

ITU World Radiocommunication Conference (WRC-12)

Geneva, Switzerland, 23 January – 17 February 2012



March 2012

Contents:

1. Introduction
 - Background on the WRC and related matter
 - The Agenda
2. The Outcomes of WRC-12
3. Concluding remarks

Introduction (1)

Background - WRCs

- WRCs are held every three to four years

- It is the job of the WRC to review and if necessary amend the Radio Regulations (RR):
 - The RR is the international treaty governing the use of the radio frequency spectrum and the satellite orbits (*geo and non-geo*)

- Under the terms of the ITU Constitution a WRC can:
 - Revise the RR and any associated frequency assignment / allotment Plans
 - Address any radiocommunication matter of worldwide character
 - Give instructions to the Radio Regulations Board (RRB) and the Radiocommunication Bureau (BR), and review their activities
 - Determine Questions for study by the Radiocommunication Assembly and its Study Groups in preparation for future Radiocommunication Conferences

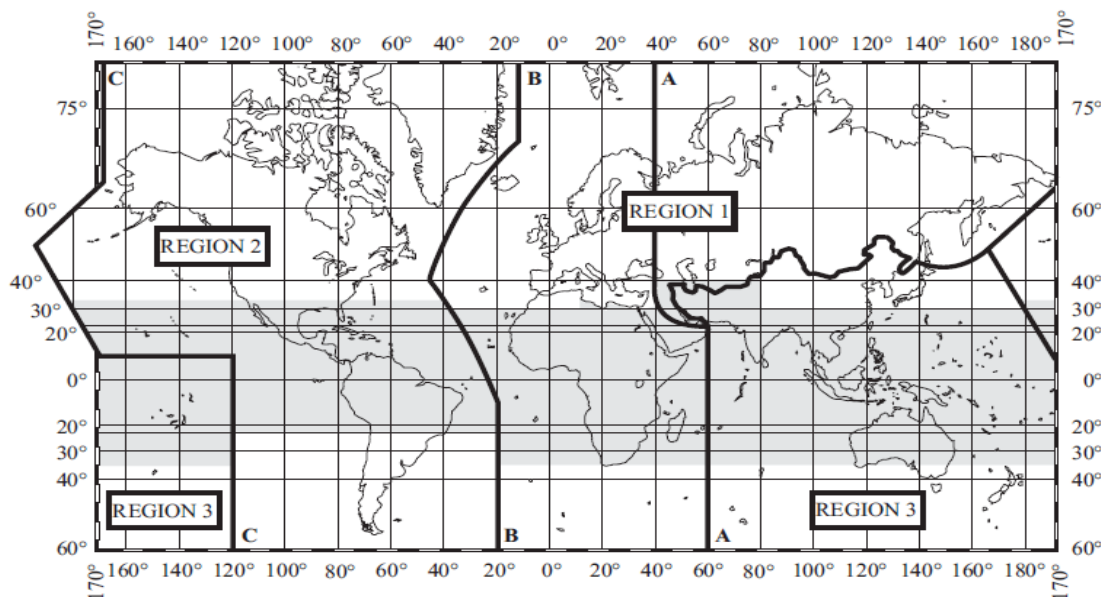
Introduction (2)

Background – WRC Agenda

- The general scope of the agenda of world radiocommunication conferences is established four to six years in advance by previous WRCs:
 - the final agenda is set by the ITU Council two years before the conference, with the concurrence of a majority of Member States
- The Agenda for WRC-12 had 36 items dealing with all types of radiocommunications services:
 - highly technical
 - highly regulatory
 - complex



WRC-12 agenda



Introduction (3)

Some facts & figures:

- More than 3,000 participants representing 165 out of the 193 ITU member states attended WRC-12
- Over 100 observers from among ITU's 700 private sector members along with international organizations also attended WRC-12
- The total estimated cost of WRC-12 was CHF 5.069 million (€4.2 million)
- The Conference was steered under the Chairmanship of Mr Tariq Al Awadhi of the United Arab Emirates, along with six Vice-Chairmen (one per regional group)
- WRC-12 established 7 Committees to undertake the relevant responsibilities:
 - Committee 1: Steering Committee
 - Committee 2: Credentials Committee
 - Committee 3: Budget Control Committee
 - Committees 4, 5 and 6: Specified Agenda Items Committees
 - Committee 7: Editorial Committee
- An ad-hoc group of the Plenary to consider amendments to Article 15 was also formed

WRC-12 Outcomes – Important for Malta



Agenda item 1.1: country footnotes

- Based on contributions from MS, a number of footnotes under Article 5 of the RR were modified.
- Malta's contribution to delete its name from 10 footnotes was approved.
- For our neighbouring countries (IT, TUN, LBY) the conference did not agree to allocate the 800 MHz band to the mobile service between now and 2015.

