

WRC-15 & WRC-18 Preparation

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WRC-15 Preparation

Contents

Part I – Overview of the WRC process

Part II – ITU preparations for WRC-15

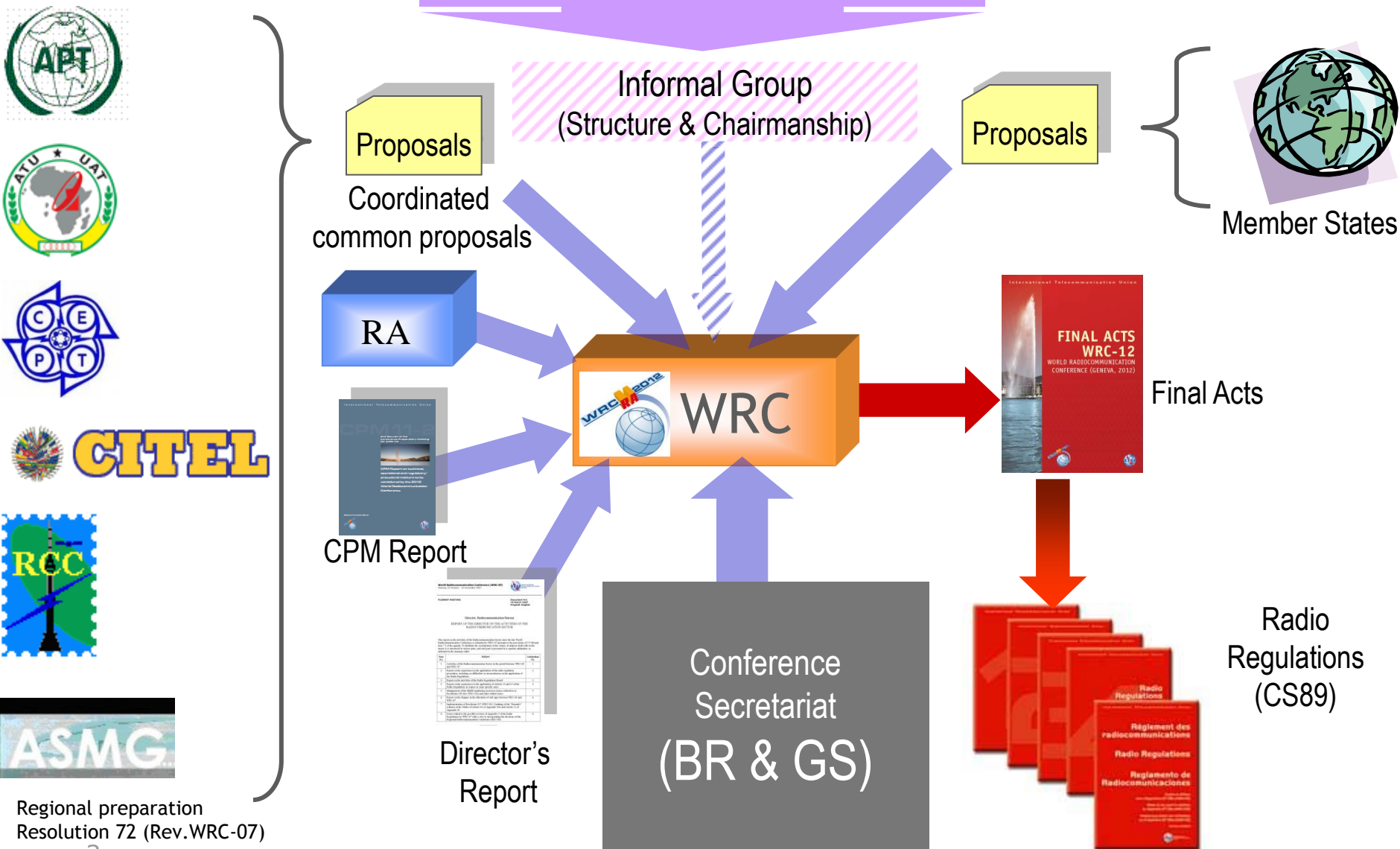
Part III – Regional preparations for WRC-15

