
PLENARY MEETING

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ASIA-PACIFIC BROADCASTING UNION (ABU)

POSITION ON WRC-12 AGENDA ITEMS 1.4, 1.10, 1.14, 1.15, 1.17, 1.19, 1.22
AND 1.25

The Asia-Pacific Broadcasting Union (ABU) is a non-profit, non-government, professional association of broadcasting organisations, formed in 1964 to facilitate the development of broadcasting in the Asia-Pacific region and to organise co-operative activities amongst its members. It currently has over 200 members in 60 countries, reaching a potential audience of more than 3 billion people.

ABU's position on WRC-12 Agenda Items 1.4, 1.10, 1.14, 1.15, 1.17, 1.19, 1.22 and 1.25 is provided in the Annex.

Agenda Item 1.4:

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);

Resolution **413 (WRC-07)**: *Use of the band 108-117.975 MHz by the aeronautical mobile (R) service*

It should be noted that **Resolution 413 (WRC-07)** invites ITU-R

1. to study any compatibility issues between the broadcasting(both analog and digital) and AM(R)S services that may arise from the introduction of AM(R)S systems in the band 112-117.975 MHz, and to develop new or revised ITU-R Recommendations as appropriate.
2. to study any compatibility issues between the broadcasting and AM(R) services in the band 108-117.975 MHz that may arise from the introduction of appropriate digital sound broadcasting systems, described in Recommendation ITU-R BS.1114, and to develop new or revised ITU-R Recommendations as appropriate.

ABU Views

- Considering the current situation in WP6A regarding the revision of IRU-R Recommendation BS. 1114, ABU fully supports the further study as proposed in Method A in order to ensure the protection of digital sound broadcasting applications below 108 MHz.
- ABU is also of the view that any constraints on broadcasting service below 108 MHz should be avoided since the Resolution 413 (Rev.WRC-07) resolve 3 mentioned that that AM(R)S systems operating in the band 108-117.975 MHz shall place no additional constraints on the broadcasting service or cause harmful interference to stations operating in the bands allocated to the broadcasting service in the frequency band 87-108 MHz.
- In view of the above, ABU supports Method A in the CPM Report.

ABU Position/1.4/1

MOD

RESOLUTION 413 (Rev.WRC-~~07~~12)

Use of the band 108-117.975 MHz by the aeronautical mobile (R) service

The World Radiocommunication Conference (Geneva, 20~~07~~12),

considering

...

h) that the~~is~~ WRC-07~~Conference~~ has modified the allocation of the band 112-117.975 MHz to the aeronautical mobile (R) services (AM(R)S) in order to make available this

frequency band for new AM(R)S systems, and in doing so enabled further technical developments, investments and deployment;

...

recognizing

...

b) that, in accordance with Annex 10 ~~of the Convention of the International Civil Aviation Organization (ICAO) on International Civil Aviation~~, all aeronautical systems must meet standards and recommended practices (SARPs) requirements;

...

resolves

1 that any aeronautical mobile (R) service systems operating in the band 108-117.975 MHz shall not cause harmful interference to, nor claim protection from ARNS systems operating in accordance with international aeronautical standards;

2 that any AM(R)S systems planned to operate in the frequency band 108-117.975 MHz shall, as a minimum, meet the FM broadcasting immunity requirements contained in Annex 10 ~~of the ICAO Convention on International Civil Aviation~~ for existing aeronautical radionavigation systems operating in this frequency band;

3 that AM(R)S systems operating in the band 108-117.975 MHz shall place no additional constraints on the broadcasting service or cause harmful interference to stations operating in the bands allocated to the broadcasting service in the frequency band 87-108 MHz and No. 5.43 does not apply to systems identified in *recognizing d*);

4 that frequencies below 112 MHz shall not be used for AM(R)S systems excluding the ICAO systems identified in *recognizing d*);

5 that any AM(R)S operating in the frequency band 108-117.975 MHz shall meet SARPs requirements published in Annex 10 ~~of the ICAO Convention on International Civil Aviation~~;

