ecta RESPONSE

TO THE PUBLIC CONSULTATION BY RSPG ON THE

DRAFT RSPG OPINION ON THE ITU-R WORLD RADIOCOMMUNICATION CONFERENCE 2023

26 JULY 2022

1. Introductory remarks

1. ecta, the european competitive telecommunications association,[1] welcomes the opportunity to provide feedback on the "*Draft RSPG Opinion on the ITU-R World Radicommunication Conference 2023"* public consultation launched on 12 June 2022 (hereinafter "The Draft Opinion").

2. ecta represents those alternative operators who, relying on the pro-competitive EU legal framework that has created a free market for electronic communications, have helped overcome national monopolies to give EU citizens, businesses and public administrations quality and choice at affordable prices. ecta represents at large those operators who are driving the development of an accessible Gigabit society, who represent significant investments in fixed, mobile and fixed wireless access networks that qualify as Very High-Capacity Networks (hereinafter "VHCN") and who demonstrate unique innovation capabilities. ecta counts Mobile Network Operators (hereafter 'MNOs'), Fixed Wireless Access operators (hereafter 'FWA operators') as well as Mobile Virtual Network Operators (hereafter 'MVNOs') among its members.

3. ecta warmly welcomes RSPG Opinion because it will provide a significant contribution, in line with the EU and its Member States' (hereinafter "MSs") interests, to decisions that will be taken in the ITU-R World Radiocommunication Conference 2023 (hereinafter "WRC-23"), where a predefined subset of the ITU Radio Regulations (hereinafter "RRs") is regularly reviewed and then revised if necessary.

4. Considering that the RRs are an international treaty between ITU Member States that govern the global use of radio spectrum and satellite orbit, and, they and their revisions are binding under international law, ecta acknowledges the relevance of the RSPG Opinion on the ITU-R World Radiocommunication Conference 2023 (WRC-23) and is happy to submit its considerations and constructive proposals on the RSPG Draft Opinion.

5. ecta will focus on the RSPG's analysis and proposals related to the following selected agenda items which have a direct impact on ecta members' business:

    i. **WRC-23 Agenda Item 1.2 (IMT mid-band identifications)**

    ii. **WRC-23 Agenda Item 1.3 (MS 3 600-3 800 MHz)**

    iii. **WRC-23 Agenda Item 1.5 (UHF Review)**

    iv. **WRC-23 Agenda Item 1.16 (Non-GSO ESIM Ka-band)**

    v. **Studies in relation with RR Article 21 (post 26GHz 5G allocation)**

[1] https://www.ectaportal.com/about-ecta

vi. **Agenda item 10 (recommendations on next WRC agenda items)**

6. In Sections 2 through 7 below, ecta addresses those selected relevant topics and related RSPG proposals, following the order of the chapters of the Draft Opinion. Section 8 contains ecta's own concluding remarks.

2. ecta Comments on WRC-23 Agenda Item 1.2 (IMT mid-band identifications)

7. In today's world, information and communications technologies totally permeate economic and social life. The electronic communications infrastructure is key in allowing consumers and businesses to benefit to the greatest extent from the opportunities the resulting services, including internet access service, provides them and to increase the economic and social welfare across Europe.

8. The European Union and the MSs around Europe acknowledge the importance of wireless technologies, in the form of mobile and fixed wireless uses, as an essential element in the digital transformation of their countries.

9. ecta and its members believe that 5G is a key enabling platform necessary for all current and future wireless infrastructure use cases, such as the enhanced mobile broadband, fixed wireless access connectivity, connected vehicles, smart deliveries with drones/robots, smart cities, and augmented/extended reality.

10. However, all those uses will generate traffic volumes far greater than todays' smartphone-driven data usage rates. This is why ecta believes that there is a need for additional mid-band spectrum towards the end of this decade. According to estimates[2] an average of 2 GHz of mid-band spectrum will be needed in total in the 2025-2030 timeframe.

