



ICAO Position for ITU WRC-12

Presented by François Xavier SALAMBANGA
ICAO

Development of the Position



- Draft Position developed with assistance of ACP WG-F during 2008
- Reviewed by ICAO Air Navigation Commission (ANC) in November 2008
 - ✓ Submitted to contracting States and international organisations
- Final review by ANC in May 2009
- Approved by ICAO Council in June 2009

Location of ICAO Position on internet



- <http://www.icao.int/anb/panels/acp> (see webpage: Repository)

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-12 Agenda Items to ICAO



- Agenda Items of particular importance
 - ✓ WRC-12 Agenda Items 1.3, 1.4 and 1.7
- Other Agenda Items of importance
 - ✓ WRC-12 Agenda Items 1.1, 1.2, 1.5, 1.9, 1.12, 1.14, 1.15, 1.19, 1.21, 1.22, 1.23, 1.45 and 4
- Agenda items with no impact
 - ✓ WRC-12 Agenda Items 1.6, 1.8, 1.10, 1.11, 1.13, 1.16, 1.17, 1.18, 1.20, 1.24, 2, 3, 5, 6, 7, and 8.1



Agenda Item 1.1

Requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, in accordance with Resolution 26 (Rev. WRC-07)

- To support the deletion of No **5.72** as access to these bands by the fixed service could create the potential for harmful interference to important radionavigation systems used by aircraft to navigate especially in the North Sea.
- To support deletion of Nos. **5.181**, **5.197** and **5.259**, as access to these bands 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 the aeronautical mobile service introduced as a result of WRC-03 and 07.
- To support deletion of No. **5.330** as access to the band by the fixed and mobile services could potentially cause harmful interference to services used to support aircraft operations.
- To support the deletion of Nos. **5.362B** and **5.362C** as of 2012 in order to remove harmful interference that can be caused by the fixed service to essential aeronautical radionavigation satellite functions in the band 1 559 - 1 610 MHz and to permit the full utilization of GNSS services to aircraft on a global basis.
- To support deletion of No. **5.439** as a measure to protect safety critical operation of radio altimeters in the band 4 200 - 4 400 MHz.



Agenda Item 1.1 (cont)

➤ For information:

- ✓ No. **5.72** Norway
- ✓ No. **5.181** Egypt, Israel and Syrian Arab Republic
- ✓ No. **5.197** Pakistan and Syrian Arab Republic
- ✓ No. **5.259** Egypt, Israel and Syrian Arab Republic
- ✓ No. **5.330** Angola, Bahrain, Bangladesh, Cameroon, Chad, China, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Mozambique, Nepal, Pakistan, the Philippines, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Togo, United Arab Emirates, and Yemen
- ✓ No. **5.362B** Algeria, Armenia, Azerbaijan, Belarus, Benin, Bulgaria, Democratic People's Republic of Korea, France, Gabon, Georgia, Germany, Guinea, Guinea-Bissau, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Nigeria, Pakistan, Poland, Romania, Russian Federation, Senegal, Spain, Swaziland, Tajikistan, Tanzania, Turkmenistan, Uganda, Ukraine, and Uzbekistan
- ✓ No. **5.362C** Chad, Congo, Egypt, Eritrea, Iraq, Israel, Jordan, Malta, Qatar, Somalia, Sudan, Syrian Arab Republic, Togo, and Yemen
- ✓ No. **5.439** Libyan Arab Jamahiriya and Iran (Islamic Republic of)



Agenda Item 1.2

Taking into account the ITU-R studies carried out in accordance with Resolution 951 (Rev. WRC-07), to take appropriate action with a view to enhancing the international regulatory framework.

- Support new provisions or modifications to existing provisions that improve the flexibility with which spectrum allocated to aeronautical safety services can be used by aviation and/or tighten regulatory provisions that enhance the protection of aviation systems.
- Ensure that any other measures taken at WRC-12 under Agenda Item 1.2 do not have an adverse impact on the use or protection of aeronautical systems.



Agenda Item 1.3*

To consider spectrum requirements and possible regulatory actions, including allocations, in order to support the safe operation of unmanned aircraft systems (UAS), based on the results of ITU-R studies, in accordance with Resolution 421 (WRC-07).

- To support, based on the results of studies identified in Resolution 421, any modification to existing allocations, or new allocations required to accommodate UAS operations in non-segregated airspace while maintaining the safety and regularity of flight of all types of aircraft.
- Accordingly, to ensure that allocations used, in particular, for UAS command and control, ATC relay and sense and avoid in non-segregated airspace are in the AM(R)S, AMS(R)S and/or ARNS and do not adversely affect existing aeronautical systems
- To oppose the use of this agenda item to seek new spectrum allocations to meet payload requirements.



Agenda Item 1.4*

To consider, based on the results of ITU-R studies, any further regulatory measures to facilitate introduction of new aeronautical mobile (R) service (AM(R)S) systems in the bands 112 - 117.975 MHz, 960 - 1 164 MHz and 5 000 - 5 030 MHz in accordance with Resolutions 413 (Rev. WRC-07), 417 (WRC-07) and 420 (WRC-07).

