbreviation of Nomadic Wireless Access. It is a system for non-residential wireless access such as "hot spots."

RFID: Abbreviation of Radio Frequency Identification. It is electronic tagging.

UWB system: UWB is the abbreviation of Ultra-wide Band. It is the ultra-wide band wireless system.

ITS: Abbreviation of Intelligent Transport System. It is an advanced road traffic system.

# Dialogue between WSIS Goodwill Ambassador KUBO and Mr. Adama Samassékou, President of the WSIS Preparatory Committee

On October 11, 2003, NHK announcer KUBO Junko\*<sup>1</sup>, who has been actively working as a Goodwill Ambassador to the World Summit on the Information Society (WSIS) since July 2003, interviewed with Mr. Adama Samassékou\*<sup>2</sup>, President of the WSIS Preparatory Committee (PrepCom) on the significance of WSIS in Geneva, where WSIS will be held in December 2003. The outline of the dialogue is as follows:

**KUBO (Q)** "Please let me know the significance of this WSIS, focusing on the information society?"



Ms. KUBO

**Samassékou (A)** "At the Summit, three major issues will be deliberated upon. Namely, elimination of the digital divide; accelerated achievement of the U.N. Millennium Development Goals; and ensuring cultural and linguistic diversity. First of all, what I want to let you all know is that this Summit is an important milestone toward a 'shared-knowledge' society and not simply a conference on ICT, but rather a social project on a global scale. UNESCO also explicitly noted that 'we will build knowledge societies within a world of diversity.' In addition, the points that WSIS is made up of two phases\*<sup>3</sup> and that all rel-

evant stakeholders including governments are trying to share recognitions are the features of WSIS."



Mr. Samassékou

**Q** "What are those changes being aimed for by WSIS and how will these be accomplished?"

**A** "The first aim of WSIS is to deepen the recognition of each member state's government as regards the fact that the world can be changed through the use of ICT. Next, there is the need to promote solidarity among us in order to resolve difficult problems such as addressing international socioeconomic differences. Therefore, WSIS will develop a 'Declaration of Principles' that reflects the thinking of each member state and a 'Plan of Action' that indicates the measures

that need to be implemented."

**Q** "As the president of PrepCom, what do you think should be included in the Declaration of Principles, etc.?"

**A** "Since there are negotiations ongoing concerning a variety of topics, as the president it is difficult for me to talk about this. However, rather than including in the declaration many issues yet unresolved by the stakeholders, it is more important to achieve a general consensus among the member states. Thus, it is thought that the declaration should outline the principles for building an information society conducive to the shared-knowledge society. During current discussions, no consensus has been reached by the stakeholders concerning such topics as the Internet governance and the establishment of world funds for digital solidarity."

**Q** "It must be a difficult task."

**A** "It is important that the stakeholders maintain a spirit of harmony, realized mutual understanding and attempt to wholeheartedly find a compromise. It is with such efforts that WSIS can become a success, no? I think that it is important for this WSIS to become a 'summit of solidarity' and that it should realize solidarity between governments and the private sector, between the private sector and civil society and between civil society and governments."

**Q** "Japan announced its 'e-Japan Strategy' in 2001 and has attempted to

build the world's most advanced information society through the concerted efforts of both the public and private sectors. As a result, Japan's ICT sector has progressed considerably. What are your expectations regarding Japan?"

**A** "It is possible for Japan to realize many things. We wish to find out how Japan henceforth will work to build an information society and, in order to improve the current situation, want to hear about how Japan has up to now built up a good working

relationship between the public and private sectors, for example. In addition, we think it is an honor to have Japan participate in WSIS, including its Summit events. Of course, the work of the WSIS Goodwill Ambassador is extremely important as well. Kubo-san, let us work together to make this WSIS an overwhelming success."

**Q** "I will work hard too. Thank you very much."

**Notes:**

1. For further information on Goodwill Ambassador KUBO, please refer to the following URL:  
<http://www.soumu.go.jp/wsis-ambassador/index.html>
2. Mr. Samassékou, aged 56, was born in Mali. He has served as Malian Minister of Education and Spokesperson for the Government of Mali; his present position is President, African Academy of Languages (equivalent to a minister). He was elected President of PrepCom at the first WSIS PrepCom.
3. The second phase of WSIS will be held in Tunis, Tunisia, in 2005.