11. ecta, in relation to the **Agenda item 1.2 (IMT mid-band identifications)** appreciates the Draft Opinion's approach which consists in opening the discussion on possible IMT mid-band identifications and in concentrating on the **6 425-7 125 MHz (Region 1) use.** This band may respond to additional spectrum demand in mid-band for IMT since it has similar propagation conditions to the band 3 400 - 3 800 MHz (e.g. 4G, 5G and beyond). RSPG proposes two (opposite) options and asks the stakeholders for their opinion.

12. ecta **agrees with "option 1" put forward by RSPG which consists in recommending as a common policy approach for the EU Member States, to support the identification of the frequency band 6 425-7 125 MHz for IMT with appropriate conditions**.

13. The conditions that RSPG lists are: "

    i. *Introduction of technical conditions to protect FSS (e.g. power or antenna sidelobe limitations);*

[2] See Estimating the mid-band spectrum needs in the 2025-2030 time frame Global Outlook A report by Coleago Consulting Ltd" (July '21) – GSMA Report, available here

ii. *Provision of any proportionate measure, recognizing the absence of allocation status of such observation, to alleviate interference to the use of this band for CIMR observations;*

iii. *Provisions to guarantee long term access of NGSO receiving earth stations in this band;*

This is without prejudice of further measures which would be necessary at the EU level for other coexistence issues including the protection of existing and future fixed links."[3]

14. ecta **fully agrees with those conditions**. It is to be noted that such conditions are currently under discussion, and it is important to aim at "least restrictive technical conditions" in line with the existing European framework. It is important to specify that ecta members are active in fixed, mobile and fixed wireless access networks and services markets and **it is key that the RSPG clarifies for any avoidance of doubt that the allocation to the IMT of the band include both mobile and fixed wireless access use cases.**

15. In fact, the spectrum that will be made available by identifying the 6 425-7 125 MHz band to IMT as proposed in RSPG option 1, beyond urban areas, will enabled operators to address the digital divide, providing affordable high speed Fixed Wireless Access (FWA) broadband to underserved areas, increase capacity available along major transport routes, and help address the connectivity needs of industrial use cases.

16. **However, in relation to the protection of the existing and future fixed links and services,** ecta **would like to underline that Fixed Service (FS) is a national matter and should be addressed on a case-by-case basis due to different usage across Europe.** ecta **underlines that toolbox of protection and allocation solutions can help administrations address their specific national and sub-national circumstances**.

3. ecta Comments on WRC-23 Agenda Item 1.3 (MS 3 600-3 800 MHz)

17. Agenda Item 1.3 considers *"the possible upgrade of the allocation of the 3 600-3 800 MHz band to the mobile service, except aeronautical mobile service, on a primary basis, within Region 1".*

18. ecta agrees with and supports the suggested RSPG recommendation for the European Commission to propose an EU position to the Council to update the allocation of the 3 600-3 800 MHz frequency band to a primary mobile allocation.

19. ecta recalls that the 3 600-3 800 MHz band is already allocated on a primary basis in Europe[4]. The proposed update would therefore be in support of a further

[3] RSPG draft Opinion on the ITU-R World Radiocommunication Conference 2023, point 4.1.3 RSPG recommendation: Option 1 on the band 6 425 - 7 125 MHz - "IMT identification" page 8.
[4] The European Common Allocation Table (CEPT ERC-Report 25), available here

important policy objective: if approved, it would significantly facilitate coordination negotiations between EU and non-EU countries at the EU borders, where non-EU neighbouring countries have a different use of the frequency band.

20. ecta believes that this upgrade, if approved, would also better reflect in the Radio Regulations the reality of use of the band in the EU today.

21. Given the importance of the whole 3 400-3 800 MHz band for 5G technologies, ecta not only supports the RSPG proposal but also endorses the following conditions that RSPG puts forward in proceeding with this upgrade:

    i. 3 400-3 600 MHz and 3 600-3 800 MHz bands have similar characteristics, the upgrade should follow similar technical and regulatory conditions already adopted for the 3 400-3 600 MHz band;

    ii. existing primary services in the 3 600-3 800 MHz band (FSS and FS) should be protected and allowed to continue operations, without undue constraints on their future development.