- To support as required, based on the results of studies identified in Resolution **413**, the inclusion in the Radio Regulations of further regulatory measures that will facilitate the introduction of future AM(R)S systems in the band 112 - 117.975 MHz.
- To support as required, based on the results of studies identified in Resolution **417**, the inclusion in the Radio Regulations of further regulatory measures that will facilitate the introduction of future AM(R)S systems in the band 960 - 1 164 MHz.
- If the spectrum requirements for surface applications at airports cannot be fully accommodated within the 5 091 - 5 150 MHz band, and based on the results of successful compatibility studies identified in Resolution **420**, support a new allocation to the AM(R)S in the band 5 000 - 5 030 MHz.



Agenda Item 1.5

To consider worldwide/regional harmonization of spectrum for electronic news gathering (ENG), taking into account the results of ITU-R studies, in accordance with Resolution 954 (WRC-07).

➤ To oppose any allocation that would adversely affect the interests of aviation.



Agenda Item 1.7*

To consider the results of ITU-R studies in accordance with Resolution 222 (Rev. WRC-07) in order to ensure long-term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service, and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz.

- Taking into account the results of ITU-R studies, support further regulatory provisions to strengthen AMS(R)S access to the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz including, if required, changes to No. **5.357A**, No. **5.362A** and Resolution **222**.
- If the studies identified by Res. **222 (Rev. WRC-07)** indicate that the long term needs of AMS(R)S cannot be satisfied in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz, then support AMS(R)S in other frequency bands through appropriate regulatory provisions.



Agenda Item 1.9

To revise frequencies and channelling arrangements of Appendix 17 to the Radio Regulations, in accordance with Resolution 351 (Rev. WRC-07), in order to implement new digital technologies for the maritime mobile service.

➤ Ensure that the introduction by the maritime mobile service of any new modulation techniques, and or changes to the table contained in **Appendix 17**, does not cause harmful interference to the aeronautical mobile (R) service.



Agenda Item 1.12

To protect the primary services in the band 37 - 38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU-R studies, in accordance with Resolution 754 (WRC-07).

- To oppose excluding aeronautical use of the existing mobile service allocation in the band 37 - 38 GHz.
- To support the use of technical protection limits to ensure that any future AMS system in the band 37 - 38 GHz will be compatible with other co-primary services.



Agenda Item 1.14

To consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30 - 300 MHz, in accordance with Resolution 611 (WRC-07).

- Oppose, under this agenda item, any change to the allocations in the 74.8 - 75.2 MHz, and/or 108 - 137 MHz bands.
- Ensure that any allocation made as a result of this agenda item does not adversely affect the operation of existing and planned aeronautical systems.



Agenda Item 1.15

To consider possible allocations in the range 3 - 50 MHz to the radiolocation service for oceanographic radar applications, taking into account the results of ITU-R studies, in accordance with Resolution 612 (WRC-07).

➤ Ensure that any allocation made as a result of this agenda item shall not cause harmful interference to the operation of existing and planned aeronautical systems that operate in or adjacent to the frequency band 3 - 50 MHz.



Agenda Item 1.19

To consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU-R studies, in accordance with Resolution 956 (WRC-07).

- To support the inclusion of regulatory measures in the Radio Regulations that preclude the operation of software defined radios in the bands allocated to aeronautical services unless they are intended and have been properly certified for use in an aeronautical application.
- To support the inclusion of regulatory measures in the Radio Regulations that preclude the operation of cognitive radio systems in bands allocated to aeronautical services.



Agenda Item 1.21

To consider a primary allocation to the radiolocation service in the band 15.4 - 15.7 GHz, taking into account the results of ITU-R studies, in accordance with Resolution 614 (WRC-07).

- Accept the primary allocation of the radiolocation service in the band 15.4 - 15.7 GHz, on the basis of agreed studies showing compatibility which take into account the protection of the use of this band by aviation.
- Any allocation to the radiolocation service in this band shall be made with the condition that no harmful interference is caused to the aeronautical radionavigation service and that no protection is required to the radiolocation service from the aeronautical radionavigation service.



Agenda Item 1.22

To examine the effect of emissions from short-range devices on radiocommunication services, in accordance with Resolution 953 (WRC-07).

- Oppose operation of short-range devices in any bands allocated to aeronautical services.
- Support the inclusion in the Radio Regulations of appropriate regulatory provisions (see Resolution **953**) to ensure that short-range devices, operating outside of aeronautical bands, do not cause harmful interference to aeronautical systems operating in allocated aeronautical bands.



Agenda Item 1.23

To consider an allocation of about 15 kHz in parts of the band 415 - 526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services.

➤ To ensure that any allocation made to the amateur service shall not cause harmful interference to the operation of aeronautical systems operating under allocations to the aeronautical radionavigation service



Agenda Item 1.25

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

➤ To oppose any allocation that would adversely affect the interests of aviation.