~~6 that WRC-11 should consider, based on the results of the ITU-R studies mentioned under invites ITU-R, any further regulatory measure to facilitate introduction of new AM(R)S systems;~~

invites ITU-R

~~1 to study any compatibility issues between the broadcasting and AM(R) services that may arise from the introduction of AM(R)S systems in the band 112-117.975 MHz, and to develop new or revised ITU-R Recommendations as appropriate;~~

~~2 to study any compatibility issues between the broadcasting and AM(R) services in the band 108-117.975 MHz that may arise from the introduction of appropriate digital sound broadcasting systems, described in Recommendation ITU-R BS.1114, and to develop new or revised ITU-R Recommendations as appropriate;~~

~~3 to report to WRC-11 on the results of these studies;~~

Agenda Item 1.10:

1.10 to examine the frequency allocation requirements with regard to operation of safety systems for ships and ports and associated regulatory provisions, in accordance with Resolution 357 (WRC-07);

Resolution 357 (WRC-07): Consideration of regulatory provisions and spectrum allocations for use by enhanced maritime safety systems for ships and ports

ABU Views

- According to the CPM report the issue of regulatory status of AIS 1 and 2 will impact on the existing fixed and mobile services. In some countries in Region 3 ENG applications in the mobile service are used in the portions of the band 156.8375 to 174 MHz.
- ABU is of the view that since regulatory modifications on the review of AIS 1 and AIS 2 must not cause any severe impact on ENG applications in the mobile service in the adjacent bands 156.8375-174 MHz, Method A2 may be acceptable. ABU suggests in adoption of Method A1 prudent action will be required in order to confirm the current exclusive usage of AIS1 and AIS 2 in the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz.
- ABU supports Method A1 which introduces primary allocation to the maritime mobile service and secondary allocations to the aeronautical mobile and mobile-satellite (Earth-to-space) services in the Table of Frequency Allocations) in the bands 161.9625-161.9875MHz and 162.0125-162.0375MHz and suppressing RR No.5.227A.

ABU Position/1.10/1

Method A1: a primary allocation in the MMS, and a secondary allocation for aeronautical mobile service in the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz; Remove the allocation to Mobile and Fixed services in these bands in Region 3.

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations

(See No. 2.1)

MOD

148-223 MHz

Allocation to services		
Region 1	Region 2	Region 3
...		
156.8375-161.9625<u>174</u> FIXED MOBILE except aeronautical mobile 5.226 5.227A 5.229	156.8375-161.9625<u>174</u> FIXED MOBILE 5.226 5.227A 5.230 5.231 5.232	
<u>161.9625-161.9875</u> FIXED MOBILE except aeronautical mobile <u>MARITIME MOBILE</u> <u>Aeronautical mobile (OR)</u> <u>Mobile-satellite (Earth-to-space)</u> 5.226 5.227A 5.229 <u>ADD 5.A110</u>	<u>161.9625-161.9875</u> FIXED MOBILE <u>MARITIME MOBILE</u> <u>Aeronautical mobile (OR)</u> <u>Mobile-satellite (Earth-to-space)</u> 5.226 5.227A 5.230 5.231 5.232 <u>ADD 5.A110</u>	
<u>161.9875-162.0125</u> FIXED MOBILE except aeronautical mobile 5.226 5.227A 5.229	<u>161.9875-162.0125</u> FIXED MOBILE 5.226 5.227A 5.230 5.231 5.232	
<u>162.0125-162.0375</u> FIXED MOBILE except aeronautical mobile <u>MARITIME MOBILE</u> <u>Aeronautical mobile (OR)</u> <u>Mobile-satellite (Earth-to-space)</u> 5.226 5.227A 5.229 <u>ADD 5.A110</u>	<u>162.0125-162.0375</u> FIXED MOBILE <u>MARITIME MOBILE</u> <u>Aeronautical mobile (OR)</u> <u>Mobile-satellite (Earth-to-space)</u> 5.226 5.227A 5.230 5.231 5.232 <u>ADD 5.A110</u>	
<u>162.0375-174</u> FIXED MOBILE except aeronautical mobile 5.226 5.227A 5.229	<u>162.0375-174</u> FIXED MOBILE 5.226 5.227A 5.230 5.231 5.232	
...		

