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| 1. **Agenda item**
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| **Agenda Item**1.16 | to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 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-GSO FSS earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with Resolution 173(WRC 19) |
| **Working Group** | WG4 | **Sub-Working Group**  | SWG-4B |
| **Coordinator** | Mr. Yusuke Fukui (Japan)Mr. Kavouss Arasteh (Islamic Rep. of Iran) | **Email** | yu-fukui@kddi.comkavouss.arasteh@gmail.com |
| **WP Chair** | Ms. Fenhong ChengMr. Mrunmaya Pattanaik | **Email** | chengfenhong@chinasatcom.compattanaik.mr@gov.in |
| **Report Date** | **2023 3rd Apr.** |
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| 1. **APT**
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| **APT Preliminary Views**CPM23-2/xxxx | APT Members are considering Method B under this agenda item provided that the issues raised in the section 3.1.5 above are duly resolved and agreed upon. However APT Members could also consider Method A. APT Members are of the view that for the protection of other space services, non-GSO ESIM characteristics shall remain within the envelope characteristics as well as within the envelope of coordination agreement of typical earth stations associated with the non-GSO satellite system with which these ESIM communicate.APT Members are of the view that for the protection of GSO FSS networks operating in the 17.8-18.6 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz and 29.5-30.0 GHz the relevant EPFD limits in Nos. 22.5C, 22.5D and 22.5F shall apply. APT Members are of the view that the methodology included in the current version of Recommendation ITU-R S.1503-3 for determination of compliance with EPFD limits in Article 22 is applicable to ESIMs communicating with non-GSO FSS systems.APT Members are of the view that currently there is no pfd limit to protect EESS (passive) operating in 18.6-18.8GHz frequency band from non-GSO satellite system. Therefore, it is necessary to set up appropriate pfd limits for unwanted emissions from non-GSO satellite transmitters with which ESIM communicate. APT Members are of the view that receiving non-GSO ESIMs in the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (see No. 5.524) shall not claim protection from terrestrial services to which the frequency bands are allocated and operating in accordance with the Radio Regulations.APT Members are of the view that transmitting non-GSO ESIMs in the frequency band 27.5-29.1 GHz shall not cause unacceptable interference to terrestrial services to which the frequency band is allocated and that operate in accordance with the Radio Regulations, and Annex 1 to the new Resolution under this Agenda Item shall apply.APT Members are of the view that transmitting non-GSO ESIMs in the frequency band 29.5-30.0 GHz shall not adversely affect the operations of terrestrial services to which this frequency band is allocated and that operate in accordance with the Radio Regulations, and technical conditions in Annex 1 to the new Resolution under this Agenda Item shall apply with respect to administrations mentioned in RR No. 5.542.APT Members are of the view that the provisions in the new Resolution under this Agenda Item, including Annex 1, set the conditions for the purpose of protecting terrestrial services from unacceptable interference from non-GSO ESIMs in neighboring countries in accordance with the provisions included in the resolves 1.2.3 of the new Resolution of the Draft CPM text under this Agenda Item in the frequency band 27.5-29.1 GHz and in the frequency band 29.5 - 30.0 GHz as guidance for administrations. However, the requirement not to cause unacceptable interference to, or claim protection from, terrestrial services to which the frequency bands are allocated and operating in accordance with the Radio Regulations remains valid. To this effect, the notifying administration of A-ESIM and M-ESIM when submitting Appendix 4 data elements to the Bureau shall also send a firm commitment undertaking that in case of any interference to terrestrial services shall immediately cease emission or reduce it to the acceptable level to the interfered services of administration (s).APT Members are of the view that regulatory provision, and technical and operational measures with appropriate examination methodology by the Bureau for non-GSO ESIM should be established to ensure the protection of services to which the frequency bands are allocated and operated in accordance with the Radio Regulations. In the absence of such methodology necessary transitional measures should be developed and agreed by WRC-23.APT Members are of the view that the only administration that could notify ESIM is the administration notifying the non-GSO system to which the ESIM communicates. Thus, notification of any frequency assignment for ESIMs shall only be made by one single administration, which will be responsible for ESIM operation.APT Members are of the view that there are still several issues on the operation of ESIMs to be clarified and specified in the Draft New Resolution, such as interference management mechanism and its due functionality. Moreover, the proper function of switching facility to respond to authorization provided for the operation of ESIM from the countries that did not agree with operation. |
| **APT Views for modification of CPM Report**CPM23-2/xxxx | None |
| **Outcome from earlier** **APT Coord meeting** | None |
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| 1. **Other regional groups**
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|  | **ATU**  | **ASMG** | **CEPT** | **CITEL** | **RCC** |
| **Input(s)** | CPM23-2/138 | CPM23-2/43 | CPM23-2/4 | CPM23-2/xxxx | CPM23-2/87 |
| **Summary of views/proposals** | **Method B** | **Method B** | **Method B** | **None** | **Method B** |
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| 1. **Summary of discussions during CPM23-2**
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| **Working documents/TEMPs etc** | [include number and hyper link to relevant working documents etc] |
| SWG-4B for agenda item 1.16 was held six times and the joint meeting with SWG-4A for agenda item 1.15 which handles with the NCMC and responsibility items that can be commonly adopted to both agenda items was held four times so far, as follows.**<SWG-4B>*** 1st SWG-4B at P3 (1400-1515) of 27th Mar. at Popov (Tower)
	+ Introduction of Documents for Doc. 4(SUI/CEPT) /15(LUX) /16(ICAO) /43(ASMG) /64(CHN) /87(RUS/RCC) was just conducted by administrations, organizations and regions, but no detailed discussion on each input was held in this meeting.