Part IV – Topics on the WRC-15 Agenda

Additional Information

The WRC Process

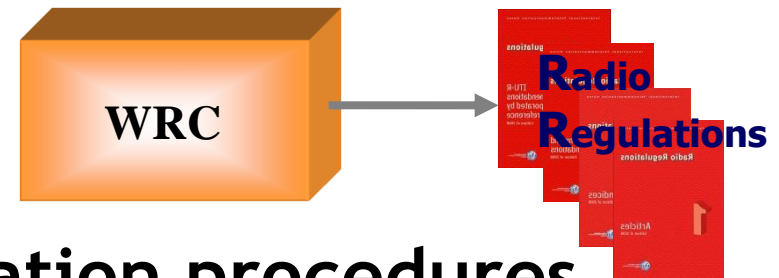
Agenda: in WRC Res, finalized in Council Res



WRC Purposes

✓ Updates the Radio Regulations (CS 89) (*treaty status*)

- Spectrum Allocation
- Coordination and Notification procedures
- Administrative and operational procedures



✓ Adopts Resolutions

✓ Held every 3-4 years (CS 90)

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Additional Information

Main Steps towards WRC-15


WRC-12: WRC-15 Agenda > **Resolution 807** (WRC-12)



1st Session Conference Preparatory Meeting CPM15-1
held on 20 – 21 Feb. 2012; **Results in** CA/201 **of 19.03.12**



Council-12: approved WRC-15 Agenda, date & venue
See **Resolution 1343** (C12) **→ in Geneva,**
RA-15: 26-30 Oct. 2015 – WRC-15: 2-27 Nov. 2015
Subsequently approved by all ITU Member States (CV 42/CV 47)




2nd Session Conference Preparatory Meeting CPM15-2
Geneva, 23 March – 2 April 2015



Final meetings of regional groups
→ Member States' proposals to WRC-15

WRC-15 Preparation Stages (1/3)

1. 1st Session of the CPM-15 (CPM15-1):
(Organised in accordance with Res. ITU-R 2-6)
 - ✓ Define framework of the preparatory studies and structure of draft CPM Report (Chapter Rapporteurs)
 - ✓ Identify ITU-R Responsible & Concerned Groups for each WRC-15 Agenda Item, in addition to the Special Committee
⇒ 8 existing Working Parties + JTG 4-5-6-7 (ai 1.1 & 1.2)
2. Study of the WRC-15 agenda items at: 
 - Meetings of ITU-R responsible & concerned groups (WPs/JTG)
 - ⇒ Carry out the necessary technical/regulatory studies
 - Development of new or revised ITU-R Rec. & Report(s)
 - ⇒ Development of draft CPM texts
 - Propose method(s) of satisfying WRC-15 Agenda Items
 - Prepare preliminary draft examples of regulatory texts
 - ⇒ Submission of texts to the CPM Rapporteurs

Q3 of 2014, about 14 months before WRC-15

WRC-15 Preparation Stages (2/3)

3. **CPM Management Team meeting**
(Organised in accordance with Res. ITU-R 2-6)
(CPM Steering Committee and
Chairmen of Study Groups and Responsible Groups)
Geneva, **Q3 of 2014**
⇒ prepare the draft CPM Report to WRC-15
4. **Special Committee on
Regulatory/Procedural matters meeting**
Geneva, **Q4 of 2014**
⇒ review regulatory/procedural parts of the draft
CPM Report
⇒ prepare a report to the CPM15-2 based on:
 - Results of studies of the SC Working Party
 - Extracts from the draft CPM Report
 - Contributions from ITU-R membership

WRC-15 Preparation Stages (3/3)


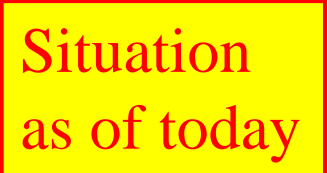
5. 2nd Conference Preparatory Meeting (CPM15-2) (Organised in accordance with Res. ITU-R 2-6)

- ⇒ Geneva, **23 March – 2 April 2015**, >6 months before WRC-15
- ⇒ prepare consolidated CPM Report to WRC-15, using:
 - the draft CPM Report
 - the Report of the Special Committee
 - Contributions from ITU-R membership
- ⇒ Consider the preliminary BR Dir. Report to WRC-15

