

JMA'S ACTIVITIES FOR WRC-07

This paper reports on JMA's activities for the World Radiocommunication Conference 2007 (WRC-07) and preliminary common proposals from the Asia-Pacific Telecommunity (APT) on WRC-07's agenda items related to the Meteorological Satellite Service (MetSat).

For agenda Item 1.2, JMA has requested the Japanese radiocommunication administration to support a bandwidth extension of the current 18.1-18.3 GHz allocation for MetSat (space-to-Earth) from 200 MHz to 300 MHz of contiguous spectrum.

In regard to agenda Item 1.4, JMA has requested correction of a description on the utilization of the 450-470 MHz band in a report by the International Telecommunication Union Radiocommunication Sector (ITU-R) to reflect the fact that JMA has been using the band to provide earthquake and tsunami warning information and will continue the service using the same band.

JMA will continue preparatory activities for future WRC meetings regarding protection of the existing frequency bands and acquisition of the new frequency bands necessary for MetSat through exchanging information with CGMS members as well as the WMO/CBS/SG-RFC.

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1 INTRODUCTION

The World Radiocommunication Conference 2007 (WRC-07) will be held from 22 October to 16 November 2007. This paper reports on JMA's preparatory activities for WRC-07 and preliminary common proposals from the Asia-Pacific Telecommunity (APT) on agenda items related to the Meteorological Satellite Service (MetSat) in WRC-07. JMA will continue preparatory activities for future WRC meetings regarding protection of the existing frequency bands and acquisition of the new frequency bands necessary for MetSat through exchanging information with CGMS members as well as the WMO/CBS/SG-RFC.

2 WRC-07 AGENDA ITEMS

2.1 Agenda Item 1.2

"To consider allocations and regulatory issues related to the Earth exploration-satellite (passive) service, space research (passive) service and the meteorological satellite service in accordance with Resolutions 742 (WRC-03) and 746 (WRC-03)."

In this agenda item, the criteria for sharing between the MetSat and other services in the 18-18.4 GHz band will be discussed with the intention of extending the bandwidth of the current 18.1-18.3 GHz allocation for MetSat (space-to-Earth).

At WRC-03, EUMETSAT proposed to extend the bandwidth of the current 18.1-18.3 GHz allocation for MetSat (space-to-Earth) from 200 MHz to 300 MHz of contiguous spectrum for the next generation of geostationary meteorological satellites. JMA supports the EUMETSAT proposal, as such an extension will be beneficial to the radio communication performance of meteorological satellites, particularly for the high-rate downlink of raw observation data by the next generation of geostationary meteorological satellites.

JMA has requested the Japanese radiocommunication administration (a function of the Ministry of Internal Affairs and Communications (MIC)) to support the extension of the frequency bandwidth. The MIC represented Japan's preliminary views at a meeting of the APT Conference Preparatory Group for WRC-07 (APG07) in Pusan, Korea in July 2007 as follows:

"Japan supports sharing studies of possibility to extend the geostationary meteorological satellites allocation within the bands 18-18.4 GHz. Sharing criteria for the extension should be appropriately defined, based on the result of the ITU-R studies in the possibility of sharing this band with other allocated services."

At the APG07, the meeting summarized the preliminary APT common proposal on this agenda point as follows:

“In order to secure the necessary frequency spectrum for next-generation geostationary meteorological satellite (MetSat) systems, APT supports extension of the existing 18 GHz MetSat allocation by 100 MHz. However, existing services (FS, FSS including feeder-links for the BSS Plan (Regions 1 and 3) and MS) must be protected from harmful interference due to the possible extension of MetSat allocation. Additionally, extending the $\pm 8^\circ$ coordination arc currently applicable to FSS networks in this band, to MetSat in the band 18.1-18.4 GHz is appropriate. This could be accomplished through appropriate modifications of Table 5-1 in RR Appendix 5.”

2.2 Agenda item 1.4

“To consider frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 taking into account the results of ITU-R studies in accordance with Resolution 228 (Rev.WRC-03).”

In this agenda point, discussion will be focused on the frequency-band sharing criteria between International Mobile Telecommunication 2000 (IMT-2000) and systems beyond IMT-2000 (refer to below as IMT-2000 & Beyond) and other radio communication services that already have frequency allocations in the relevant bands.

For the future development of IMT-2000 & Beyond, Working Party 8F (WP8F), which is responsible for the system aspects of IMT-2000 & Beyond under the International Telecommunication Union’s Radiocommunication Sector (ITU-R), has been conducting studies on frequency sharing and compatibility with other radio communication services that already have frequency allocations. In August 2006, WP8F submitted a draft report to the ITU-R on studies for sharing between other radio communication services and IMT systems operating in the 450-470 MHz band. The report said that no countries were using or planning to use this band for MetSat (space-to-Earth) at that time, and thus studies on sharing between IMT systems and MetSat (space-to-Earth) were not required.

However, JMA has been using the 468 MHz band to provide earthquake and tsunami warning information to users in Japan via the Japanese geostationary meteorological satellites, and will continue the service using the same band. JMA therefore explained to the MIC that it is necessary to correct the description in the draft report in order to reflect Japan’s current status and future plans for utilization of the 460-470 MHz band by Japanese geostationary meteorological satellites, and that sharing studies are necessary. The MIC requested WP8F to correct the description to reflect the actual status in Japan.

At the APG07, the meeting summarized the preliminary APT common proposal on this agenda point as follows:

“With regard to the terrestrial components of the future development of IMT-2000 and systems beyond IMT-2000, APT supports that the bands 450-470 MHz, 2300-2400 MHz should be identified and Method 1A under Agenda Item 1.4 could be applied.”