* 2nd SWG-4B at P6 (1930-2100) of 27th Mar. at Room A (CICG)
	+ After the completion of the introduction of Documents for 107(IRN) /123(TON) /128(AUS) /138(ATU) /152(B/CAN) /159(USA) /175(KOR/J), the compilation document which reflects the proposals from the input documents was reviewed from the beginning to the section 3.3.4.
* 3rd SWG-4B at P5 (1730-1900) of 28th Mar. at Room A (CICG)
	+ The review of the compilation document was continued up to considering b).
* 4th SWG-4B at P4 (1545-1700) of 29th Mar. at Room A (CICG)
	+ The review of the compilation document was continued up to considering further f).
* 5th SWG-4B at P1 (0900-1015) of 31st Mar. at Popov
	+ The review of the compilation document was continued up to recognizing k).
* 6th SWG-4B at 13:30-1445 of 2nd Apr. at Popov
	+ The review of the following parts in the compilation document was continued.
		- recognizing j)/k)
		- recognizing further b)
		- NOTE for “Methodology with respect to the examination referred to in resolves 1.2.5”
		- New resolves further 1)/2) which were proposed by SWG-4B chair.
	+ As for the new resolves further 1)/2), no consensus was reached for these resolves in the meeting.

**<Joint meeting with SWG-4B>*** 1st Joint meeting between SWG-4A and SWG-4B at 30th Mar. at Room A(CICG)
	+ The document for the joint meeting which includes the following items relating to the responsibility and NCMC was reviewed from the beginning to X.4, and the proposed resolves from X1 to X4 were agreed.
		- the proposed resolves on responsibilities of administrations for the operation of ESIMs
		- the proposed resolves on technical and operational requirements of ESIMs to prevent accidental interference from occurring” and “ Proposed CPM text to describe the interference management capabilities and procedures applicable to ESIMs
		- Proposed CPM text to describe the interference management capabilities and procedures applicable to ESIMs
* 2nd Joint meeting between SWG-4A and SWG-4B at P4(1545-1700) of 30th Mar. at Room A(CICG)
	+ The review of the document for the joint meeting was continued up to X.5.
	+ An administration insisted to put [ ] on X.1 and X.4 which were agreed in the meeting because the administration was still confirming if X.1 and X.4 are agreeable, and the meeting decided that X.1 and X.4 were yet to be agreed.
* 3rd Joint meeting between SWG-4A and SWG-4B at P3(1430-1545) of 31st Mar. at Room A(CICG)
	+ The review of the document for the joint meeting was continued from X.5 to iii) of the section 3 except for Section 2. \*Section 2 to be discussed in the 4th Joint meeting.
	+ As for the discussion about X.1 and X.4 which were not agreed in the 2nd meeting, it was introduced that X.1 and X.4 were agreed through offline discussions.
	+ In the section 3, there was a controversial discussion on the step iii) which is related to a course of action to be taken by the affected administration.
* 4th Joint meeting between SWG-4A and SWG-4B at P3(1345-1500) of 1st Apr. at Popov
	+ The review of the document for the joint meeting was continued in the sections 2 and 3, and the joint meeting was closed with the completion of the review.
	+ All of the steps described including the step iii) which was discussed controversially in the section 3 were replaced with the steps proposed in the input document 43(ASMG). In addition, two views were proposed to be remained in the leading paragraphs of the section 3. (issue#1)
	+ resolves proposed in the section 2 were agreed with several modifications.
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| 1. **Issue(s) which require discussion and further guidance at APG Coordination meeting**
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| * + Issue #1)
		- Since no consensus was reached for the new resolves further 1)/2) relating to the commitment with Appendix 4, which were proposed by SWG-4B chair, these resolves are to be further discussed with checking if the similar resolves are already contained in the other resolves parts.
	+ Issue #2)
		- Since it seems that the steps including the following step iii) which were proposed in the section 3 of the document for the joint meeting are not pragmatic because it would be a burden for the affected administration to identify the notifying administration of the ESIM which would be the interference source, all of the steps proposed in the section 3 of the document were replaced with the steps in the input document 43(ASMG). As described in “4. Summary of discussions during CPM23-2” above, this issue has been settled for the time being, however, it is necessary to follow if the steps are appropriately specified in the resolution. “ The affected administration informs the notifying administration of the satellite system under which the ESIM would operate.”
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