Agenda item 1.10: Safety system for ships / ports

- Allocation to services for Channel AIS 1 and AIS 2.
- Allocation of channels 75 and 76 to the mobile-satellite service (E-s) for the transmission of AIS message 27 from ships and their protection.
- Exclusive worldwide allocation to the maritime mobile service in the frequency band 495-505 kHz band for the transmission of safety and security information for ships and ports.
- A digital band has been identified in Appendix 18. Four duplex channels will be transferred to simplex channels and a channel for future safety related applications has been identified. The implementation date is 1 January 2017.

WRC-12 Outcomes – Important for Malta



Agenda item 1.15: Oceanographic radars

- Frequency allocations were made in the HF ranges on a secondary basis in some parts of the world, including Europe:
 - The UOM intends to set up such a radar to be operating on 13 MHz band.

Agenda item 1.17: Mobile services in the UHF TV band

- Agreed on some outstanding technical issues relating to the implementation of mobile services in the band 790 – 862 MHz.
- Adopted a new resolution on an allocation of the band 694 – 790 MHz to mobile services:
 - Allocation of the band 694-790 MHz to the mobile service on a co-primary basis with other services and identification to IMT.
 - The allocation will be effective immediately after WRC-15.
 - WRC-15 will refine the lower edge of the allocation.
 - WRC-15 will specify the technical and regulatory conditions for such allocation.

WRC-12 Outcomes – Important for Malta



Agenda item 8.1: Report of the BR Director

- The interference problems caused by Italy to its neighboring countries were raised in the Plenary meeting of the conference, and as a result the WRC-12 Chairman established a group limited to the countries neighboring Italy.
- The first coordination meeting was held on 2 February 2012 and countries experiencing interference problems had the opportunity to describe the interference situation.
 - Malta, Slovenia, Croatia, Switzerland.
- A number of bilateral meetings were held between Italy and these countries:
 - The purpose of these meetings was to establish a road map, with timelines, on how to solve the interference problems caused by Italy.
 - The meeting between Malta and Italy was held on 7 February 2012.
- The second coordination meeting was held on 10 February 2012 and countries reported on the outcome of the bilateral discussions.
- The WRC-12 Chairman reported on the progress achieved during the Plenary meeting of WRC-12:
 - The ITU will follow up developments on this issue and will provide the necessary support to countries.
 - The ITU will report to WRC-15 on progress achieved.

WRC-12 Outcomes – Important for Malta



Agenda item 8.1: Report of the BR Director (cont.)

- Amendment to Article 15 of the Radio Regulations dealing with interferences:
 - This amendment was necessary due to 'deliberate' interference caused by an Arab state to the Eutelsat satellite network (satellite jamming).

WRC-12 Outcomes – General

Agenda item 1.2: International regulatory framework

- The definitions for the various radiocommunication services / stations not to be altered.
- A new Resolution calling for the continuation of ITU-R studies specifically in relation to the review of the definitions of the fixed service, fixed station and mobile stations was agreed.
- WRC-12 agreed on revisions to Recommendation 34 on the principles for the allocation of frequency bands.

Agenda item 1.3: Radio spectrum for unmanned aircraft

- A new allocation was made in the band 5030 – 5091 MHz specifically for the terrestrial communication of UAVs. This avoids impact on the European Satellite Navigation system Galileo.
- Europe's proposal for a satellite allocation to UAVs was not approved, but this will be considered at the next WRC, taking into account the results of sharing studies.

WRC-12 Outcomes – General

Agenda item 1.4: Radio spectrum for aeronautical services

- Modifications to Resolution 413 on the use of the band 108 – 117.975 MHz by the aeronautical mobile (R) service.
- Modifications to Resolution 417 on the use of the band 960 – 1164 MHz by the aeronautical mobile (R) service.
- Modifications to Resolution 420 on the use of the band 5091 – 5250 MHz by the aeronautical mobile service for telemetry applications.
- WRC-12 did not agree on a proposal to allocate the band 5000 – 5030 MHz to this service, thereby ensuring the continued protection to the Galileo system.

Agenda item 1.5: Electronic News Gathering

- Studies will continue within ITU-R study groups on the identification of tuning ranges for ENG applications.
- WRC-12 considered requests made by 42 countries of Region 1 to add their name to footnote 5.296:
 - Malta added its name to this footnote at a previous WRC.

WRC-12 Outcomes – General

Agenda item 1.6: Passive services above 275 GHz

- Extension of the band identified for passive services (e.g. radio astronomy and earth exploration satellite service) from an upper limit of 275 GHz up to 3000 GHz. This allocation is on a non-exclusive basis.

Agenda item 1.7: Aeronautical Mobile Satellite Service

- Compromise position was agreed to on the procedure on how to make additional spectrum available in the bands 1.5/1.6 GHz for aeronautical mobile satellite service.
- A transparent appeals mechanism was also established through the adoption of a Resolution.

