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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 17 to Document 130-E** |
|  | **16 October 2015** |
|  | **Original: English** |
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| Angola (Republic of)/Botswana (Republic of)/Lesotho (Kingdom of)/ Madagascar (Republic of)/Malawi/Mauritius (Republic of)/ Mozambique (Republic of)/Namibia (Republic of)/Democratic Republic  of the Congo/Seychelles (Republic of)/South Africa (Republic of)/ Swaziland (Kingdom of)/Tanzania (United Republic of)/ Zambia (Republic of)/Zimbabwe (Republic of) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.17 | |

1.17 to consider possible spectrum requirements and regulatory actions, including appropriate aeronautical allocations, to support wireless avionics intra-communications (WAIC), in accordance withResolution **423 (WRC‑12)**;

Resolution **423 (WRC-12)**: Consideration of regulatory actions, including allocations, to support Wireless Avionics Intra-Communications

Introduction

Agenda item 1.17 considers the spectrum requirements and regulatory actions to support wireless avionic intracommunications (WAIC) systems. WAIC systems will offer aircraft designers and operators opportunities to improve flight safety and operational efficiency with the goal of reducing costs to airlines and passengers. In accordance with Resolution 423 (WRC-12), an initial assessment was conducted that analyses potential compatibility between the proposed WAIC systems and systems operating under an allocation to an incumbent service, where all aeronautical bands in the frequency range 960 MHz-15.7 GHz containing either an aeronautical mobile (R) service, aeronautical mobile service, or an aeronautical radionavigation service allocation were considered. Of the frequency bands studied, only the frequency band 4 200-4 400 MHz shows that sharing is feasible.

WAIC will be used for safety related aircraft applications and will be required to operate in frequency bands that may already be used for the provision of services intended for the benefit and safe operation of the aircraft. Therefore, it is imperative that future WAIC applications are afforded adequate protection while maintaining interference free coexistence with incumbent services such as aeronautical radionavigation.

Proposals

AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/ZWE/130A17/1

The SADC member states support the method as proposed in the CPM report, which adds a primary AM(R)S allocation to the frequency band 4 200-4 400 MHz. Relevant footnotes are modified and new footnotes are added to limit the use to WAIC systems, maintain the status of passive sensing in the Earth exploration-satellite service (passive) and space research service, and maintain the use of the aeronautical radionavigation service. A draft new Resolution [130A17-A117-WAIC] (WRC-15) is also proposed.

**Reasons:** A primary aeronautical (R) service allocation is provided for WAIC applications while ensuring the mandatory protection of the aeronautical radionavigation service.

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/2

2 700-4 800 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 200-4 400 AERONAUTICAL MOBILE (R) ADD 5.A117  AERONAUTICAL RADIONAVIGATION MOD 5.438  5.439 5.440 ADD 5.B117 | | |

MOD AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/3

5.438 Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground.

ADD AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/4

5.A117 Use of the frequency band 4 200-4 400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with draft new Resolution **[130A17-A117-WAIC]** (WRC-15).(WRC-15)

ADD AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/5

5.B117 Passive sensing in the Earth exploration-satellite and space research services may be authorized in the frequency band 4 200-4 400 MHz on a secondary basis.(WRC-15)

SUP AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/6

RESOLUTION 423 (WRC‑12)

Consideration of regulatory actions, including allocations, to support   
Wireless Avionics Intra-Communications

ADD AGL/BOT/LSO/MDG/MWI/MAU/MOZ/NMB/COD/SEY/AFS/SWZ/TZA/ZMB/  
 ZWE/130A17/7

Draft New Resolution [130A17-A117-WAIC]

Use of Wireless Avionics Intra-Communications in the   
frequency band 4 200-4 400 MHz

The World Radiocommunication Conference (Geneva, 2015),

considering

*a*) that aircraft are designed to enhance efficiency, reliability and safety, as well as to be more environmentally friendly;

*b*) that Wireless Avionics Intra-Communications (WAIC) systems provide radiocommunications between two or more aircraft stations integrated into or installed on a single aircraft, supporting the safe operation of the aircraft;

*c*) that WAIC systems do not provide radiocommunications between an aircraft and the

ground, another aircraft or a satellite;

*d*) that WAIC systems operate in a manner that ensures the safe operation of an aircraft;

*e*) that WAIC systems operate during all phases of flight, including on the ground;

*f*) that aircraft equipped with WAIC systems operate globally;

*g*) that WAIC systems operating inside an aircraft receive the benefits of fuselage attenuation to facilitate sharing with other services;

*h*) that Recommendation ITU-R M.2067 provides technical characteristics and operational

objectives for WAIC systems,

recognizing

that Annex 10 to the Convention on International Civil Aviation contains Standards and Recommended Practices (SARPs) for safety aeronautical radionavigation and radiocommunication

systems used by international civil aviation,

resolves

1 that WAIC is defined as radiocommunication between two or more aircraft stations located on a single aircraft, supporting the safe operation of the aircraft;

2 that the WAIC systems operating in the frequency band 4 200-4 400 MHz shall not cause harmful interference to, nor claim protection from systems of the aeronautical radionavigation

service operating in this frequency band;

3 that the WAIC systems operating in the frequency band 4 200-4 400 MHz shall comply with Standards and Recommended Practices published in Annex 10 to the Convention on International Civil Aviation;

4 that No. **43.1** shall not apply for WAIC systems,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO,

invites ICAO

to take into account Recommendation ITU-R M.2085 in the course of development of *SARPs* for WAIC systems.

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