22. ecta would also like to highlight that these regulatory conditions are in line with the conditions set for 3 400-3 600 MHz in the Radio Regulations.

23. ecta however underlines that **any upgrade of allocation conditions should not amend negatively the conditions already established for the primary basis allocation in Europe on this band and calls on the institutions involved in WRC-23 negotiations to take utmost care of this fundamental need**.

4. ecta Comments on WRC-23 Agenda Item 1.5 (UHF Review)

24. **Agenda Item 1.5 (UHF Review)** consists in a review on the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 with possible regulatory actions in the frequency band 470-694 MHz band, based on the review.

25. RSPG recommends the European Commission to propose an EU position to the Council to ensure that the decision of WRC-23 on this Agenda item is compliant with the Decision(EU) 2017/899 providing priority to broadcasting and PMSE usage until at least end 2030.

26. ecta notes that, for this purpose, RSPG proposes two options. The first option consists in foreseeing no change at WRC-23, with a possible agenda item for WRC-27 or at WRC-31. The second one instead, can be a co-primary allocation to the mobile service which should become effective at a later stage (e.g. 31.12.2030).

27. ecta supports the second option for several reasons as explained below.

28. Firstly, ecta underlines that the opportunity cost of not proceeding with a co-primary allocation would be too high for European citizens taking into account that:

i. DTT use by European users is constantly decreasing;

ii. There is need for both Downlink and Uplink additional spectrum in lower bands for:

i. Additional affordable capacity (downlink and uplink) in rural areas to meet demand for delivering average data & coverage obligations;

ii. Enhanced indoor connectivity, especially in areas where mid-bands do not reach (e.g. urban deep indoor coverage)

29. Secondly ecta notes that Decision (EU) 2017/899[5] ensures the availability of the 470-694 MHz band at least until 2030 for the terrestrial provision of broadcasting services, including free television and PMSE, on the basis of national needs. At the same time, the obligation of the European Commission to report to the European Parliament and to the Council on developments in the use of the sub-700 MHz frequency band established by the Decision, highlights the importance of carefully assessing the trend of constant decreasing of DTT consumption in Europe in light of growing demand for wireless broadband services.

30. The Decision also points out that "reducing the digital divide, in coverage as well as in knowledge, is an important aspect that has to be a priority". In line with this core objective put forward by the Decision, ecta underlines that the availability of the 470-694 MHz band for wireless broadband services in Europe would further support the availability of nearly ubiquitous eMBB services and would also provide economically viable solutions for broadband connectivity by means of "last mile fiber in the air" by the FWA uses.

31. ecta would also like to highlight that the potential decision of WRC-23 on a co-primary mobile allocation and IMT identification of the 470-694 MHz band in Region 1 will not require an immediate regulatory action. The timeframe for using the 470-694 MHz band, or parts thereof, for mobile broadband could be decided on national, sub-regional or regional level according to the situations in the respective geographical areas.

32. In light of above motivations and trends, ecta **kindly suggests the RSPG to recommend to the Commission to propose an EU position supporting a co-primary mobile allocation of the 470-694 MHz band in Region 1 and IMT identification of the whole band, or parts thereof, for the countries of Region 1 wishing to do so.**

5. ecta Comments on WRC-23 Agenda Item 1.16 (Non-GSO ESIM Ka-band)

33. **Agenda Item 1.16 (Non-GSO ESIM Ka-band)** deals with the development of globally harmonised technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-

[5] Available here

19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-Geostationary orbit FSS earth stations in motion (ESIM), while ensuring the required protection of GSO systems and other services operating in the same frequency bands and in adjacent bands, including passive services.