Agenda item 1.8: Unwanted emissions for fixed services in 71 - 238 GHz

- A set of unwanted emission power levels for fixed services in the 81-86/92-94GHz bands for compatibility with the earth-exploration satellite services in the 86 - 92GHz band were adopted.
- Studies will continue on active services (including fixed services) requirements / developments in the bands above 71GHz. The results will be actioned at a future conference.

WRC-12 Outcomes – General



Agenda item 1.9: Frequencies for the maritime services

- The conference considered proposals to add flexibility on the use of frequencies in the range 4 – 26 MHz for maritime services, taking into account those channels designated for search and rescue applications.
- As from 1 January 2017 digital technology can be deployed in this frequency range.
- Prior this date digital equipment can be used subject to not causing interference to analogue systems.

Agenda item 1.11: Space research services

- A primary allocation was made in the band 22.55 – 23.15 GHz.

Agenda item 1.12: Protection of services in the band 37 – 38 GHz

- It was resolved to exclude aeronautical mobile services from this band to protect land and maritime mobile services, and spacecraft communications, in this frequency range.

WRC-12 Outcomes – General

Agenda item 1.13: Usage of the 21.4 - 22 GHz band for BSS

- Procedures were agreed for the 21.4 to 22 GHz band to create some spectrum space for those countries which do not have filing for satellite broadcasting service. Also, a new uplink allocation FSS (Earth-to-Space) was agreed.
- A special procedure was adopted and will only be applied by an administration to cover its territory. This procedure will permit to jump the pending examination coordination queue and to apply a special PFD mask to facilitate the coordination process.

Agenda item 1.14: Radars in the VHF range

- A new allocation in the band 154 - 156 MHz was agreed for radio location service: i.e. radars for space-object detection systems.
- Provisions were included to protect Maritime Mobile Services safety systems in this range.

WRC-12 Outcomes

Agenda item 1.16: Lightning detection system

- An allocation was agreed in the VLF range 8.3 to 11.3 kHz for lightning detection in the meteorological aids service.

Agenda item 1.18: Radiodetermination satellite service (2.4GHz band)

- Conditions agreed for extending the existing allocation for the radiodetermination service in the range 2483.5 to 2500 MHz, to achieve a global primary allocation.
- For systems like Galileo and Globalstar, an agreement was reached on the relaxation to pfd threshold levels to be applied in some countries worldwide except RCC, Arab group, India and China.

Agenda item 1.19: Software defined radio / cognitive radio systems

- WRC-12 agreed that no change is appropriate for the Radio Regulations to reflect the technologies of cognitive and software defined radio.
- WRC-12 adopted a Recommendation on cognitive radio systems.

WRC-12 Outcomes – General

Agenda item 1.20: Gateway links for High Altitude Platforms

- Frequency ranges and technical provisions were made for feeder links of HAPS. These frequencies are 6440 - 6520 MHz (HAPS-to-ground direction) and 6560 - 6640 MHz (ground-to-HAPS direction)

Agenda item 1.21: Radiolocation service in the 15 GHz band

- Based on compromise discussions the conference allocated the band 15.4 - 15.7 GHz on a global basis to radiolocation services.

Agenda item 1.22: Short range devices

- WRC-12 agreed that no changes to the Radio Regulations were necessary to regulate SRDs.

Agenda item 1.23: Amateur Radio

- A secondary allocation to the amateur service in the range 472 to 479 kHz was adopted.

WRC-12 Outcomes – General

Agenda item 1.24: Meteorological aids

- Additional 50 MHz, between 7850 and 7900 MHz was allocated to the meteorological-satellite service (non geo-stationary).

Agenda item 1.25: New allocations to the Mobile Satellite Service

- No new allocations were made to MSS.

Agenda item 7: Procedures for satellite coordination, notification

- Many regulatory measures were agreed. However, other draft provisions will be further considered at the WRC 15, including how to deal with satellites which are launched, but do not reach the orbital positions that have been allocated to them

WRC-12 Outcomes – General

Agenda item 8.2: Agenda of WRC-15 (main items only)

- Additional spectrum for terrestrial mobile broadband services and their identification for IMT applications
- Use of the band 694 – 790 MHz for mobile services
- Spectrum for broadband PPDR applications
- Review of provisions relating to Earth stations onboard vessels (ESVs)
- Spectrum requirements for satellite IMT applications in the band 22 – 26 GHz
- Spectrum requirements for onboard communications systems
- New allocations for wireless avionics intra-communications (WAIC)
- New allocations for SRR in the 79 GHz band

Concluding remarks

- WRC-12 was positive for Malta since the interference problems with Italy were registered at an international level. The outcome of bi-lateral meetings are so far considered as positive.
- New spectrum allocations will provide for the development of new applications, e.g. oceanographic radars, satellite services, maritime communications, etc.
- Some revisions served to provide clarify in the implementation of provisions of the Radio Regulations and to modernise certain procedures (e.g. use of emails in satellite coordination)
- WRC-12 also served to strengthen our contacts with other NRAs in the field of radiocommunications.

Thank you

The Radiocommunication Regions

