

## **ESOA Response to RSPG Consultation on “the ITU-R World Radiocommunication Conference 2019 (WRC-19)”**

20<sup>th</sup> July 2018

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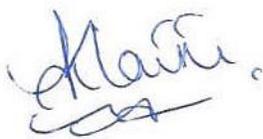
The EMEA Satellite Operators Association (ESOA)<sup>1</sup> welcomes the opportunity to respond to the RSPG consultation on its draft Opinion on “the ITU-R World Radiocommunication Conference 2019 (WRC-19)”, published on 5 June 2018.

Our position represents the view of all satellite operators active in Europe and other parts of the world where our members operate commercially.

ESOA respectfully submits the attached comments to this consultation.

Sincerely,

Aarti Holla  
Secretary General  
ESOA



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<sup>1</sup> ESOA is the world’s leading satellite association bringing together the CEOs of 20 satellite operators and associated companies including satellite manufacturers, launch service providers, space insurers, brokers and equipment manufacturers headquartered in the EMEA region. ESOA was established in 2002 as a non-profit organisation with the objective of serving and promoting the common interests of its members. The Association leads a coordinated and impactful response to the global challenges and opportunities the commercial satellite communications sector faces. A complete list of ESOA Members can be found at [www.esoa.net](http://www.esoa.net)

## Introduction

ESOA takes good note of the following cases identified by the RSPG:

- “**Case a)**, which requires an EU position to be proposed by the European Commission for adoption by the Council because a WRC decision may affect common rules
- **Case b)**, for which an EU position to be proposed by the European Commission for adoption by the Council is desirable
- In addition there are instances where RSPG notes an emerging convergence of views, but where an EU position is not required. Those instances are marked as **Case c)**”

## Para 4.13 - Other Agenda items

ESOA takes note of the following Agenda items for which the RSPG has no recommendation:

“For WRC-19 **Agenda Items 1.1, 1.2, 1.3, 1.4, 1.11, 1.15, 2, 4, 7** as well as for Issues under **Agenda Item 9.1** (except issue 9.1.5), the current information indicates no relevance on EU policy, in particular no affection of common rules.”

## Para 4.1 - General objective

ESOA takes good note of the RSPG’s preliminary remark that:

“It needs to be taken into account, when necessary, that the Member states **objected** to any consideration of the 27.5 - 29.5 GHz band for IMT-2020 harmonization (5G) at WRC-19.”

ESOA also welcomes the RSPG’s call for consistency amongst WRC Agenda items:

“Furthermore, it is noted that some Agenda items are addressing the same or overlapping frequency bands. In its work CEPT is seeking a consistent position for such cases. The RSPG endorses this approach.”

## Para 4.9 - Agenda item 1.13 (5G)

ESOA understands that the RSPG asks for an EU position (and a negotiation mandate to be granted to the EU Commission) on the 26 GHz band – **Case a)**

“The RSPG recommends that the European Commission propose an EU position to the Council supporting an **IMT identification in the band 24.25 - 27.5 GHz on a global basis.**”

ESOA understands that the RSPG also proposes for an EU position (and a negotiation mandate to be granted to the EU Commission) on the 40.5-43.5 GHz and 66-71 GHz bands, subject to the results of studies – **Case b)**

“The RSPG recommends that the European Commission propose an EU position to the Council, conditional to the results of studies, support further the **identification of the band 40.5 - 43.5 GHz and 66 - 71 GHz for IMT on a global basis.**”

ESOA fully supports the RSPG recommendation for an EU position against any negotiation on the 28 GHz band – **Case b)**

“The RSPG recommends that the European Commission propose an EU position to the Council **opposing** any consideration of the 27.5 - 29.5 GHz band under Agenda item 1.13.”

Additional elements for the bands under consideration by Europe under AI1.13:

**24.25 - 27.5 GHz:**

The compatibility studies are showing, based on assumed IMT-2020 parameters in conjunction with Recommendation ITU-R M.2101, a protection of FSS (E-s) with a margin of about 12 dB.

IMT technical and deployment characteristics may evolve in the future and result in excessive interference into FSS/ISS satellites. Should this occur, interference reduction at satellite receivers after the deployment of IMT systems would be complicated due to aggregate interference from a large number of IMT stations as well as the fact that satellite footprints can cover territories of multiple administrations.