6. RADIOCOMMUNICATION ASSEMBLY 2015 (RA-15): **Geneva, 26 – 30 October 2015**

7. WORLD RADIOCOMMUNICATION CONFERENCE 2015 (WRC-15) **Geneva, 2 – 27 November 2015**

Timetable towards WRC-15

February – December 2012		January – December 2013		January – December 2014		January – September 2015		26-30 Oct. 2015	2-27 Nov. 2015
CPM15-1 20-21 Feb.			SC-WP Q4		SC [Q4]		CPM15-2 23/3-2/4		
 ~ 2.5 years of studies									
Meetings of Responsible Groups and Study Groups 21 Feb. 2012 →→→→→→→→→→→→→→→→ [Q3] of 2014									
CA/201 CPM 15-1 Results 19 Mar.		 Situation as of today			Deadline for draft CPM texts [Q3]				
	[CPM-15 Streering]		[CPM-15 Streering]		CPM-15 Management Team [Q3]				
			ITU Workshop On WRC-15 Prep. (Q4)		ITU Workshop On WRC-15 Prep. [Q4]		ITU Workshop On WRC-15 Prep. [Q3]		
	C-12, 4-13 Jul WRC-15 Agenda				Publication Draft CPM Report [Q4]		Publication CPM Report to WRC-15		

RA-15

WRC-15

WRC-15 Preparation

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Additional Information

Regional preparation for WRC-15

✓ Resolution 80 (Rev. Marrakesh, 2002)

“World radiocommunication conference process”

Administrations of ITU membership encouraged to:

- Plan WRC preparations on the basis of 2 consecutive WRCs;
- Harmonize regional common proposals for WRC;
- Formally/informally collaborate with a view to resolving differences on WRC agenda items (a.i.);
- Indicate for proposed WRC a.i., the possible financial implications on the BR (ITU-R studies and BR implementation).

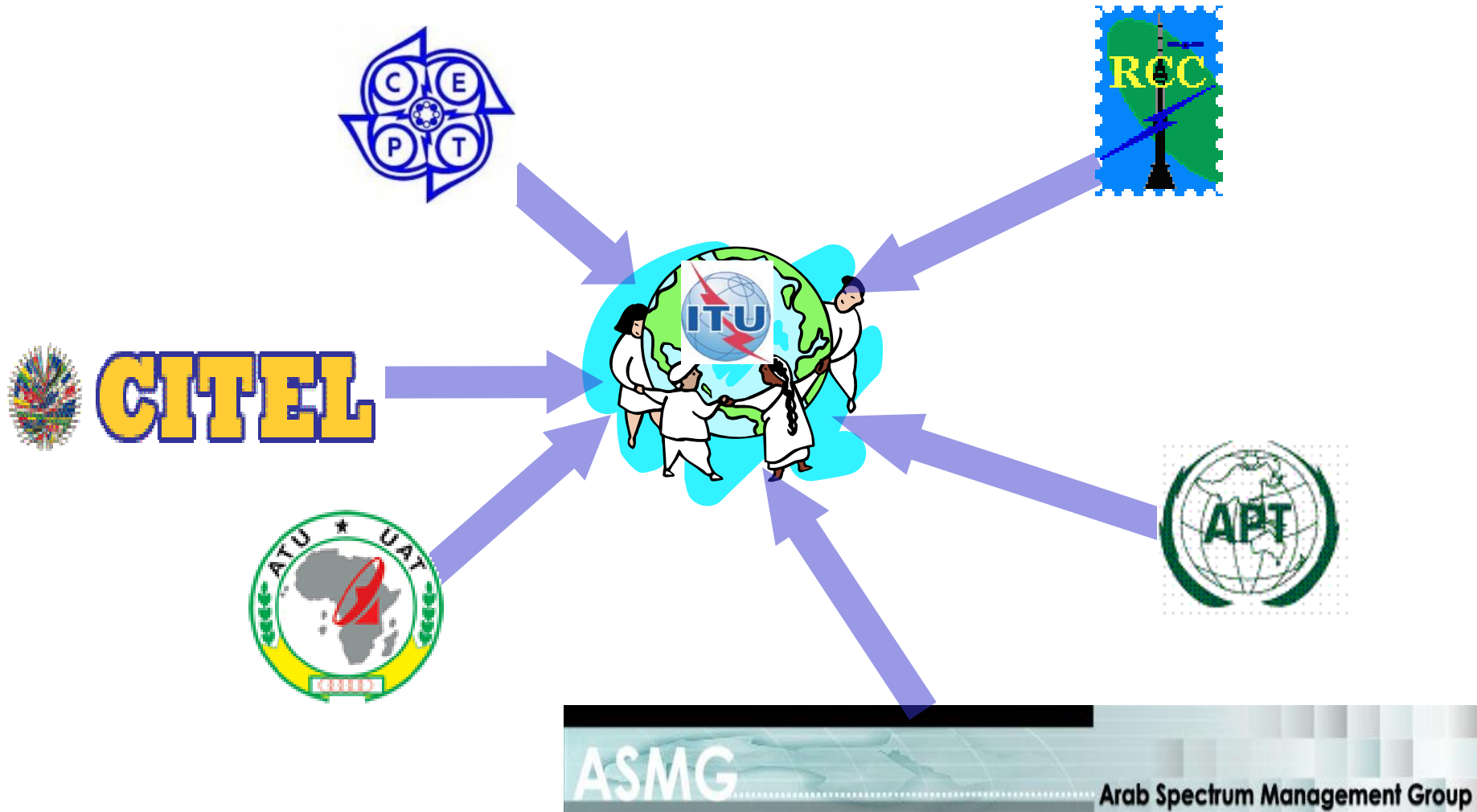
✓ Resolution 72 (Rev. WRC-07)

