

RESOLUTION 215 (REV.WRC-12)

Coordination process among mobile-satellite systems and efficient use of the allocations to the mobile-satellite service in the 1-3 GHz range

The World Radiocommunication Conference (Geneva, 2012),

considering

- a)* that space-to-Earth transmissions of mobile-satellite systems are constrained to limit their power flux-density over areas where the frequency band is shared with terrestrial systems;
- b)* that a number of proposed mobile-satellite systems can provide a good service to users within the power flux-density limits given in Annex 1 to Appendix 5 to the Radio Regulations;
- c)* that when maximum communication capacity is achieved by systems in the mobile-satellite service (MSS) a major portion of the interference into each of these systems will come from the other mobile-satellite systems sharing the frequency band, and, consequently, if one system starts to transmit at higher power, all others need to do the same in order to overcome mutual interference;
- d)* that ITU-R is studying the efficient use of the radio spectrum and frequency sharing within the MSS, that Recommendations ITU-R M.1186 and ITU-R M.1187 are a basis for further study, and that additional preliminary texts are available or can be provided by administrations on this matter;
- e)* that, in a codirectional, co-frequency and co-coverage sharing environment, capacities of systems using spread-spectrum multiple-access techniques are affected by technical and operational characteristics of other MSS systems using similar multiple-access techniques;
- f)* that in many parts of the world and in certain frequency bands in the 1-3 GHz range, significant congestion already exists due to use by other terrestrial and space services;
- g)* the need to make most efficient use of frequencies in the MSS allocations,

recognizing

that, as a means to ensure that the frequency bands allocated to the MSS can be used in an efficient manner, there is an urgent demand for:

- a)* criteria to be established by ITU-R to be used in determining the need to coordinate between mobile-satellite systems; and
- b)* detailed methods of interference calculation to be used by administrations in the coordination process;
- c)* ITU-R studies which should not impede the timely deployment of any MSS systems,

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resolves to invite ITU-R

1 to continue its studies on this subject and develop, as a matter of urgency, criteria for determining the need to coordinate and calculation methods for determining levels of interference, as well as the required protection ratios between MSS networks;

2 to study, as a matter of urgency, the use of technically and operationally feasible techniques to allow for improvements in spectrum efficiency in MSS systems,

further resolves

1 that ITU-R studies should be focused on the technical and operational characteristics of systems using spread-spectrum multiple-access techniques that can allow co-frequency, co-coverage, codirectional sharing but which involve cooperation among systems' operators to maximize the efficient use of spectrum by multiple MSS systems using such access techniques;

2 that administrations responsible for the introduction of mobile-satellite systems are urged to implement, as practicable, the latest available technologies to improve spectrum efficiency consistent with the requirement to offer viable MSS services;

3 to recommend that administrations be encouraged to use the most advanced technology available when preparing to implement their global MSS systems in the 1-3 GHz range so that they may operate, if necessary, in different frequency bands in different regions, in accordance with the MSS allocations in the 1-3 GHz range decided by WRC-97.