Some regulatory measures have been included in ECC Decision (18)06 to address long term protection of FSS/ISS satellites taking into account the compatibility studies, including interference margin results:

- Requiring that the tilt of IMT base stations should normally not be higher than 0 degree.
- Requiring that the mechanical tilt of IMT base stations shall be below the horizon.
- To regularly update characteristics of IMT (including base station density) and to study/assess the impact on sharing and compatibility with other services. This would enable to recommend corrective measures to address situations whereby the interference threshold to FSS/ISS space stations would be at a risk to become exceeded. It is noted that such process would also be relevant to the continued protection of EESS passive band in the 23.6-24 GHz.

The regulatory measures included in the ECC Decision (18)06 should be part of the future EC Decision on 24.25-27.5 GHz and future draft WRC-19 Resolution.

Furthermore, ESOA notes the measures regarding FSS/ISS in the ECC Decision (18)06 and is of the view that appropriate in-band TRP limits would have also been needed to ensure protection of FSS/ISS space stations and would have represented a balanced solution in this band.

**40.5 - 43.5 GHz:**

The studies have shown possibilities to achieve co-existence between IMT and other incumbent services under certain conditions. Therefore it is possible to:

- Upgrade the existing secondary mobile allocation in the frequency band 40.5-42.5 GHz to a primary allocation in the Table of Frequency allocations in Region 1 and identify the frequency band for IMT by a new footnote with certain regulatory conditions.
- Identify the frequency band 42.5-43.5 GHz for IMT in Region 1 by a new footnote with certain regulatory conditions.

Regulatory measures similar to those included in the ECC Decision (18)06 should be part of the future EC Decision on 40.5-43.5 GHz and future draft WRC-19 Resolution to protect FSS in this band.

To preserve existing HDFSS identifications in other Regions (noting that IMT and HDFSS as per 5.516B are not compatible), this proposal to identify IMT in 40.5-43.5 GHz should be limited to Region 1.

Furthermore, ESOA notes the measures regarding FSS/ISS in the ECC Decision (18)06 and is of the view that appropriate in-band TRP limits would be needed to ensure protection of FSS space stations in 42.43.5 GHz and would represent a balanced solution in this band.

### **37 - 40.5 GHz:**

Since Europe will support an identification for IMT in the band 40-5-43.5 GHz and is willing to maintain a necessary balance within the range 37-43.5 GHz between spectrum for IMT in 40-5-43.5 GHz and spectrum for other services in 37-40.5 GHz (noting amongst other that IMT and HDFSS as per 5.516B are not compatible), there is a need to support no change to the RR in the band 37-40.5 GHz.

### **66 - 71 GHz:**

The studies have shown possibilities to achieve co-existence between IMT and other incumbent services under certain conditions. Therefore ESOA supports to identify the frequency band 66-71 GHz for IMT in accordance under certain conditions in a WRC Resolution.

## **Para 4.10 - Agenda item 1.14 (HAPS)**

ESOA takes note of the following RSPG recommendation – **Case c)**

“Member States should, conditional to the results of studies and in accordance with the Agenda item, support the identification of worldwide frequency bands for HAPS with relevant conditions for the protection of existing services.”

ESOA would like to highlight that, when doing this, protection of existing FSS and a viable sustainable access without undue constraints to the planned FSS services allocated in the existing and candidate frequency bands identified for HAPS needs to be ensured.

## **Para 4.11 - Agenda item 1.16 (R-LAN)**

ESOA takes note of the RSPG recommendations for an EU position (and a negotiation mandate to the EU Commission) in order notably to – **Case a):**

- support **no change** in the RR in the 5 250 - 5 350, 5 350 - 5 470 and 5 850 - 5 925 MHz frequency band;
- ensure **compatibility with other services and applications** in the 5 725 - 5 850 MHz range, in particular Road Tolling, FSS, eTachograph in the band 5 795 - 5 815 MHz covered by EU legislation, as well as radars taking into account the effectiveness of any mitigation technique;
- support, conditional on the results of studies on the bullet above, developments in response to the demand for Wireless Access Systems, including RLAN, within the frequency bands 5 150 - 5 250

MHz (relaxation of conditions where appropriate) and 5 725 - 5 850 MHz (limitation of RLAN to indoor deployment and an eirp limit of 100mW/20 MHz per RLAN Access Point).

#### **Para 4.2 - Agenda item 1.5 (ESIMs)**

There is already an effective regulatory framework in CEPT for ESIM operating in GSO FSS networks in the frequency bands 17.7 - 19.7 GHz and 27.5 - 29.5 GHz, in particular through ECC Decision (13)01. ESOA supports the adoption of technical measures under this agenda item as close as possible to those in the CEPT framework.

ESOA agrees with the RSPG that ESIM contribute to the EU policy to deliver broadband connectivity to European citizens while they are in motion.