“World and regional preparations for world radiocommunication conferences”

- *resolves* to invite the regional groups to continue their preparations for WRCs, including the possible convening of joint meetings of regional groups formally and informally

Main regional groups

✓ Six main regional groups:



✓ For the preparation of common and coordinated proposals

WRC Regional Preparation

Preparation of common & coordinated proposals (Res. 72 (Rev. WRC-07))



Asia Pacific Telecommunity

- APG15-1, 10-11 September 2012, Da Nang, S.R. Viet Nam
- APG15-2, [July 2012]



Arab Spectrum Management Group

- 1st meeting, [Early 2013]



African Telecommunications Union

- 1st meeting, [February 2013]



European Conference of Postal and Telecommunications Administrations

- CPG15-1, 16 – 18 April 2012, Mainz, Germany
- CPG15-2, 22-25 January 2013, Luxembourg



CITEL

- XX PCC.II, 22-27 October 2012, Mexico City, Mexico
- XIX PCC.II, [8-12 April 2013]

Inter-American Telecommunication Commission



Regional Commonwealth in the field of Communications

- COMs/WG1, 21-25 May 2012, Moscow, Russian Federation
- WG2, 17-21 December 2012, Kiev, Ukraine

ITU Inter-Regional Workshops on WRC-15 Preparation

**[1st
Meeting,
Q4 of
2013]***

- To be scheduled halfway through the preparatory cycle
 - ⇒ Presentation and review of the on-going preparatory studies of the ITU-R responsible groups for CPM-15
 - ⇒ Presentation of the organization, preliminary views, draft priorities and positions of the regional groups

**[2nd
Meeting,
Q4 of
2014]***

- To be scheduled few months prior to CPM15-2
 - ⇒ Presentation of the Draft CPM Report to WRC-15 (explanation of the draft Methods to satisfy the WRC-15 Agenda items)
 - ⇒ Presentation and review of the regional groups' draft views, positions and common proposals

**[3rd
Meeting
Q3 of
2015]***

- To be scheduled few months prior to WRC-15
 - ⇒ Presentation of the CPM & Dir. Reports to WRC-15
 - ⇒ Presentation and review of the regional groups' draft views, positions and common proposals

* see the ITU-R Meetings schedule at <http://www.itu.int/events/upcomingevents.asp?lang=en§or=ITU-R>

Information also provided at:

- ✓ **Meetings of regional groups & sub-groups**
(APT/APG, AMSG, ATU, CEPT/ECC/CPG, CITE/PCP.II-WG, RCC/COMs-WG)
- ✓ **BR World and Regional Seminars**
 - ⇒ Provide progress status reports, informing about the development of ITU-R studies on all WRC-15 Agenda items

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Additional Information

Topics on WRC-15 Agenda (1/7)

Broadband

- Additional spectrum for mobile BB applications (and band identification for IMT)
- Use of the 700 MHz band in Region 1 by the mobile (with IMT Id.) and other services
- Additional spectrum for Broadband PPDR for a revision of Res. 646 (Rev. WRC-12)

Amateur Radio for emergency

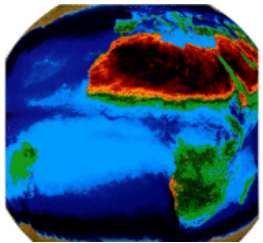
New 2ndary allocation at 5.25-5.45 MHz to bridge the propagation gap between 3.5 & 7.0 MHz amateur radio bands and maintain stable communication over various distances & 24 h/day, especially for use when providing emergency communications