34. ecta would like to underline that **while recognising the recent development of satellite services, the continuation of current uses in the bands concerned, in particular the 18 GHz band (backhauling fixed links) and the 28 GHz band (Internet access service), should continue to be promoted.**

35. ecta would like to stress that the 28 GHz band (27,50-29,50 GHz), among other uses, is currently in active use with fixed wireless technology to provide ultra-broadband services, mostly in rural areas.

36. From the regulatory point of view, ECC Decision (05)01[6] establishes a band segmentation for FSS and FS in the band 27.5-29.5 GHz band and also contains technical and operational requirements for uncoordinated FSS Earth stations operating within this band.

37. Further to the above-mentioned decision, ECC Decision (15)04[7] contains technical and operational requirements for Earth Stations on Mobile Platforms (ESOMPS) operating, among others, in the 27.5-29.1 GHz frequency band for the protection of FS operations within the band.

38. Therefore, considering the current balanced usage of the 28 GHz band by FS and FSS systems established by ECC Decisions (05)01 and (15)04, as well as the fact that coordinated FSS earth stations can still make use of the whole band 27.5-29.5 GHz using established coordination procedures ecta's position is as follows. ecta **kindly invites RSPG to recommend to the European Commission that if a new international regulatory framework allowing non-GSO ESIMs to use, among others, the 27.5-29.1 GHz is established by WRC-23 under AI 1.16, the technical and operational conditions under such a framework would ensure an adequate protection and the continued operation of FS systems which are operating on a co-primary basis within the band.**

6. ecta Comments on Studies in relation with RR Article 21 (post 26 GHz 5G allocation)

39. In relation to the Agenda Item on the Studies in relation with RR Article 21, RSPG states: *"As a follow up of decisions on the identification of the 26 GHz frequency band for 5G/IMT, WRC-19 instructed ITU-R to study urgently the application of the Article 21.5 to IMT AAS station and the update of Table 21-2 of Article 21".*

40. To such purpose it is important to note that Article 21.5 provides a protection of satellite reception from interference of terrestrial stations by limiting the power

[6] Available here
[7] Available here

transmitted to the antenna. However, in the case of active antenna systems used for 5G/IMT, the antenna includes the power amplifiers and the RSPG underlines that: *"the Radiocommunication Bureau of the ITU cannot check the compliance of 5G/IMT station. Therefore, WRC-23 is expected to address this issue in response to the Report from the director of the BR".*

41. ecta notes that RSPG, in relation to this important issues states: *"an expansion of the scope of application of article 21.5 to 5G/IMT bands beyond that of 26 GHz would address the conditions applicable to 5G/IMT stations in frequency bands such as 42 GHz or 66 GHz, and this issue could become relevant to the Electronic Communication and Connectivity EU policy area, too".*

42. ecta would like to underscore that the request contained in WRC-19 document 55026[8] is to study the applicability and notification of RR Art. 21.5 to IMT stations that use an antenna that consists of an array of active elements in the 26 GHz band; consequently, the studies should be focused on 26 GHz band.

43. ecta further notes that in studying the applicability and notification of Art.21.5 to IMT stations using an antenna with an array of active elements in the 26 GHz band, the following elements should be taken into due account:

    i. the power delivered to a transmitter should be interpreted as "the conducted power from a transmitter" to the antenna, coherently with the letter of the Article.
    ii. There is no bandwidth reference in RR Article 21.5; any definition of a reference bandwidth should be supported by specific studies concerning the coexistence with satellite systems.

44. Finally, it is fundamental, in ecta's opinion, that the overall EU interest in this matter should be to strike the balance between frequency bands used for satellite reception and shared with equal rights with 5G/IMT stations using active antenna systems.

45. Therefore, **any solution should ensure a right balance between the objective of ensuring the protection of satellite reception and the objective of ensuring the timely and efficient development and deployment of 5G technology, for which 26 GHz band is a key band**[9]

46. It goes therefore without saying that unduly constraining restrictions that can result from the studies in relation with RR Article 21 may impair the development of 5G/IMT. For the benefit of all European consumers and businesses, this kind of outcome should be avoided.