Editorial Note: In the Table above, if the proposed modifications for the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz are accepted, then the frequency allocations in these bands become identical for all three Regions and the corresponding cells of the Table should be merged for Regions 1, 2 and 3. RR No. 5.229 will also be part of the merged cells for the frequency band 162.0125-162.0375 MHz.

ADD

5.A110 The use of the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the mobile-satellite service (Earth-to-space) and the aeronautical mobile (OR) service is limited to automatic identification system (AIS) emissions operating in accordance with Appendix 18. (WRC-12)

SUP

5.227A

Agenda Item 1.14:

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);

Resolution 611 (WRC-07): *Use of portion of the VHF band by the radiolocation service*

It should be noted that *resolves parts of Resolution 611 (WRC-07)* are;

“1 that WRC-11 consider a primary allocation to the radiolocation service in the portion of the band 30-300MHz for the implementation of new applications in the radiolocation service, with bandwidth no larger than 2MHz, taking into account the results of ITU-R studies;

“2 that the introduction of new systems in the radiolocation service shall be avoided in the frequency bands 156.4875-156.8375MHz and 161.9625-162.0375 MHz, which are used by distress and safety applications in the maritime mobile service;

ABU Views

- The long protection distance between radiolocation services and existing FS/MS services will not be practical because this may require additional coordination among relating countries. Furthermore, the protection distances for mobile services and radiolocation service varies depending on the location of the mobile stations, therefore, the determination of the distance will not be practical.
- ABU is of the view that since regulatory modifications of allocating new frequency band for radiolocation services must not cause any severe impact on ENG applications in and the adjacent bands. ABU suggests in adoption of Method D.

ABU Position/1.14/1

NOC

ARTICLE 5

SUP

RESOLUTION 611 (WRC-07)

Use of a portion of the VHF band by the radiolocation service

Agenda Item 1.15:

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);

Resolution 612 (WRC-07): *Use of the radiolocation service between 3 and 50 MHz to support high-frequency oceanographic radar operations*

ABU Views

- ABU supports the view that the new spectrum allocation for radiolocation service for oceanographic radar must not cause any impact on broadcasting service. In addition, new frequency allocations in the band for MS especially ENG applications on 26.574 MHz, 38.96 MHz, and a band 40.68 – 47.27 MHz should be avoided because as described in Recommendation ITU-R M.1824, these bands are often used with live broadcasting program. Therefore, ABU supports METHOD B or C; allocating RLS on a secondary basis on the frequency bands which are used by ENG applications.
- ABU supports Method C for the new allocation of RLS taking existing BAS operation frequencies allocation into consideration.

ABU Position/1.15/1

MOD

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26-175 26 571- 27-500 26 580	FIXED
	MOBILE except aeronautical mobile
	5.150

Reasons: In these bands, ship and/or coast stations have not been operating in Japan. 26 574 kHz is assigned to land mobile stations for the purpose of broadcast auxiliary service in some country. Allocation in the band 26 574 kHz -3 kHz and +6 kHz should be avoided.

MOD

ARTICLE 5

41.015 42.85- 44 42.93	FIXED MOBILE 5.160 5.161
44 44.83- 47 44.91	FIXED MOBILE 5.162 5.162A

Reasons: In these bands, ship and/or coast stations have not been operating in Japan. 42.89 MHz and 44.87 MHz are assigned to land mobile stations for the purpose of broadcast auxiliary service in Japan. Allocation in the band 42.89 kHz \pm 40 kHz and 44.87 \pm 40 kHz should be avoided.

