

ICAO Position for ITU WRC-15

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Development of the Position

- * Draft Position developed with assistance of ACP WG-F during 2012
- * Reviewed by ICAO Air Navigation Commission (ANC) in October 2012
 - * Submitted to contracting States and international organisations
- * Comments addressed by WG-F at WG-F/28
- * Final review by ANC May 2013
- * Approved by ICAO Council 27 May 2013
- * Updates based on study results first considered by WG-F/31

Location of Draft ICAO Position on internet

<http://www.icao.int/safety/acp/repository/Forms/WRC15.aspx>

Main principles used in the development of the Position

- * To ensure that the ITU Radio Regulations do not compromise the safety of civil aviation
- * The ITU Radio Regulations shall not be in conflict with ICAO Standards and Recommended Practices
- * The frequency allocations to aeronautical safety services shall be protected in conformity with internationally agreed requirements. Changes to frequency allocations need to be supported by adequate studies in the ITU-R Sector or in ICAO, as appropriate.

Importance of WRC-15 Agenda Items to ICAO

- * Agenda Items of particular importance
 - * WRC-15 Agenda Items 1.1, 1.5, 1.7, 1.17 and 9.1 (sub-item 5)
 - * **New WRC-15 agenda item on Global Flight Tracking**
- * Other WRC-15 Agenda Items of importance
 - * 1.4, 1.6, 1.10, 1.11, 1.12, 1.16, 1.18, 4, 8, 9.1 (sub-items 1 and 6) and 10.
- * WRC-15 Agenda items with no expected impact
 - * 1.2, 1.3, 1.8, 1.9, 1.13, 1.14, 1.15, 3, 5, 6, 7, 9.2, and 9.3.

Agenda Item 1.1*

to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution 233 (WRC-12);

To oppose any new allocation to the mobile service in or adjacent to:

- frequency bands allocated to aeronautical services (ARNS, AM(R)S, AMS(R)S); or
- frequency bands used by fixed satellite service (FSS) systems for aeronautical purposes as part of the ground infrastructure for transmission of aeronautical and meteorological information or for AMS(R)S feeder links,

unless it has been demonstrated through agreed studies that there will be no impact on aeronautical services.

Agenda Item 1.4

to consider possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz in accordance with Resolution 649 (WRC-12);

To ensure that any allocation made to the amateur service shall not cause harmful interference to aeronautical systems operating under the allocation to the aeronautical mobile (R) service in the adjacent frequency band 5 450 – 5 480 kHz in Region 2.

Agenda Item 1.5*

Unmanned aircraft systems (UAS) have great potential for innovative civil applications, provided that their operation does not introduce risks to the safety of life.

Taking into account Recommendations 1/12 and 1/13 of the Twelfth Air Navigation Conference (November 2012) “That ICAO ... develop and implement a comprehensive aviation frequency spectrum strategy ... which includes the following objectives: ... clearly state in the strategy the need for aeronautical systems to operate in spectrum allocated to an appropriate aeronautical safety service”; and “That ICAO support studies in the International Telecommunication Union Radio Communication Sector (ITU-R) to determine what ITU regulatory actions are required to enable use of frequency bands allocated to the fixed satellite service for remotely piloted aircraft system command and control (C2) links to ensure consistency with ICAO technical and regulatory requirements for a safety service.”, in order to support the use of FSS systems for UAS CNPC links in nonsegregated airspace, the technical and regulatory actions identified by studies under **Resolution 153** (WRC-12) must be consistent with the above Recommendations, and satisfy the following conditions:

to consider the use of frequency bands allocated to the fixed-satellite service not subject to Appendices 30, 30A and 30B for the control and non-payload communications of unmanned aircraft systems (UAS) in non-segregated airspaces, in accordance with Resolution 153 (WRC-12);

