



International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia

Founded 1950

IARU-R1 Political Relations Committee

Subject (Draft) RSPG Draft Opinion on Common Policy Objectives for WRC-15

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IARU-R1 Comments on:-

RADIO SPECTRUM POLICY GROUP

(Draft) RSPG Opinion on Common Policy Objectives for WRC-15

Introduction

The amateur and amateur satellite services have a number of key allocations, usages and technology trends within the scope of the WRC-15 agenda items.

The most obvious amateur radio item is AI -1.4 regarding the 5 MHz band. However several other items affect the amateur and amateur satellite services; including the loss of spectrum due to AI-1.1; we are the Primary User for AI-1.18; and are a lead organisation for frequency coordination of innovative nano/pico-satellites with respect to AI-9.1.8.

A summary of the generic IARU positions is in the file below (as per a recent input to CEPT PTA), whilst overleaf we comment on and suggest more specific modifications to the RSPG opinion for those items of concern



INFO-008_IARU
Positions.docx

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Electronic Communications

WRC-15 Agenda Item 1.1

The open-ended nature of AI-1.1 has been highly contentious and disruptive for all other services and frequency allocations. However we recognise the focus is on the 400 MHz – 6 GHz frequency range.

A recent EU Commission report on the spectrum inventory¹ explicitly states that no further spectrum is necessary in this range, particularly given that the current mobile allocations are far from being fully utilised. Our concerns are focussed on the 3.4GHz and 5GHz bands:-

3.4 GHz (3400 – 3600 MHz)

The opinion should more explicitly recognise that the sub-band 3400-3410 MHz is shared by both amateur service (under ECA footnote EU17²) and amateur-satellite service (in Regions 2 & 3) as well as Government users (such as airborne radar). This sub-band is vital for the survival and ongoing innovation of amateur radio in the lower microwave bands given the widespread loss of spectrum to IMT/RLANS occurring in the 2.3, 2.4 and 3.4 GHz bands.

5 GHz (5725 – 5850 MHz)

The opinion says little on the 5725-5850 MHz frequency range. This band includes both amateur and amateur satellite service allocations (as well as other users) and in particular our most sensitive globally harmonised narrowband weak-signal communications at 5760 and 5840 MHz for terrestrial and satellite use³ respectively. Making this a Wi-Fi extension band will provide negligible consumer benefits given that 5 GHz Wi-Fi coverage and building penetration are very poor, whilst raising noise levels to other services to deleterious levels. Therefore we would advocate no allocation until there is a full and proven package of mitigation measures such as DFS and TPC, along with a ban on fixed outdoor access points, so that the background level is no greater than the current 25mW allowance.

On Page-8 the draft opinion regarding 3400-3600 MHz does not include a reference to Footnote-7, whereas 3600-3800 MHz has this. This should surely be corrected.

Sharing with IMT is difficult. We see nothing in the opinion regarding any mitigation or compensation for spectrum lost to IMT, which in our case would need to be on a globally harmonised basis for the narrowband weak-signal and satellite sub-bands.

¹ <https://ec.europa.eu/digital-agenda/en/news/commission-report-radio-spectrum-inventory>

² EU17: "In the sub-bands **3400-3410MHz**, 5660-5670MHz, 10.36-10.37GHz, 10.45-10.46GHz the amateur service operates on a secondary basis. In making assignments to other services, CEPT **administrations are requested wherever possible to maintain these sub-bands in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.**"

³ **EU23:** In the sub-bands 5660-5670MHz (earth to space), **5830-5850 MHz (space to earth)** and 10.45 - 10.50GHz the amateur-satellite service additionally operates on a secondary and non-interference basis to other services. In making assignments to other services, CEPT **administrations are requested wherever possible to maintain these allocations in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.**



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WRC-15 Agenda Item 1.4

This is currently missing from the opinion. However amateur radio and its role in emergency situations is a key consideration in the resolution underpinning this agenda item and as such should be supported. This was echoed by EU Commissioner Kristalina Georgieva in her speech to the IARU-R1 General Conference in September 2014⁴.

