

2015 WORLD RADIOCOMMUNICATION CONFERENCE

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

TITLE: To consider the identification of frequency bands, among those currently allocated to the FSS in the range from 37.5 to 51.4 GHz, where NGSO satellite systems would coordinate with GSO satellite networks under No. **9.11A** and No. **22.2** would not apply

AGENDA ITEM 10: *to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention,*

U.S. PROPOSAL: The US proposes the adoption of an agenda item for the next WRC aiming at the consideration of the possibility to identify frequency bands, among those currently allocated to the FSS in the range from 37.5 to 51.4 GHz, where NGSO satellite systems would coordinate with GSO satellite networks on a first-come-first-served basis, as is currently the case for the frequency bands covered by **5.523A**, which are not subject to efd limits in the Radio Regulations.

BACKGROUND

WRC-97 approved **5.523A** whereby the use of certain frequency bands by geostationary and non-geostationary fixed satellite service networks is subject to the application of the provisions of No. **9.11A** and No. **22.2** does not apply.

According to that footnote, non-geostationary-satellite networks should not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix 4 notification information was considered as having been received by the Bureau prior to a certain date, but after that date **9.11A** would apply.

The WRC action was motivated by the understanding that NGSO satellite systems should be allowed to operate in certain frequency ranges unconstrained by the need to protect future GSO satellite networks and therefore able to make full use of the technical characteristics and service capabilities inherent to NGSO constellations.

The same type of approach would apply to any frequency bands potentially identified under the new agenda item.

RESULTS OF STUDIES

As of today, there is only one satellite network notified in the frequency range 37.5-39.5 GHz, no notified networks in the frequency range 39.5-40.5 GHz, and two notified networks in the frequency range 40.5-42.5 GHz (downlink frequency allocations). Additionally, there are 26 satellite networks notified in the frequency range 42.5-43.5 GHz, 65 networks notified in the frequency range 43.5-45.5 GHz, no networks notified in the frequency range 45.5-47 GHz, two networks notified in the frequency range from 47.2-49.2 GHz, one network notified in the frequency range 49.2-50.2 GHz and no satellite networks notified in the frequency range 50.4-51.4 GHz.

Judicial choice of frequency bands should minimize the impact on notified GSO satellite networks.

Proposals

MOD USA/10/1

RESOLUTION 808 (WRC-~~12~~15)

Preliminary aAgenda for the 2018 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, ~~2012~~2015),

Reasons: To modify the agenda for WRC-18 to add a new item.

ADD USA/10/2

XX to consider the identification of frequency bands, among those currently allocated to the FSS in the range from 37.5 to 51.4 GHz, where NGSO satellite systems would coordinate with GSO satellite networks under No. **9.11A** and No. **22.2** would not apply;

Reasons: To allow the introduction of NGSO systems in certain frequency ranges in the band from 37.5 to 51.4 GHz unconstrained by No. **22.2** in order to allow NGSO satellite systems operations unconstrained by the need to protect future GSO satellite networks and allow the full use of the technical characteristics and service capabilities inherent to NGSO constellations.

ADD USA/10/3

DRAFT RESOLUTION [USA/10/NGSO V-BAND] (WRC-15)

Studies relating to the identification of frequency bands allocated to the FSS in the range from 37.5 to 51.4 GHz where NGSO satellite systems would coordinate with GSO satellite networks under No. 9.11A

The World Radiocommunication Conference (Geneva, 2015),

considering

a) that the International Telecommunication Union has, among its purposes, “to promote the extension of the benefit of the new telecommunication technologies to all the world’s inhabitants” (No. 6 of the Constitution of the International Telecommunication Union - Edition 2011);

b) that it is desirable, in this respect, to promote systems capable of providing universal service;

c) that new telecommunication services need advanced and reliable networks permitting high-capacity communications;

- d) the need to encourage the development and implementation of new technologies;
- e) that systems based on the use of new technologies associated with both geostationary (GSO) and non-geostationary (non-GSO) satellite constellations are capable of providing the most isolated regions of the world with high-capacity and low-cost means of communication;
- f) that there should be equitable access to the radio-frequency spectrum and orbital resources in a mutually acceptable manner that allows for new entrants in the provision of services;
- g) that all Member States would benefit from the implementation of proposed systems in the allocated spectrum and from avoidance of monopolization or exclusive use of an allocation by a single system;
- h) that the operation of such systems requires a suitable amount of spectrum in appropriate frequency bands;
- i) that decisions on this matter should permit the operation of as many systems as possible;
- j) that there is a need for the provision of services on a competitive basis between GSO fixed-satellite service (FSS) and non-GSO FSS systems as well as between non-GSO FSS and non-GSO FSS systems;
- k) that the Radio Regulations must be sufficiently flexible to accommodate the introduction and implementation of innovative technologies as they evolve, and allow the further development and implementation of any proposed system in conformity with their provisions,
- l) that No. 22.2 produces uncertainty in the operation of non-GSO systems due to the obligation to protect future GSO networks operating in the frequency bands where that regulatory provision applies, with consequential risks for both types of systems;
- m) that the protection of GSO satellite networks from potential interference caused by non-GSO systems and vice-versa typically requires the avoidance of transmissions in directions near the geostationary orbit, which may not be possible for certain types of constellations using non-geostationary orbits;
- n) that it would be desirable to have frequency bands in the 37.5 to 51.4 GHz frequency range allocated in such a way that GSO satellite networks and non-GSO satellite systems would be coordinated on a first-come-first-served basis,

noting

- 1 that information relating the FSS satellite networks in the 37.5 to 51.4 GHz frequency bands has been communicated to the Bureau;
- 2 that some of these networks are in operation and others will be operated in the near future and, consequently, difficulties may be experienced in modifying their characteristics;
- 3 the need to protect existing and future terrestrial and space services and systems;

4 that the frequency band 50.2-50.4 GHz is allocated on a primary basis to the EES (passive) and SR (passive) services which must be adequately protected from interference caused by unwanted emissions in adjacent frequency bands.

recognizing

that WRC-97 approved **5.523A** whereby the use of certain frequency bands by geostationary and non-geostationary fixed satellite service networks is subject to the application of the provisions of No. **9.11A** and No. **22.2** does not apply.

resolves to invite ITU-R

to consider the identification of frequency bands, among those currently allocated to the FSS in the range from 37.5 to 51.4 GHz, where NGSO satellite systems would coordinate with GSO satellite networks under No. **9.11A** and No. **22.2** would not apply.

invites administrations

to participate in the studies by submitting contributions to ITU-R.