1. That the technical and regulatory actions should be limited to the case of UAS using satellites, as studied, and not set a precedent that puts other aeronautical safety services at risk.
2. That all frequency bands which carry aeronautical safety communications need to be clearly identified in the Radio Regulations.
3. That the assignments and use of the relevant frequency bands have to be consistent with article 4.10 of the Radio Regulations which recognizes that safety services require special measures to ensure their freedom from harmful interference.
4. Knowledge that any assignment operating in those frequency bands:
 - is in conformity with technical criteria of the Radio Regulations,
 - has been successfully co-ordinated, including cases where co-ordination was not completed but the ITU examination of probability of harmful interference resulted in a favourable finding, or any caveats placed on that assignment have been addressed and resolved such that the assignment is able to satisfy the requirements to provide BLOS communications for UAS; and
 - has been recorded in the International Master Frequency Register.
5. That interference to systems is reported in a transparent manner and addressed in the appropriate timescale.
6. That realistic worst case conditions, including an appropriate safety margin, can be applied during compatibility studies.
7. That any operational considerations for UAS will be handled in ICAO and not in the ITU.

Agenda Item 1.6

to consider possible additional primary allocations:

1.6.1 to the fixed-satellite service (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1;

1.6.2 to the fixed-satellite service (Earth-to-space) of 250 MHz in Region 2 and 300 MHz in Region 3 within the range 13-17 GHz;

and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU-R studies, in accordance with Resolutions 151 (WRC-12) and 152 (WRC-12), respectively;

To oppose any new fixed satellite service allocation unless it has been demonstrated through agreed studies that there will be no impact on aviation use of the relevant frequency band.

Agenda Item 1.7*

to review the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in accordance with Resolution 114 (Rev.WRC-12);

Support the removal of date limitations on the fixed satellite service (FSS) allocation in the frequency band 5091 – 5150 MHz subject to:

- the retention of the aeronautical protections contained in Resolution 114 (WRC-12).
- improving the flexibility for managing the allowed FSS satellite noise temperature increase by the aeronautical mobile (R) and aeronautical radionavigation services operating in the band 5 091-5 150 MHz.

Agenda Item 1.10

to consider spectrum requirements and possible additional spectrum allocations for the mobile-satellite service in the Earth-to-space and space-to-Earth directions, including the satellite component for broadband applications, including International Mobile Telecommunications (IMT), within the frequency range from 22 GHz to 26 GHz, in accordance with Resolution 234 (WRC-12);

To oppose any new mobile satellite service allocation unless it has been demonstrated through agreed studies that there will be no impact on aviation use in the 24.25 – 24.65 GHz frequency band in Regions 2 and 3.

Agenda Item 1.11

to consider a primary allocation for the Earth exploration-satellite service (Earth-to-space) in the 7-8 GHz range, in accordance with Resolution 650 (WRC-12);

To oppose any new allocation to the Earth exploration-satellite service, unless it has been demonstrated through agreed studies that there will be no impact on aviation use in the frequency band 8 750 – 8 850 MHz.

Agenda Item 1.12

to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz, in accordance with Resolution 651 (WRC-12)

Oppose any allocation to the Earth exploration-satellite service in the frequency band 9 000 – 9 200 MHz unless:

- it has been demonstrated through agreed studies that there will be no impact on aviation use.
- no additional constraints are placed on the use of the frequency band by aeronautical systems

No change to Nos. 5.337, 5.427, 5.474 and 5.475.

Agenda Item 1.16

to consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution 360 (WRC-12);

To ensure that any change to the regulatory provisions and spectrum allocations resulting from this agenda item do not adversely impact on the capability of search and rescue aircraft to effectively communicate with vessels during disaster relief operations.

Agenda Item 1.17*

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

Support any necessary additional aeronautical mobile (route) service allocation required to facilitate the implementation of WAIC, provided technical studies show that WAIC systems will not cause harmful interference to existing or planned aeronautical systems operating in frequency bands allocated to aeronautical safety services.

