

SUB-COMMITTEE ON NAVIGATION,
COMMUNICATIONS AND SEARCH AND
RESCUE
7th session
Agenda item 12

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**RESPONSE TO MATTERS RELATED TO THE RADIOCOMMUNICATION ITU R STUDY
GROUP AND ITU WORLD RADIOCOMMUNICATION CONFERENCE**

Liaison statement from ICAO

**Adjacent band compatibility studies of IMT-Advanced systems in
the mobile service in the band below 1 518 MHz with respect
to MSS systems operating in 1 518 – 1 559 MHz**

Note by the Secretariat

SUMMARY

Executive summary: This document contains in the annex a liaison statement from ICAO regarding the Adjacent band compatibility studies of IMT – Advanced systems in the mobile service in the band below 1 518 MHz with respect to MSS systems operating in 1 518 – 1 559 MHz

*Strategic direction,
if applicable:* 2

Output: 2.1

Action to be taken: Paragraph 3

Related documents: NCSR 7/12, paragraph 2.30, and annex, paragraphs 8.1 to 8.7

Introduction

1 This document contains in the annex a liaison statement from the International Civil Aviation Organization (ICAO) regarding the Adjacent band compatibility studies of IMT – Advanced systems in the mobile service in the band below 1 518 MHz with respect to MSS systems operating in 1 518 – 1 559 MHz.

2 This liaison statement was considered at the fifteenth meeting of the Joint IMO/ITU Experts Group, as reported in document NCSR 7/12, paragraph 2.30, and annex, paragraphs 8.1 to 8.7.

Action requested of the Sub-Committee

3 The Sub-Committee is invited to note the information provided in the attached liaison statement and take action, as appropriate.

ANNEX

Radiocommunication Study Groups



Document 5D/1139-E
Document 4C/431-E
Document 5B/652-E
4 February 2019
English only

SPECTRUM ASPECTS

International Civil Aviation Organization

LIAISON STATEMENT TO ITU-R WORKING PARTIES 4C AND 5D

(COPY FOR INFORMATION TO
WORKING PARTY 5B, IMO AND IMSO)

Adjacent band compatibility studies of IMT-Advanced systems in the mobile service in the band below 1 518 MHz with respect to MSS systems operating in 1 518 – 1 559 MHz

ICAO thanks WP 4C for its liaison statement dated 18 July 2018 on adjacent band compatibility studies of IMT-Advanced systems in the mobile service in the frequency band below 1 518 MHz with respect to MSS systems operating in the frequency band 1 518-1 559 MHz. ICAO notes that WP 4C and WP 5D are working on the development of a new ITU-R Recommendation and a new ITU-R Report describing adjacent band compatibility measures which may address the protection of MES operating above 1 518 MHz. ICAO endorses the development of preliminary draft new Recommendation ITU-R M.[REC.MSS & IMT L-BAND COMPATIBILITY] in response to *invites ITU-R 2* of Resolution **223 (Rev.WRC-15)**, to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency band 1 427-1 518 MHz, taking into account the results of sharing and compatibility studies.

ICAO considers that any protection measures identified in response to Resolution **223 (Rev.WRC-15)** must protect the large number of already-fielded aeronautical satellite receiving earth stations operating in the frequency band above 1 518 MHz (including those supporting aeronautical safety services operating in accordance with ICAO standards). Additionally, ICAO considers that any timescales in transitioning to more relaxed protection measures which are derived on the anticipated performance of future satellite receiving earth stations should reflect the natural replacement cycle of aeronautical equipment, typically 25 years or more. This long lifecycle, which is the same as the lifecycle of commercial aircraft, is due to the very high cost associated with any upgrading of the equipment on-board aircraft, due to, inter-alia, revenue lost due to loss of aircraft flying time, airworthiness, and re-certification issues.

ICAO notes that in its preliminary draft revision of Recommendation ITU-R M.1036-5, WP 5D is considering frequency arrangements for IMT systems in the band 1 427-1 518 MHz. The deployment of IMT systems in the upper most frequencies (e.g. 1 512-1 518 MHz) of this band pose a greater risk of harmful interference to aviation satcom receivers than the use of channels below 1 512 MHz. ICAO also notes that WP 5D is considering adopting an un-paired (TDD) channel arrangement for operation of IMT systems in the band 1 427-1 517 MHz, and considers there is a credible possibility of harmful interference to aeronautical L-band satellite communication (SATCOM) receivers from IMT user-equipment transmissions operated by passengers at airports and while on-board aircraft. It is noted that an increasing number of airports will require SATCOM connectivity for international and domestic flights. Hence ICAO welcomes the identification of any measures on base-station and user-equipment transmissions around any airport that would avoid the potential for such harmful interference to aeronautical SATCOM receivers.

ICAO thanks WP 4C and WP 5D for consideration of its views in the above work and requests it be kept informed of the progress on the development of preliminary draft new Recommendation ITU-R M.[REC.MSS & IMT L-BAND COMPATIBILITY], preliminary draft new Report ITU-R M.[REP.MSS & IMT L-BAND COMPATIBILITY] and the preliminary draft revision of Recommendation ITU-R M.1036-5.

Status: For information and action as appropriate

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