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ITUEvents

1st ITU Inter-regional Workshop on WRC-23 preparation

13 - 15 December 2021

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ASMG Preliminary positions for WRC 23

Arab Spectrum Management Group (ASMG)





Arab Spectrum Management Group (ASMG)

The Arab Ministerial Council for ICT established the Arab Spectrum Management Group (ASMG) in 2001



Arab Spectrum Management Group ASMG The aim of the group is to establish cooperation in spectrum management

The group is responsible for sharing and exchanging views and information on the development of radio communications sector

The group is also responsible for managing and coordinating all issues related to spectrum management on the Arab and the ITU levels

Eng. Tariq Al Awadhi is re-elected to chair the ASMG for WRC-23 study cycle

ASMG Journey to WRC-23

ASMG-26 Physical Meeting Abu Dhabi, UAE 9-11 Feb 2020

ASMG Virtual meeting 19 Jul 2020 ASMG-27 Virtual meeting 21-25 Mar 2021 ASMG-28 Virtual meeting 17-20 Oct 2021

28th ASMG Meeting Virtual meeting, 17-20 October 2021



17-20 October 2021 Administrations, Organizations and Industries.



96 Participants

17 Administrations7 Organizations20 Industry member



44 Contributions: proposals on Preliminary Positions and Presentations

ASMG

Working Groups

WG1 Fixed, Mobile & Broadcasting services

Aeronautical & Maritime services

Science services
Satellite services

General issues and WRC-27 agenda items

TECH WG

WG2

WG3

WG4

WG5

Issues related to Emerging Technologies

Issues related to fixed, mobile and broadcasting services

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Protection of stations of the aeronautical and maritime mobile services and review the pfd criteria in the frequency band 4 800-4 990 MHz

1.2

1.1

Identification of (IMT) in the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz



The use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level



9.1 c

Review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1

1.3

Primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions

Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis

Issues related Aeronautical & Maritime services

1.6

1.7



New allocation for aeronautical mobile-satellite (R) service (AMS(R)S) for both the Earth-tospace and space-to-Earth directions in the frequency band 117.975-137 MHz

1.8

Accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems

1.9

Accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route)

Chaired by: Dr. Halimouche Ramzi r.halimouche@anf.dz +213660773627



Possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications

1.11

1.10

Modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation



Review of the amateur service and the amateursatellite service allocations in the frequency band 1 240-1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) services

Issues related to Science services

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New secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz

1.13

1.12

Upgrade the allocation of the frequency band 14.8-15.35 GHz to the space research service

1.14

New primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz **9.1** a

Spectrum requirements and appropriate radio service designations for space weather sensors

9.1 d

Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations

Issues related to Satellite services

Chaired by: Mr. Abdulrahman Al Najdi anajdi@citc.gov.sa +966114618204



Harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally

1.18

Spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems

1.16

1.17

1.15

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

1.19

New primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2

The appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof

to consider possible changes, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks,

Working Group 5 General issues and WRC-27 agenda items

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4

8

Chaired by: Mr. Majdaldeen Musa magdaldeenmusa@gmail.com +249187171233



to examine the revised ITU R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with further resolves of Resolution 27 (Rev.WRC-19), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in resolves of that Resolution

to review the Resolutions and Recommendations of previous conferences with a view to their possible revesion, replacement or abrogation

to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC 19); 9.2

on any difficulties or inconsistencies encountered in the application of the Radio Regulations

9.3

on action in response to Resolution 80 (Rev.WRC-07)

10

to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution 804 (Rev.WRC-19);

WG-1

1.1) Protection of stations of the aeronautical and maritime mobile services and review the pfd criteria in the frequency band 4 800-4 990 MHz

- To invite the Arab group to participate in the study of the scope and follow-up studies on this subject in the WP 5D, taking into account the current difficulties and challenges and determining the position in the upcoming ASMG meetings.
- To emphasis on protecting existing services and not imposing additional restrictions on them.

1.2) Identification of (IMT) in the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz

- To review the regulatory requirements within footnote (5.429b), and then identify the frequency band 3300-3400 MHz for IMT systems for countries wishing to do so, with an emphasis on protecting the existing services and systems and not affecting them.
- To follow-up studies with regard to identifying the frequency range 6425-7125 MHz, emphasize the protection of existing services and systems and not affecting them, and then to determine the Arab position on identifying the range for IMT systems in the upcoming ASMG meetings.
- Some Arab countries want to emphasis on not imposing restrictions on IMT applications in the bands that will be supported.

WG-1

1.3) Primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions

• To continue supporting to elevate the status of the frequency band 36003 800 MHz for the mobile service, with the exception of aeronautical mobile, on a primary basis in Region 1, without imposing unnecessary restrictions on existing services and their future development.