Agenda Item 1.19:

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);

Resolution 956 (WRC-07): Regulatory measures and their relevance to enable the introduction of software-defined radio and cognitive radio systems

ABU Views

- ABU is in the view that there is unnecessary to change Radio Regulations for the implementation of software-defined radios (Method A). SDR and CRS are recognized as techniques and frequency allocation is not required.
- Regarding CRS, Method B with option B1 can be supported.
- ABU supports the suppression of Resolution 956(WRC-07).
- ABU supports Method A on Issue A, and Method B1 Option B on Issue B.

ABU Position/1.19/1

Method A: No change to the Radio Regulations.

NOC to the Radio Regulations.

SUP

RESOLUTION 956 (WRC-07)

Regulatory measures and their relevance to enable the introduction of software-defined radio and cognitive radio systems

ABU Position /1.19/2

Method B1 Option B: **No change to the Radio Regulations supporting further study for ITU-R Resolution**

NOC to the Radio Regulations.

SUP

RESOLUTION 956 (WRC-07)

Regulatory measures and their relevance to enable the introduction of software-defined radio and cognitive radio systems

Agenda Item 1.22:

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

Resolution 953 (WRC-07): *Protection of radiocommunication services from emissions by short-range radio devices*

ABU Views

- Considering the feature of SRDs that a number of devices are expected to be deployed worldwide and may be transported between and used in multiple countries, some appropriate regulatory aspects would be required to ensure the protection of the radiocommunication services. ABU strongly believes that protection of the current and future applications in broadcasting service, broadcasting satellite services, including BAS in the mobile and fixed services, SNG in the fixed satellite services must be ensured from harmful interference of SRDs.
- ABU is of the view that as the SRD is different from ISMs since they will be operated both indoor and outdoor in regional/global scale the adequate technical criteria for protection of the existing and future applications in the existing services. Similar footnotes to 5.150 will be required in the Article 5 with harmonized bands for SRDs. ABU supports method B for further study of sharing and compatibility study.

ABU Position/1.22/1

WRC Resolution, to invite ITU-R to study the regional and global harmonization of SRDs and develop ITU-R Recommendations and/or Reports accordingly.

ADD

EXAMPLE DRAFT RESOLUTION [A122-SRD-METHOD-B] (WRC-12)

Use of the radio-frequency spectrum by short-range radio devices (SRDs)

The World Radiocommunication Conference (Geneva, 2012),

considering

- a) that some administrations have introduced SRDs in various frequency bands, including bands designated for the deployment of industrial, scientific and medical (ISM) applications, under Nos. **5.138** and **5.150**;
- b) that these administrations are developing regional and national rules and approaches for managing the regulation and certification of SRDs;
- c) that frequency bands and technical rules are not always harmonized either regionally or globally;
- d) that there are a number of ITU-R Recommendations defining the protection of radiocommunication services from devices and applications without a corresponding service allocation in the RR;
- e) that SRDs use the radio spectrum on a non-interference non-protected basis;
- f) that appropriate spectrum access techniques can allow the use of the frequency spectrum by SRDs to ensure adequate protection of stations in the radiocommunication services operating in accordance with the RR;
- g) that SRDs will continue to use frequency bands already allocated to radiocommunication services;
- h) that these compatibility studies are usually band- and service-specific;
- i) that many SRDs may create the potential for harmful interference to radiocommunication services, and they can be carried by travellers across national boundaries;
- j) that some SRDs, such as RFIDs, certain types of medical devices, etc., have great growth potential and may require new spectrum;
- k) that SRDs, their applications, their underlying technologies, and their frequencies of operation are continuously evolving;
- l) that some SRDs increasingly are playing a role in the mobile Internet economy and mobile broadband applications,

recognizing

- a) the benefits of harmonization for end users, manufacturers and regulators, such as:
 - greater end-user confidence in the reliable functioning of devices when travelling abroad;
 - a broader manufacturing base and increased volume of devices (globalization of markets) resulting in economies of scale and expanded equipment availability;
 - improved spectrum management;
- b) that encouraging SRD operation in suitable harmonized frequency bands could reduce the potential for harmful interference from SRDs to radiocommunication services;