[8] Available here

[9] It should be noted that 26 GHz is one of the pioneer bands defined by the RSPG for 5G as it ensures high speed, latency, reliability and capacity to the consumers and businesses in metropolitan and urban areas, stadiums, shopping malls, railroads but also for fixed wireless access solutions for homes and businesses.

7. ecta Comments on Agenda item 10 (recommendations on next WRC agenda items)

47. ecta notes that the RSPG, in its draft Opinion with respect to the Agenda Item 10, states: *"Regarding Agenda Item 10, the RSPG is monitoring the development closely and may provide a view in the final Opinion."*

48. ecta firstly would like to underline that the deployment of IMT-2030 networks beyond the year 2030 is expected to enable new use cases and applications associated with a considerable increase in wireless data traffic and will require access to spectrum resources (under competitive terms) greater than what is currently available, or what is expected to be soon available (e.g., upper 6 GHz), for IMT-2020. ITU work on this relevant issue is ongoing and it is expected to be ready by the end of this year[10].

49. On the one hand, the expected increase of wireless data traffic, and, on the other hand, the long regulatory processes involved in the allocation or identification of new bands at the ITU-R and their subsequent assignment at national level, would therefore call for an early discussion at the WRC-27 of possible new frequency bands.

50. 6G is not a hypothetical concept; it is already being developed and its use cases are already taking shape.

51. In 6G technology, to interconnect the real physical world with digital worlds, IMT-2030 networks will play an important role in the communications infrastructure to:

    i. Collect real-time sensory data from everywhere in the physical world;
    ii. Compute real-time immersive senses for humans, and controls for automated machines, and;
    iii. Deliver this computed data back to the physical world so that humans and machines can continuously interact with each other.

52. In light of these requirements for 6G, to meet the capacity and coverage demands of IMT-2030 and to serve the diverse set of envisaged and emerging services and applications, multiple frequency ranges will be required – from the low to the very high frequencies.

53. ecta acknowledges that IMT-2030 will undoubtedly provide higher spectral efficiencies than IMT-2020. and will also utilise – in time – existing spectrum identified for past generations of IMT, but ecta also underlines that this is not expected to be sufficient to compensate for the demand for additional bandwidth for the implementation of IMT-2030 use cases.

54. In light of these considerations, ecta deems it necessary to explore in WRC-27 the potentiality of following bands for 6G:

[10] Draft Working Document, with restricted access, available here

i. Spectrum from within the 7.125-24 GHz range – the so-called "cm-wave bands" – whose use can be assessed in order to enable the envisaged capacity-demanding IMT-2030 use cases.
The lower portion 7.125-15 GHz, according to the technical inputs provided by ecta member Huawei, could achieve a superior balance between good coverage and high capacity, both of which are essential for IMT-2030 use cases which involve wider area mobility.

ii. Spectrum from within the 92-300 GHz range – the so-called "sub-THz bands"- the use of which can be assessed in order to enable extremely high data rates (of the order of Tbit/s) and extremely low latencies that would be needed for some of the lower mobility IMT-2030 use cases, including direct device-to-device communications, sensing and recognition, as well as other local area use cases.

55. ecta wishes to underline that those two bands will be used in a complementary manner because they show unique and very different characteristics, making them appropriate for different usage patterns as described in above paragraph.

56. It is equally important to underline that, given that those band ranges very wide, ecta acknowledges that studies of the entire range towards WRC-27 would not be feasible in practice. ecta therefore expects that specific sub-bands from the above two ranges will be identified prior to WRC-23.

57. ecta therefore kindly recommends the RSPG to support in its final Opinion the adoption of WRC-23 resolutions that would invite the ITU-R to conduct and complete studies of the technical, operational and regulatory issues pertaining to the possible use of IMT systems in:

i. essential frequency range 7.125-24 GHz, and,
ii. complementary sub-THz range 92-300 GHz.