Agenda Item 1.18

to consider a primary allocation to the radiolocation service for automotive applications in the 77.5-78.0 GHz frequency band in accordance with Resolution 654 (WRC-12);

- * Initially not of interest to ICAO
- * Current proposal to amend ICAO position to: “Support the allocation of the frequency band 77.5-78 GHz to the radiolocation service in such a way as not to preclude its use on an advisory basis by taxiing aircraft.”
- * Will be discussed at WG-F/32

Agenda Item 4

in accordance with Resolution 95 (Rev.WRC-07), to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

Recommendations

- * No change to: 7, 9, 71, 75, 401 and 608

Resolutions

- * No Change to: 18, 20, 26, 27, 28, 63, 95, 207, 217, 222, 225, 339, 354, 356, 405, 413, 417, 609, 610, 612, 644 and 705
- * Modify based on WRC-15 studies: 67, 114, 153, 154, 205, 360, 418, 423 and 748
- * Delete after WRC-15: 151, 152, 233, 729 and 957
- * Modify/delete as necessary based on studies (non WRC-15): 422 and 608

Agenda Item 8

to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC-07);

- To support deletion of Nos. **5.181**, **5.197** and **5.259**, as access to the frequency bands 74.8 – 75.2, 108 – 112 and 328.6 – 335.4 MHz by the mobile service is not feasible and could create the potential for harmful interference to important radionavigation systems used by aircraft at final approach and landing as well as systems operating in the aeronautical mobile service operating in the frequency band 108 – 112 MHz.
- To support deletion of No. **5.330** as access to the frequency band 1 215 – 1 300 MHz by the fixed and mobile services could potentially cause harmful interference to services used to support aircraft operations.
- To support deletion of No. **5.355** as access to the frequency bands 1 610.6 – 1 613.8 and 1 613.8 – 1 626.5 MHz by the fixed services could potentially jeopardize aeronautical use of these frequency bands.
- To support the deletion of Nos. **5.362B** and **5.362C** as of 2015 in order to eliminate harmful interference that has been caused by the fixed service to essential aeronautical radionavigation satellite functions in the frequency band 1 559 – 1 610 MHz and to permit the full utilization of GNSS services to aircraft on a global basis.
- To support the removal of Sates in the African region from No. **5.430A** to ensure the protection of the safety operation of the aeronautical VSAT in the frequency band 3 400-4 200 MHz, where it is allocated on primary basis to the mobile service
- To support the deletion of No. **5.439** to ensure the protection of the safety critical operation of radio altimeters in the frequency band 4 200 – 4 400 MHz.

Agenda Item 9.1 (sub-item 1)

To consider possible additional allocations to the mobile-satellite service, in accordance with Resolution 231 (WRC-07).

Support increased protection of COSPAS-SARSAT system in the frequency band 406 – 406.1 MHz..

Agenda Item 9.1 (sub-item 5)*

Consideration of technical and regulatory actions in order to support existing and future operation of fixed-satellite service earth stations within the band 3 400 – 4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1 (Resolution 154 (WRC-12))

To support possible technical and regulatory measures to ensure protection of VSATs used for the transmission of aeronautical and meteorological information in the frequency range 3.4 – 4.2 GHz from other services operating in the same or adjacent frequency range.

Agenda Item 9.1 (sub-item 6)

Resolution 957 – Studies towards review of the definitions of *fixed service, fixed station and mobile station*

Ensure that any change to the definitions as a result of a review of the studies referenced in Resolution 957, do not adversely impact aviation.

Agenda Item 9.1 (sub-item 9?) Global Flight Tracking

2014 Plenipotentiary Conference Resolution COM 5/1 on global flight tracking for civil aviation: “to instruct WRC-15, pursuant to No. 119 of the ITU Convention, to include in its agenda, as a matter of urgency, the consideration of global flight tracking, including, if appropriate, and consistent with ITU practices, various aspects of the matter, taking into account ITU-R studies”

This item for the agenda was added by 2014 Plenipotentiary Conference . ICAO position to be developed by WG-F/32.

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,

To Be Developed

Support of ICAO Position

- * Work with national radio regulators to secure a national/ASMG position in line that of ICAO
- * Where possible participate in the work of the ASMG and ITU-R