- c) that globally and/or regionally harmonized bands could reduce the influx of non-conforming SRDs into the marketplace of countries;
- d) that the ITU-R provides administrations, standardization, and scientific and industrial organizations an opportunity to share technical information on current SRD deployments and future spectrum requirements of SRDs,

noting

- a) that decision on frequency bands for use by SRDs is a national matter, while recognizing significant advantages of harmonization of international band usage;
- b) that frequency bands commonly used by SRDs are listed in Table 1 of Report ITU-R SM.2153, Technical and operating parameters and spectrum use for short-range radiocommunication devices;
- c) that not all of these bands are harmonized for SRD use either regionally or globally;
- d) that the work required to advance harmonization can be done through ITU-R Recommendations and or Reports,

resolves

to encourage administrations to work through ITU-R to harmonize frequency bands and rules for SRDs on a regional and/or global basis,

invites ITU-R

- 1 to study, in collaboration with standardization, and scientific and industrial organizations, the regional and/or global harmonization of technical and operating parameters, including frequency ranges, for specific SRDs, such as those that are portable across borders and that have the potential to cause interference to radiocommunication services;
- 2 to continue to develop the necessary monitoring and measurement procedures to enable administrations to verify technical and operating parameters of SRDs and to examine the effect of emissions from SRDs on radiocommunication services;
- 3 to promote and maintain an ongoing exchange of information on SRDs between ITU-R members and other organizations as per Resolution ITU-R 9-3;
- 4 to study spectrum utilization and technical requirements of SRDs to promote the efficient use of spectrum;
- 5 to conduct technical studies to evaluate the feasibility of deploying SRDs in specific frequency bands that could be harmonized;
- 6 to document these studies in ITU-R Reports and Recommendations,

invites

administrations, standardization, and scientific and industrial organizations to participate actively in these studies,

instructs the Director of the Radiocommunication Bureau

to bring this Resolution to the attention of ITU-T, ISO/IEC and other relevant organizations in accordance with Resolution ITU-R 9-3.

Agenda Item 1.25:

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

Resolution 231(WRC-07): Additional allocations to the mobile-satellite service with particular focus on the bands between 4 GHz and 16 GHz.

ABU Views

- According to the CPM report the band 7 055-7 250 MHz and 8400-8500MHz are heavily used for the deployment of FS, including broadcasting auxiliary services (BAS) applications in many administrations. Regarding 10.5-10.6GHz, BAS applications for digital migration from analogue broadcasting are widely deployed in some countries in Asia-Pacific Region. ABU strongly believes that protection of these applications must be ensured from harmful interference of MSS.
- Further, as the Resolution 231 (WRC-07) prescribes the principle its resolve part, it is imperative to avoid undue constraints on existing Mobile and Fixed services in this band.
- Taking into account the current study conducted by ITU-R WP 4C of those candidate frequency bands to be considered for MSS allocation, many APT members are of the view that it is not feasible to implement MSS in the bands 7 055 – 7 250 MHz, 8400 – 8500 MHz and 10.5 – 10.6 GHz.
- ABU is of the view that the most appropriate method is NOC in bands 7055-7250 MHz, 8400-8500MHz and 10.5-10.6GHz bands for not only ensuring protection of BAS applications but also for avoiding undue constraints on the existing mobile and fixed services.

ABU supports Method B1, C1, and D1.

ABU Position/1.25/1

The band 7 055-7 250 MHz

Method B1: There would be no allocation to the MSS in the entire band 7 055-7 250 MHz and therefore no change to the Radio Regulations.

NOC

ARTICLE 5

The band 8 400-8 500 MHz

Method C1: There would be no allocation to the MSS in this band and therefore no change to the Radio Regulations.

NOC

ARTICLE 5

The band 10.5-10.6 GHz

Method D1: There would be no allocation to the MSS in this band and therefore no change to the Radio Regulations.

NOC

ARTICLE 5

SUP

RESOLUTION 231 (WRC-07)

**Additional allocations to the mobile-satellite service with
particular focus on the bands between 4 GHz and 16 GHz**