ESOA takes note of the following RSPG recommendation – **Case c)**

“As a common policy approach, Member States should support the extension of ESIM into the FSS frequency ranges of 17.7 - 19.7 GHz and 27.5 - 29.5 GHz, while ensuring the continuing use of these bands for existing services as well as for FSS applications other than ESIMs.”

#### **Para 4.3 Agenda item 1.6 (Q/V Band)**

ESOA takes note of the following RSPG recommendations – **Case c)**

“Member States should support the development of a regulatory framework for non-geostationary FSS satellites that ensures the coexistence with geostationary FSS systems both of which may operate in the frequency bands 37.5 - 39.5 GHz (space-to-Earth), 39.5 - 42.5 GHz (space-to-Earth), 47.2 - 50.2 GHz (Earth-to-space) and 50.4 - 51.4 GHz (Earth-to-space). The regulatory conditions with regards to the fixed and mobile services in these bands have to be maintained unchanged.

(...)

This common policy approach does not prejudge the consideration of portions of this band for 5G/IMT under Agenda item 1.13, noting that the regulatory conditions for mobile services are maintained.”

ESOA would further note that in developing a regulatory framework for NGSO systems, ESOA does not support modification of the GSO FSS limits in Resolution 750 as this is outside the scope of Resolution 159 (WRC-15). If studies demonstrate it to be appropriate, ESOA could support an introduction of limits in Resolution 750 for future NGSO FSS to maintain the existing interference environment.

#### **Para 4.5 – Agenda item 1.8 (GMDSS)**

ESOA takes note of the following RSPG recommendation – **Case c)**

“Member States should support, taking into account the view from IMO, the modernization of GMDSS, including consequential regulatory actions regarding the possible introduction of an additional satellite system into the GMDSS, on the condition that this introduction is compatible with existing services (especially with regards to the protection of the radio astronomy service in the 1.6 GHz band).”

ESOA supports the RSPG recommendation for AI 1.8 however, it is also necessary to include provisions for the protection of adjacent bands and compliance by the new additional GMDSS operator to the requirements of the resolution 359 in all its considerations.

ESOA is agreeable to Method B1 or B5 provided that regulations are included that ensure that systems accepted by IMO cannot claim protection from Inmarsat MESS which transmit in the band: 1626.5-1660.5MHz.

To this effect, Method B1 or B5, if proposed, should be combined with option B2, which adds text to a RR Article 5 footnote to state that “Mobile earth stations receiving in the band 1 616-1 626.5 MHz shall not claim protection from mobile earth stations transmitting in the band 1 626.5-1 660.5 MHz”.

#### **Para 4.7 – Agenda item 1.10 (GADSS)**

ESOA takes note of the following RSPG recommendation for an EU position – **Case a)**

“Due to the on-going considerations within ICAO and taking into account the stable view from ICAO on the spectrum aspects of GADSS, the RSPG recommends taking **no further action** under Article 5 of the Radio Regulations on this Agenda item.”

ESOA agrees with the RSPG recommendation for AI 1.10 that no changes are necessary to Article 5 of the Radio Regulations. However, ESOA notes some changes will be necessary to Articles 30 and 34 in order to recognize GADSS provisions within the Radio Regulations.

ESOA favors the adoption of Method A of the draft CPM text over Method B, since it considered unnecessary to restrict GADSS functions only to frequency bands that are provided for safety purposes, as is proposed in Method B. ESOA notes the GADSS concept as defined by ICAO has many elements to increase the effectiveness of the tracking of aircraft, and the alerting of the search-and-rescue services in case of aircraft emergency. While most of the objectives of GADSS clearly require a safety allocation, some objectives, such as the timely retrieval of flight recorder data and the routine tracking of aircraft location do not. Such functions may be provisioned, particularly over remote areas, through the use of satellite services that do not have an associated safety allocation (e.g., the FSS and some MSS frequency bands). Restricting GADSS functions only to operate in frequency bands that are provided for safety purposes is likely to limit the further development and provisioning of GADSS within ICAO.

#### **Para 4.8 – Agenda 1.12 (ITS)**

ESOA fully supports the following RSPG recommendation for an EU position – **Case a)**

“supporting “**No change**” for this Agenda item at WRC-19.”

Furthermore, ESOA believes that it is necessary to insert a requirement for the design of the ITS devices to ensure they cope with the interference environment created by other co-primary services, as operation for ITS in shared bands should be made under non-protected basis. This can be made in the proposed ITU R Recommendation or, if it is the case, in a WRC Resolution when identifying bands for ITS.