Space Policy

WRC-15 Agenda Item 1.6

The 10 GHz band is one of the most popular amateur microwave bands for terrestrial and amateur satellite use. The EU17/23 footnotes also reflect this for narrowband terrestrial use centred around 10368 MHz and amateur satellite downlinks at ~10.450 GHz.

We are opposed to any allocation of the FSS in the 10-10.5 GHz band (under AI-1.6.1) that places constraints on our activity. We also note that sharing studies for this item have not taken account of existing and planned use by the amateur and amateur satellite services.

WRC-15 Agenda Item 1.10

The 22-26 GHz frequency range not only includes the internationally protected passive band at 23 GHz, but a key amateur and amateur satellite Primary allocation adjacent to it at 24-24.05 GHz. In common with many other CEPT stakeholders, we do not support any use of this band for MSS. The opinion should therefore be even clearer that an MSS allocation is not supported.

WRC-15 Agenda Item 9.1.8

The IARU is a major stakeholder for this item. Our frequency coordinators play a key role in liaison with satellite builders and the ITU bureau regarding frequency coordination⁵. Whilst nano/pico-satellites have so far largely been in the scientific/education sector (including IARU support for the EU QB50 project⁶), we also recognise that commercial applications will grow.

Currently AI-9.1.8 is concerned with filing procedures. Given the use of 'experimental' filings for some non-standard satellite frequencies, it is important to stress that the frequencies applied for should be consistent with the ITU radio service allocations.

⁴ <http://www.iaru-r1.org/index.php/174-news/latest-news/1336-the-24th-iaru-region-1-general-conference-opened-in-albena-bulgaria>

⁵ The reference information for this is at <http://www.iaru.org/satellite.html>

⁶ QB50 - <https://www.qb50.eu/>



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Transport Policy

WRC-15 Agenda Item 1.18

The draft opinion fails to recognise that the 77.5-78 GHz band is a global amateur and amateur satellite Primary allocation. The agenda item and opinion is also flawed in that it sets a dangerous and unnecessary regulatory precedent that a Primary allocation is necessary for an existing licence-exempt short range device application.

We do of course recognise the benefit of 77-81 GHz SRR and sharing studies for the specific application do show reasonable compatibility. However any move to make this a more generic Primary Allocation would have serious unintended consequences that have not in any way been considered in the sharing studies (or by the SRR proponents). Any allocation should be specific to SRR-device parameters and/or be on a secondary basis, so as not to upset the existing regulatory balance.

Scientific Use of Spectrum

WRC-15 Agenda Item 1.12

One of the options for AI-1.12 includes the 10-10.5 GHz range (overlapping AI-1.6), which is used by the amateur and amateur satellite service.

We note that detailed sharing studies have included general amateur activity, although they do not take into account planned use of the new geostationary amateur satellite downlinks planned for 10.45-10.5 GHz (and due for launch in 2016). Given that our most sensitive weak-signal band is globally harmonised at 10368 MHz (aligned with ECA footnote EU17), we advocate that the draft opinion is modified such that any EEES frequency extension is limited to 9.9-10.3 GHz, rather than 10.4 GHz, nor should it constrain existing services.

An illustration of how this can be accomplished is found in Recommendation ITU-R RS.1260-1; see No. 5.279A which applies to the use of the band 432-438 MHz by the Earth exploration-satellite service (active).

Future Agenda Items (AI-10)

The current opinion regarding 5G spectrum is too vague, nor is it based on any reliable traffic forecast. It is vital that the scope of this be defined early in any ITU resolution and be confined to existing Primary Mobile allocations (ideally in the ~20-40GHz range, with perhaps an option for 60GHz Wi-Fi offload), rather than '6 GHz-to-daylight', in order to avoid a major open-ended effort like AI-1.1. Furthermore we would highlight that WRC-12 Resolution 804 governing such future agenda items also requires them to be focussed, time-bound and not costly (as per Conditions 3 and 4).

The RSPG opinion should also support items with broader societal benefits or that mitigate the impact of previous items - such as the IARU-R1 proposal in CEPT PTA for the global harmonisation of 1.8, 50 and 3400 MHz.