Agenda Item 4

- **In accordance with Resolution 95 (Rev. WRC-03), to review the resolutions and recommendations of previous conferences with a view of possible revision, replacement or abrogation.**
- Recommendations – No proposals
- Resolutions
 - ✓ 222 (rev.WRC-07)
 - Use of the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz by the mobile-satellite service - Modify as necessary based on studies carried out under WRC-12, Agenda Item 1.7
 - ✓ 413 (WRC-07)
 - Use of the band 108 - 117.975 MHz by aeronautical services - Modify as necessary based on studies carried out under WRC-12, Agenda Item 1.4 and other studies
 - ✓ 417 (WRC-07)
 - Use of the band 960 - 1 164 MHz by the aeronautical mobile (R) service - Modify as necessary based on studies carried out under WRC-12, Agenda Item 1.4
 - ✓ 420 (WRC-07)
 - Consideration of the frequency bands between 5 000 and 5 030 MHz for aeronautical mobile (R) service surface applications at airports - Delete after WRC-12 (WRC-12, Agenda Item 1.4)
 - ✓ 421 (WRC-07)
 - Consideration of appropriate regulatory provisions of the operation of unmanned aircraft systems - Delete after WRC-11 (WRC-12, Agenda Item 1.3)



Agenda Item 4 (cont)

➤ Resolutions (cont)

- ✓ 608 (WRC-03)
 - Use of the frequency band 1 215 - 1 300 MHz by systems of the radionavigation satellite service - Delete after studies completed
- ✓ 611 (WRC-07)
 - Use of portion of the VHF band by the radiolocation service - Delete after WRC-12 (WRC-12, Agenda Item 1.14)
- ✓ 612 (WRC-07)
 - Use of the radiolocation service between 3 and 50 MHz to support high-frequency oceanographic radar operations - Delete after WRC-12 (WRC-12 Agenda Item 1.15)
- ✓ 614 (WRC-07)
 - Use of the band 15.4 - 15.7 GHz by the radiolocation service - Delete after WRC-12 (WRC-12, Agenda Item 1.21)
- ✓ 729 (WRC-07)
 - Use of frequency adaptive systems in the MF and HF bands - Delete after WRC-12
- ✓ 754 (WRC-07)
 - Consideration of modification of the aeronautical component of the mobile service allocation in the 37 - 38 GHz band for protection of other primary service in the band - Delete after WRC-12 (WRC-12 Agenda Item 1.12)
- ✓ 805 (WRC-07)
 - Agenda for the 2012 World Radiocommunication Conference - Delete after WRC-12
- ✓ 951 (WRC-07)
 - Options to improve the international spectrum regulatory framework - Delete after WRC-12

Future development of Position



- Position may be revised as studies progress
 - ✓ In line with State Letter E 3/5-09/61 dated 30 June 2009
- Work with national radio regulators to secure a national/ATU position in line with that of ICAO
- Where possible participate in the work of ATU and ITU-R

African States Commitments



AFI Planning and Implementation Regional Group (APIRG) 17 th Meeting Ouagadougou, Burkina Faso, 02-06 August 2010

➤ **CONCLUSION 17/34:** ICAO POSITION FOR THE ITU WRC-2012

That, States and Air Navigation Service Providers (ANSPs):

- a) Continue their efforts on implementation of the relevant elements of ICAO Assembly Resolution A32-13 and in particular, participate in the preparatory work of the ITU and the ATU for WRC; and
- b) Continue to assign high priority to the tasks relating to the protection and availability of Radio frequency spectrum allocated to aeronautical services and in particular, actively participate in the relevant activities of the ITU-R and ATU.

African States Commitments



AFI Planning and Implementation Regional Group (APIRG) 17 th Meeting Ouagadougou, Burkina Faso, 02-06 August 2010

- **CONCLUSION 17/35:** DELETION OF FOOTNOTES 5.330, 5.362B AND 5.362C

That, States with footnotes at 5.330, 5.362B and 5.362C be urged to contact their spectrum regulators to delete these footnotes.

- **CONCLUSION 17/36:** REGISTRATION OF OPERATIONAL FREQUENCIES

That, States which have not formally registered their operational frequencies take the necessary steps to register their operational frequencies with their Telecommunication Regulatory Authorities.

African States Commitments



AFI Planning and Implementation Regional Group (APIRG) 17 th Meeting Ouagadougou, Burkina Faso, 02-06 August 2010

➤ **DECISION 17/37:** FOLLOW –UP OF AFI/FMG ACTION PLAN

That:

The following States should follow up on ITU WRC-12 Agenda items and report to AFI/FMG:

South Africa: Agenda item 1.7;

Ghana: Agenda item 1.3;

Kenya: Agenda item 1.4; and

The AFI/FMG rapporteur (ASECNA) coordinate and follow up the AFI/FMG action plan and report to the CNS Sub-group

African States Commitments



AFI Planning and Implementation Regional Group (APIRG) 17 th Meeting Ouagadougou, Burkina Faso, 02-06 August 2010

- **CONCLUSION 17/38:** **NON-APPLICATION OF CHARGES FOR THE UTILIZATION OF AERONAUTICAL FREQUENCIES SPECTRUM**

That, AFI States refrain from subjecting Air Navigation Service Providers to charges for the utilization of Aeronautical Frequencies Spectrum, including aeronautical communications supported by VSAT Stations



**Thank you For
Your Attention**