1.4) The use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level

- To follow-up studies of the possibility of using high-altitude platforms as base stations for IMT (HIBS) in the frequency bands referred to in Resolution 247 (WRC-19) with follow-up studies of sharing and sharing in order to ensure the protection of existing services to which the frequency band is allocated on a primary basis and services operating in adjacent bands as appropriate, in addition to the measures required for coordination with neighboring countries regarding exceeded coverage.
- To protect existing systems and the future development of services to which bands are allocated on a primary basis and services operating in neighboring bands as necessary.
- To continue studying the spectrum requirements of high-altitude platform stations as base stations for IMT (HIBS), while not imposing additional regulatory or technical restrictions on mobile communications systems and determining the position on the possibility of using these applications in the bands mentioned in Resolution 247 (WRC-19) in the upcoming ASMG meetings

WG-1

1.5) Review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1

 To emphasize on the protection of existing services and systems, especially the broadcasting service, and not affecting it, and to study the possibility of allocating the band (470-694 MHz) or part of it to the mobile service and identifying it for applications of IMT by the interested administrations.

9.1) c Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis

- To invite ASMG administrations to consider the frequency bands that will be studied for using the IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis, with an emphasis on protecting the existing services.
- To studying the update of the current recommendations in the ITU with the possibility of preparing a new recommendation and the bands that will be identified for the use of these systems in the frequency bands allocated on a primary basis to the fixed service, in addition to studying of technologies and applications of fixed wireless broadband within the uses of IMT systems and related concepts.

1.6) Regulatory provisions to facilitate radiocommunications for suborbital vehicles

- There is no objection to developing regulatory procedures to facilitate the operation of suborbital vehicles, while ensuring that they do not affect the systems of civil aviation and the current space launch system.
- No change in Article 5 of the Radio Regulations.
- Follow-up studies in the radio sector

1.7) New allocation for aeronautical mobile-satellite (R) service (AMS(R)S) for both the Earth-to-space and space-to-Earth directions in the frequency band 117.975-137 MHz

• Support ongoing regulatory studies and procedures with the aim of strengthening aviation systems over remote areas and oceans while ensuring that existing services and existing aviation systems are protected and that no operational restrictions are imposed on them.

WG-2

1.8) Accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems

- Support the application of safety and life conservation standards with UAS CNPC links and ensuring that the requirements of ICAO on the condition that:
- no additional restrictions are imposed on the ground systems
- does not affect the existing agreement between the notifying administrations, reached during the FSS satellite coordination process;
- doesn't affect the future coordination of FSS networks at the application of the provisions of Articles 9 and 11 of the Radio Regulations;

1.9) Accommodate digital technologies for commercial aviation safetyof-life applications in existing HF bands allocated to the aeronautical mobile (route)

• Support the promotion of optimal use of the frequency spectrum by introducing digital technologies for safety applications in the HF bands allocated to the aeronautical mobile servic 'provided that coexistence is ensured with the current analogue systems.

WG-2

1.10) Possible new allocations for the aeronautical mobile service for the use of nonsafety aeronautical mobile applications

• The necessity of providing the necessary protection to the existing in-band and adjacent band services, for the frequency bands under study.

1.11) Modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation

 Support the possible regulatory procedures for updating the GMDSS system and implementing electronic navigation, and introducing a new GMDSS satellite system while ensuring the protection of other existing services and systems operating in the GMDSS system.

9.1 b) Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240-1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) services

• support the possible technical and operational measures to ensure the protection of receivers of systems operating according to the primary allocation of the RNSS service in the frequency band 1240 - 1300 MHz.

WG-3

1.12) New secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz

• Support technical and regulatory studies under this agenda item for a possible new secondary allocation to the Earth Exploration Satellite Service (Active) for space-based radar sounding systems in the frequency range of about 45 MHz, while ensuring the protection of existing services in the 40-50 MHz band and in adjacent bands.

1.13) Upgrade the allocation of the frequency band 14.8-15.35 GHz to the space research service

• Follow-up studies under this agenda item, focusing on protecting existing services, especially microwave links operating in the band 14.8-15.35 GHz and radio services in adjacent bands, without imposing additional restrictions on existing primary service and systems in the band and adjacent bands.

1.14) New primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz

• Follow-up current studies to consider possible modifications of current or potential new allocation for the Earth Exploration Satellite Service (passive) in the band 231.5-252 GHz while ensuring protection and without imposing additional restrictions on existing services.

WG-3

9.1 a) Spectrum requirements and appropriate radio service designations for space weather sensors

 Follow-up the studies to identify priority bands that provide critical data for recognition and protection of space weather systems and to develop appropriate definitions in the Radio Regulations (RR) used by space weather sensors without imposing any additional restrictions on existing services.