Topics on WRC-15 Agenda (2/7)

Climate monitoring, weather forecast

Earth observations



- **New 1st allocation to EESS (E-to-s) at 7/8 GHz** to accommodate \uparrow & \downarrow TT&C in the same transponder, increasing efficiency and reducing satellite complexity, [56 MHz] needed
- **Extension of current EESS (active) allocation at 9.3-9.9 GHz** by up to 600 MHz within the bands 8.7-9.3 GHz and/or 9.9-10.5 GHz for future high-resolution radars (SAR) to satisfy global environment monitoring of great value for the global community (50 cm resolution \rightarrow 1200 MHz bandwidth)



Topics on WRC-15 Agenda (3/7)

Space Research



Possibility of increasing the 5 km distance limitation & allowing SRS (s-to-s) use of the 410-420 MHz band for proximity operations by space vehicles communication with orbiting manned space vehicle

UTC and leap seconds

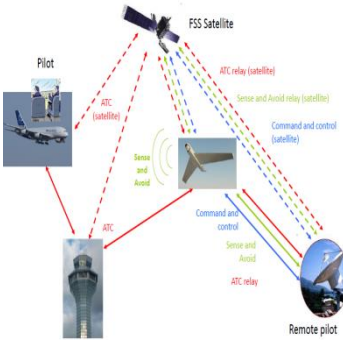


Feasibility of achieving a continuous reference time-scale, by the modification of Coordinated Universal Time (UTC) or another method

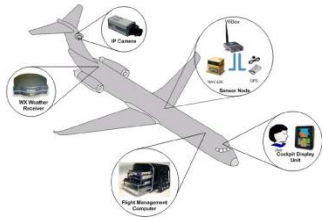
Topics on WRC-15 Agenda (4/7)

Aeronautical Issues

Unmanned Aircraft Systems – Consider use of FSS bands (not App. 30/30A/30B) for control and non-payload communications of UAS in non-segregated airspaces

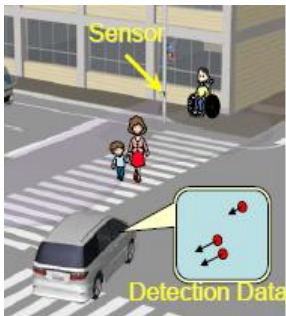


Consider possible spectrum requirements & regulatory actions, including appropriate aeronautical allocations, to support WAIC



Automotive Radar Applications

Consider a primary allocation to the RLS at 77.5-78.0 GHz for automotive applications (with short range high resolution radars)



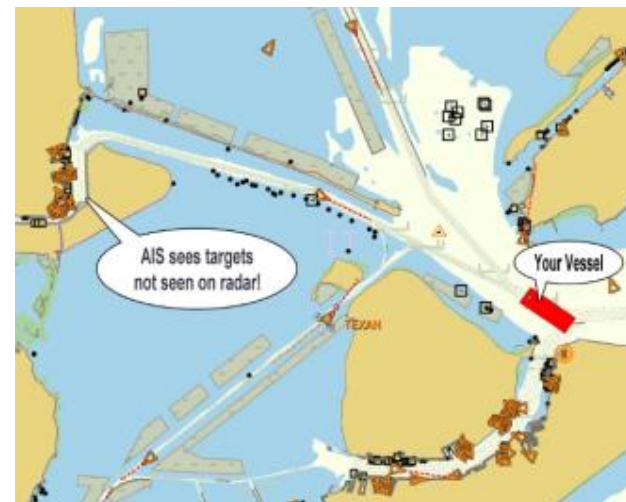
Topics on WRC-15 Agenda (5/7)

Maritime Issues

Consider spectrum demands for on-board communication stations in the maritime mobile service (MMS) in the UHF band



Regulatory provisions & spectrum allocations to enable possible new AIS technology and other new applications to improve maritime radiocommunication



Topics on WRC-15 Agenda (6/7)

Satellite communications

Allocation issues

Possible additional primary allocations for **FSS**:

- of **250 MHz** (Reg. 1) in E-s & s-E directions **within 10-17 GHz** to overcome shortfall in spectrum available @ 10-15 GHz
- of **250 MHz** (Reg. 2) & **300 MHz** (Reg. 3) in E-s direction **within 13-17 GHz**, to overcome the bandwidth limitation in the E-s direction vs the s-E direction & review the regulatory provisions of current FSS allocations

