

RESOLUTION 222 (Rev.WRC-07)

**Use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz
by the mobile-satellite service, and studies to ensure
long-term spectrum availability for the aeronautical
mobile-satellite (R) service**

The World Radiocommunication Conference (Geneva, 2007),

considering

a) that prior to WRC-97, the bands 1 530-1 544 MHz (space-to-Earth) and 1 626.5-1 645.5 MHz (Earth-to-space) were allocated to the maritime mobile-satellite service and the bands 1 545-1 555 MHz (space-to-Earth) and 1 646.5-1 656.5 MHz (Earth-to-space) were allocated on an exclusive basis to the aeronautical mobile-satellite (R) service (AMS(R)S) in most countries;

b) that WRC-97 allocated the bands 1 525-1 559 MHz (space-to-Earth) and 1 626.5-1 660.5 MHz (Earth-to-space) to the mobile-satellite service (MSS) to facilitate the assignment of spectrum to multiple MSS systems in a flexible and efficient manner;

c) that WRC-97 adopted No. **5.353A** giving priority to accommodating spectrum requirements for and protecting from unacceptable interference distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS) in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz and No. **5.357A** giving priority to accommodating spectrum requirements for and protecting from unacceptable interference the AMS(R)S providing transmission of messages with priority categories 1 to 6 in Article **44** in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz;

d) that AMS(R)S is an essential element of ICAO CNS/ATM to provide safety and regularity of flight in the civil air transportation,

further considering

a) that coordination between satellite networks is required on a bilateral basis in accordance with the Radio Regulations, and, in the bands 1 525-1 559 MHz (space-to-Earth) and 1 626.5-1 660.5 MHz (Earth-to-space), coordination is partially assisted by regional multilateral meetings;

b) that, in these bands, geostationary satellite system operators currently use a capacity-planning approach at multilateral coordination meetings, with the guidance and support of their administrations, to periodically coordinate access to the spectrum needed to accommodate their requirements;

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c) that spectrum requirements for MSS networks, including the GMDSS and AMS(R)S, are currently accommodated through the capacity-planning approach and that, in the bands to which Nos. **5.353A** or **5.357A** apply, this approach, and other methods may assist in accommodating the expected increase of spectrum requirements for GMDSS and AMS(R)S;

d) that Report ITU-R M.2073 has concluded that prioritization and inter-system pre-emption between different mobile-satellite systems is not practical and, without a significant advance in technology, is unlikely to be feasible for technical, operational and economical reasons. It summarized that prioritization and intersystem real-time pre-emption would not necessarily increase the efficiency of spectrum use compared to the current situation, but it would certainly complicate substantially the coordination process and network structure;

e) that there is existing and increasing demand for spectrum for AMS(R)S and non-AMS(R)S by several mobile satellite systems in the bands 1525-1559 MHz and 1626.5-1660.5 MHz, and that the application of this Resolution may impact the provision of services by non-AMS(R)S systems in the mobile satellite service;

f) that future requirements for AMS(R)S and GMDSS spectrum may require additional allocations,

recognizing

a) that absolute priority to all telecommunications concerning safety of life at sea, on land, in air or in outer space is given by No. 191 of the ITU Constitution;

b) that the International Civil Aviation Organization (ICAO) has adopted Standards and Recommended Practices (SARPs) addressing satellite communications with aircraft in accordance with the Convention on International Civil Aviation;

c) that all air traffic communications as defined in Annex 10 to the Convention on International Civil Aviation fall within priority categories 1 to 6 of Article **44**;

d) that Table 15-2 of Appendix **15** identifies the bands 1530-1544 MHz (space-to-Earth) and 1626.5-1645.5 MHz (Earth-to-space) for distress and safety purposes in the maritime mobile-satellite service as well as for routine non-safety purposes,

resolves

1 that, in frequency coordination of MSS in the bands 1525-1559 MHz and 1626.5-1660.5 MHz, administrations shall ensure that the spectrum needed for distress, urgency and safety communications of GMDSS, as elaborated in Articles **32** and **33**, in the bands where No. **5.353A** applies, and for AMS(R)S communications within priority categories 1 to 6 of Article **44** in the bands where No. **5.357A** applies, is accommodated;

2 that administrations shall ensure the use of the latest technical advances, in order to achieve the most flexible and practical use of the generic allocations;

3 that administrations shall ensure that MSS operators carrying non-safety-related traffic yield capacity, as and when necessary, to accommodate the spectrum requirements for distress, urgency and safety communication of GMDSS communications, as elaborated in Articles 32 and 33, and for AMS(R)S communications within priority categories 1 to 6 of Article 44; this could be achieved in advance through the coordination process in *resolves* 1, and, when necessary, through other means if such means are identified as a result of studies in *invites ITU-R*,

invites ITU-R

to conduct, in time for consideration by WRC-11, the appropriate technical, operational and regulatory studies to ensure long-term spectrum availability for the aeronautical mobile-satellite (R) service (AMS(R)S) including:

- i) to study, as a matter of urgency, the existing and future spectrum requirements of the aeronautical mobile-satellite (R) service;
- ii) to assess whether the long-term requirements of the AMS(R)S can be met within the existing allocations with respect to No. 5.357A while retaining unchanged the generic allocation for the mobile-satellite service in the bands 1525-1 559 MHz and 1626.5-1 660.5 MHz, and without placing undue constraints on the existing systems operating in accordance with the Radio Regulations;
- iii) to complete studies to determine the feasibility and practicality of technical or regulatory means, other than the coordination process referred to in *resolves* 1 or the means considered in Report ITU-R M.2073, in order to ensure adequate access to spectrum to accommodate the AMS(R)S requirements as referenced in *resolves* 3 above, while taking into account the latest technical advances in order to maximize spectral efficiency;
- iv) if the assessment identified in *invites ITU-R* i) and ii) indicates that these requirements cannot be met, to study existing MSS allocations or possible new allocations only for satisfying the requirements of the aeronautical mobile satellite (R) service for communications with priority categories 1 to 6 of Article 44, for global and seamless operation of civil aviation taking into account the need to avoid undue constraints on existing systems and other services,

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to consider the results of the above ITU-R studies and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz,

invites

the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the International Air Transport Association (IATA), administrations and other organizations concerned to participate in the studies identified in *invites ITU-R* above.