

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

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*

Background Information: Increasing demand for broadband data capacity is leading the industry to increasingly rely on opportunities for off-loading from traditional cellular networks onto Radio Local Area Network (RLAN) and small-celled wireless infrastructure. Additionally, there is strong demand for inexpensive, widely available, high-speed internet access and networking capabilities.

To address this demand for greater network data capacity, WRC-15 Agenda Item 1.1 considered additional primary mobile service allocations for terrestrial mobile broadband capabilities, including the possible expansion of RLAN use into the 5350-5470 MHz band.

Initial studies conducted in Joint Task Group (JTG) 4-5-6-7 indicated that sharing was not possible between RLANs and incumbent services in the 5350-5470 MHz band utilizing existing mitigation measures. The existing mitigation techniques studied included a 200 mW power limit, indoor restriction, and Dynamic Frequency Selection (DFS) designed for the 5150-5350 MHz and 5470-5725 MHz frequency bands. Additionally, the same ITU working parties began exploring possible new mitigation techniques to enable sharing between RLANs and incumbent services in the 5350-5470 MHz. Unfortunately, the WRC-15 study cycle provided insufficient time to complete the development and consideration of the proposed mitigation techniques and further study is required.

Given the increased demand for RLANs, along with the need to ensure protection of important incumbent services, the United States of America proposes a future WRC agenda item to continue the studies and consider additional mitigation measures that may enable sharing between RLANs and incumbent services in the 5350-5470 MHz band.

Proposal:

MOD USA/10/1

RESOLUTION 806 (WRC-15)

Agenda for the 2019 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

ADD USA/10/2

1.[5 GHz] to consider, in accordance with Resolution [5GHz] (WRC-2015), regulatory provisions and additional allocations to the mobile service in the 5350-5470 MHz band, taking into account the results of studies;

Reasons: To enable wide-band applications for RLAN at 5350-5470 MHz while ensuring protection of incumbent services.

RESOLUTION [5GHz] (WRC-15)

Consideration of a mobile service allocation and identification for the implementation of wireless access systems (WAS) including radio local area networks (RLAN) in the 5350-5470 MHz band

The World Radiocommunication Conference (Geneva, 2003),

considering

- a) that since WRC-07 there has been tremendous growth in the demand for mobile broadband applications with multimedia capabilities;
- b) that in many developing markets the main delivery mechanism for broadband access is expected to be through mobile devices;
- c) that adequate and timely availability of spectrum and supporting regulatory provisions is essential to support future growth of mobile broadband systems;
- d) that the band 5 350-5 460 MHz is allocated worldwide on a primary basis to the Earth exploration-satellite service (active) (No. **5.448B**);
- e) that the band 5 350-5 460 MHz is also allocated worldwide on a primary basis to the space research service (active) (No. **5.448C**);
- f) that the band 5 350-5 460 MHz is allocated worldwide on a primary basis to the aeronautical radionavigation service (No. **5.449**);
- g) that the band 5 350-5 470 MHz is also allocated worldwide on a primary basis to the radio-location service (No. **5.448D**);
- h) that the band 5 460-5 470 MHz is allocated worldwide on a primary basis to the radionavigation service (No. **5.449**);
- i) that the band 5 460-5 470 MHz is also allocated worldwide on a primary basis to the EESS (active), SRS (active), and radiolocation service (No. **5.448D**);
- j) that there is a need to protect the existing primary services in the 5 150-5 350 MHz, 5350-5470 MHz, and 5 470-5 725 MHz bands;
- k) that studies have shown that sharing between incumbent services and mobile service applications in the frequency range 5 350-5 470 MHz is not possible with current mitigation techniques but may be possible if new or advanced mitigation techniques are developed that prove to be feasible and able to be fielded in commercially viable systems;
- l) that there is a need to specify operational restrictions for WAS, including RLANS, in the mobile service in the band 5 350-5 470 MHz in order to protect incumbent service systems;
- m) that the deployment density of WAS, including RLANS, will depend on a number of factors including intrasystem interference and the availability of other competing technologies and services,

noting

- a) that initial studies have begun in the ITU-R based on work for consideration of potential mobile allocations and identification for terrestrial mobile allocations under WRC-15 agenda item 1.1;
- b) that the regulatory provisions for RLANS to enable sharing in the frequency ranges 5150-5350 MHz and 5470-5725 MHz is insufficient to enable sharing in the 5350-5470 MHz frequency range;

recognizing

- a) that WAS, including RLANs, provide effective broadband solutions;
- b) that there is a need for administrations to ensure that WAS, including RLANs, meet the required mitigation techniques, for example, through equipment or standards compliance in conjunction with effective regulatory procedures,

resolves

that WRC-19 consider a mobile allocation and identification to WAS including RLAN in the 5350-5470 MHz frequency range while ensuring:

- 1 Protection of current and future deployments of incumbent services;
- 2 Consideration of effective operational requirements which can be implemented by WAS including RLAN to enable sharing with incumbent services,

invites ITU-R

to conduct, and complete in time for WRC-19, the appropriate studies leading to technical and operational recommendations to facilitate sharing between WAS including RLAN and the incumbent services.

ATTACHMENT

PROPOSAL FOR ADDITIONAL AGENDA ITEM FOR CONSIDERATION OF A MOBILE SERVICE ALLOCATION AND IDENTIFICATION FOR RLAN FOR THE IMPLEMENTATION OF WIRELESS ACCESS SYSTEMS INCLUDING RADIO LOCAL AREA NETWORKS IN THE 5350-5470 MHZ BAND

Subject: Proposed Future WRC Agenda Item for WRC-2019 for consideration of a mobile service allocation and identification for RLAN for the implementation of wireless access systems including radio local area networks in the 5350-5470 MHz band

Origin: United States of America

Proposal: To consider a mobile service allocation and identification for RLAN for the implementation of wireless access systems including radio local area networks in the 5350-5470 MHz band.

Background/reason:

Initial studies conducted in Joint Task Group (JTG) 4-5-6-7 indicated that sharing was not possible between RLANs and incumbent services in the 5350-5470 MHz band utilizing existing mitigation measures. The existing mitigation techniques studied included a 200 mW power limit, indoor restriction, and Dynamic Frequency Selection (DFS) designed for the 5150-5350 MHz and 5470-5725 MHz frequency bands. Additionally, the same ITU working parties began exploring possible new mitigation techniques to enable sharing between RLANs and incumbent services in the 5350-5470 MHz. Unfortunately, the WRC-15 study cycle provided insufficient time to complete the development and consideration of the proposed mitigation techniques and further study is required.

Radiocommunication services concerned: Earth Exploration-Satellite Service (active), Space Research Service (active), Aeronautical Radionavigation, Radiolocation and Radionavigation

Indication of possible difficulties: None foreseen.

Previous/ongoing studies on the issue: Studies are underway in WP 5A, WP 5B and WP 7C to examine mitigation techniques. JTG 4-5-6-7 conducted initial sharing studies during WRC-15 study cycle.

<i>Studies to be carried out by:</i> SG 5	<i>with the participation of:</i> SG 7
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ITU-R Study Groups concerned: SG 5 and SG 7

ITU resource implications, including financial implications (refer to CV126): Minimal

Common regional proposal: Yes/No

Multicountry proposal: Yes/No

Number of countries:

Remarks