8. ecta Concluding Remarks

58. In light of the observations, evidence and reflections provided above, ecta considers of utmost importance that the final RSPG Opinion, in relation to:

i. **WRC-23 Agenda Item 1.2 (IMT mid-band identifications) endorses option 1** which consists in identifying 6 425-7 125 MHz for IMT with appropriate conditions as from the RSPG proposal[11] also clarifying, for the

[11] Those conditions are:
i. Introduction of technical conditions to protect FSS (e.g. power or antenna sidelobe limitations);
ii. Provision of any proportionate measure, recognizing the absence of allocation status of such observation, to alleviate interference to the use of this band for CIMR observations
iii. Provisions to guarantee long term access of NGSO receiving earth stations in this band.
iv. Provision of further measures which would be necessary at the EU level for other coexistence issues including the protection of existing and future fixed links.

avoidance of doubt, that the allocation to IMT of the band includes both mobile and fixed wireless access uses[12].

ii. **WRC-23 Agenda Item 1.3 (MS 3 600-3 800 MHz)** confirms definitively the draft RSPG proposal to **upgrade the 3 600 MHz - 3 800** MHz band together with the conditions proposed, that is to say:

   i. the upgrade should follow similar technical and regulatory conditions already adopted for the 3 400-3 600 MHz band, and;
   ii. existing primary services in the 3 600-3 800 MHz band (FSS and FS) should be protected and allowed to continue operations, without undue constraints on their future development.

However, ecta deems fundamental that RSPG final Opinion specifies that the upgraded allocation conditions should in no way amend negatively the conditions already established for the primary basis allocation in Europe.

iii. **WRC-23 Agenda Item 1.5 (UHF Review)** confirms the **second option**, by recommending to the Commission to propose an EU position supporting a co-primary mobile allocation of the 470-694 MHz band in Region 1 and IMT identification of the whole band, or parts thereof, for the countries of Region 1 wishing to do so.

iv. **WRC-23 Agenda Item 1.16 (Non-GSO ESIM Ka-band)** recommends to the European Commission that if a new international regulatory framework allowing non-GSO ESIMs to use, among others, the 27.5-29.1 GHz is established by WRC-23 under AI 1.16, the technical and operational conditions under such a framework should **ensure an adequate protection and the continued operation of FS systems which are operating on a co-primary basis within the band**.

v. **Agenda Item on the Studies in relation with RR Article 21, post allocation of 26 GHz to 5G**, underlines the need that in studying the applicability and notification of Art.21.5 to IMT stations using an antenna with an array of active elements in the 26 GHz band, the following factors will be taken into due account:

   i. the power delivered to a transmitter should be interpreted as "the conducted power from a transmitter" to the antenna, coherently with the letter of the Article.

   ii. There is no bandwidth reference in RR Article 21.5; any definition of a reference bandwidth should be supported by specific studies concerning the coexistence with satellite systems

[12]In relation to the protection of the existing and future fixed links, ecta would like to underline that Fixed Service (FS) is a national matter and should be addressed on a case-by-case basis due to different usage across Europe. ecta underlines that a toolbox of solutions can help administrations address their specific circumstances.

In addition, ecta respectfully calls on RSPG to state in its final Opinion that any solution should not impact the protection of satellite reception and at the same time should not impose too constraining restrictions as those may impair the development of 5G/IMT.

vi. In relation to the **Agenda Item 10 regarding the recommendations on next WRC-27 agenda items**, support the adoption of WRC-23 resolutions that would invite the ITU-R to conduct and complete studies of the technical, operational and regulatory issues pertaining to the possible use of IMT systems in:

   i. essential frequency range 7.125-24 GHz, and,

   ii. complementary sub-THz range 92-300 GHz.

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In case of questions or requests for clarification regarding this contribution, the RSPG is welcome to contact Mr Luc Hindryckx, ecta Director General, or Ms Pinar Serdengecti, ecta Regulation and Competition Affairs Director.