Possible new **FSS & MMSS** allocations **at 7/8 GHz**

- to increase spectrum available for current & future FSS applications, **estimated at ~100 MHz max**
- for MMSS, to address operations beyond territorial waters with additional regulatory measures

Spectrum requirements & possible additional allocations to **MSS**, incl. Sat. comp. for BB applications (IMT), **22-26 GHz**



Topics on WRC-15 Agenda (7/7)

Satellite communications

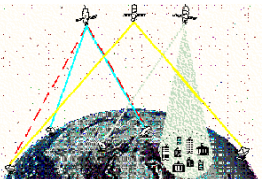
Other issues



Review the use of the band 5091-5150 MHz by the FSS (E-to-S) (limited to feeder links of N-GSO MSS systems) → Possible extension of the allocation beyond 2018



Review provisions relating to ESVs at 5.925-6.425 & 14-14.5 GHz, to take account of the technological advancements and compatibility improvements



Regulatory notification/coordination procedures for an efficient use of spectrum/orbit resources - Res.86



- ✓ **Coordination Arc reduction and technical criteria**
- ✓ **Protection of the MSS in the band 406-406.1 MHz**

Other issues for WRC-15

Other satellite issues

- **Satellite orb. & frequency spectrum to deliver International Public Telecommunication Services in developing countries**
- **FSS ES operation @ 3.4-4.2 GHz, as an aid to safe operation of aircraft & reliable distribution of meteorological information in some Reg. 1 countries**
- **Regulatory aspects for nano- & pico-satellites**

Spectrum management & general issues

- **Updating & rearrangement of the RR (excepting Art. 1, 4-9, 11, 13-18, 21-23 & 59)**
- **Review of definitions of fixed-service, fixed stations and mobile station**
- **Spectrum management guidelines for emergency & disaster relief radiocommunication**

WRC-18 preliminary Agenda

Resolution 808 (WRC-12)

Following issues in addition to standing agenda items on
IbR of ITU-R Rec., review of WRC Res. & Rec.,
Country footnotes, Res.86, BR Dir.'s Report:



- **Regulatory actions, including spectrum allocations, to support GMDSS modernization and implementation of e-navigation**



- **Appropriate regulatory procedures for notifying satellite networks needed to facilitate the deployment and operation of nano-satellites and pico-satellites**

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- ✓ Part III – Requirements for WRC-15
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Additional Information

List of radio service abbreviations

www.itu.int/go/WRC-15

List of radio service abbreviations (1)

Abbreviations	Radio services	RR definition
AMS	aeronautical mobile service	No. 1.32
AM(R)S	aeronautical mobile (route) service	No. 1.33
AMSS	aeronautical mobile-satellite service	No. 1.35
AMS(R)S	aeronautical mobile-satellite (route) service	No. 1.36
ARNS	aeronautical radionavigation service	No. 1.46
ARNSS	aeronautical radionavigation-satellite service	No. 1.47
ARS	amateur service	No. 1.56
ARSS	amateur-satellite service	No. 1.57
BS	broadcasting service	No. 1.38
BSS	broadcasting-satellite service	No. 1.39
EESS	Earth exploration-satellite service	No. 1.51
FS	fixed service	No. 1.20
FSS	fixed-satellite service	No. 1.21
ISS	inter-satellite service	No. 1.22
LMS	land mobile service	No. 1.26
LMSS	land mobile-satellite service	No. 1.27
MetAids	meteorological aids service	No. 1.50

List of radio service abbreviations (2)

Abbreviations	Radio services	RR definition
MetSat	meteorological-satellite service	No. 1.52
MMS	maritime mobile service	No. 1.28
MMSS	maritime mobile-satellite service	No. 1.29
MRNS	maritime radionavigation service	No. 1.44
MRNSS	maritime radionavigation-satellite service	No. 1.45
MS	mobile service	No. 1.24
MSS	mobile-satellite service	No. 1.25
RAS	radio astronomy service	No. 1.58
RDS	radiodetermination service	No. 1.40
RDSS	radiodetermination-satellite service	No. 1.41
RLS	radiolocation service	No. 1.48
RLSS	radiolocation-satellite service	No. 1.49
RNS	radionavigation service	No. 1.42
RNSS	radionavigation-satellite service	No. 1.43
SOS	space operation service	No. 1.23
SRS	space research service	No. 1.55