9.1 d) Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations

• Follow-up the studies to identify the necessary regulatory and technical issues that ensure protection of EESS sensors (passive) in the band 36-37 GHz from interference of N-GSO FSS space stations in the band 37.5-38 GHz.

WG-4

1.15) Harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally

- Follow up the studies on the regulatory and technical aspects for ESIMs on aircraft and vessels communicating with GSO space stations in the FSS operating in the frequency band 12.75-13.25 GHz (Earth-to-space), while ensuring protection to the existing services and those in the adjacent bands within the frequency band 13.25–13.75 GHz, taking into account not to impose any affect on these services and their future development as well as implementation of Resolution 170 (WRC 19)
- The studies should specify the responsibilities of the administration as following :
- - the notifying administration for ESIM.
- - the administration that use the satellite network.
- -the administrations that allow the communication between ESIMS and Satellite network.
- - the administration that EISM operate within it territory.
- Develop a methodology for the BR to examine the conformity of earth stations on aircraft and vessels in case of usage of an appropriate pfd to protect terrestrial services from ESIM with such methodology needs to be established and agreed before the conference.
- Support to develop a reguoularty , technincal and regusteration procedures for ESIMs on aircraft and vessels communicating with GSO space stations in the FSS operating in the frequency band 12.75-13.25 GHz (Earth-to-space), which may differ from current procedures.

WG-4

1.16) 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

- Follow-up studies in the radio sector to ensure that ther non-GSO ESIM shall not request any protection from existing and future services in these frequency bands and adjacent bands, with an emphasis on establishing strict procedures to ensure the protection of those existing and future services in these frequency bands and adjacent bands
- the non-GSO ESIM characteristics shall remain within the envelope characteristics of typical earth stations associated with the GSO satellite system with which these ESIM communicate
- Non-GSO ESIM operating in the frequency band (29.5-30)GHz shall not claim protection from terrestrial services in the footenot (5.542) of the Radio Regulations.
- Non-GSO ESIM operating in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz shall not claim protection from terrestrial services to which the frequency band is allocated and operating in accordance with the Radio Regulation
- Develop a methodology to assist the BR to verify that the non-GSO ESIM under this resolution comply with the PFD limits under this agenda to ensure the portection of terrestrial services in the frequency bands (27.5-29.1)GHz and (29.5-30)GHz
- Review the ITU-R Recommendation S.1503 to ensure that non-GSO ESIM under this agenda will comply with EPFD limits mentioned in the aritcle 22 of the radio regulations to ensure the protection of GSO satellite networks in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz and 29.5-30 GHz

1.17) The appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof

- Support to develop a regulatory framework to ensure the protection of the in-band and adjacent bands services to which the frequency bands referred to in this agenda item, in particular, existing and future FSS services be guaranteed.
- Support the "within the cone of coverage" concept of operation, which allows satellite-to-satellite transmissions to be granted regulatory recognition under the current FSS allocation, without the need for a new inter-satellite service allocation.
- Support the allocation of satellite-to-satellite transmissions within current FSS allocation, with same directional designators as in FSS, i.e. Earth-to-space and space-to-Earth.
- The technical parameters shall be approved for uplink and downlink transmissions between two spacecraft with different altitude communicating with the earth stations

WG-3

1.18) Spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems

- The studies should ensure the protection for all ensure the protection of all existing and future services in these frequency bands and adjacent band defined in the resolution (248) (WRC-19) from MSS, especially the frequency band (2010 -2025) MHz in Region 1 that identified for IMT.
- To ensure that the studies shall not impose any restrictions on all existing and future services in these frequency bands and adjacent band defined in the resolution (248) (WRC-19).
- Follow-up the the coexistence and compatibility studies with all services within the frequency bands under this agenda in in order to determine the required frequency band BW.
- Follow-up the the coexistence and compatibility studies with all services within the frequency bands under this agenda in order to define the use of this service as primary or secondary.

1.19) New primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2

- Follow-up studies and make sure that any new allocation in Region 2 will ensure the protection of existing services in the frequency band and adjacent bands in Region 1
- Provide the necessary regulatory procedures including the technical and operational procedures to ensure the protection for existing services in band and the adjacent band.

WG-4

7A) Tolerances for certain orbital characteristics of non-GSO space stations in the FSS, BSS, and MSS

- Follow-up studies and take under consideration the effect of exceeding these tolerance and how it can be reflected in the satellite filing.
- Provide the necessary regulatory procedures for NGSO constellation in case exceeding the tolerance of the orbital plan and determine the impact if the operations are beyond the specified allowable tolerances mentioned in none-GEO constellation filing.
- Take the necessary regulatory procedures to specify the tolerance in order to prevent satellite crashes.

7B) NON-GSO system post milestone Reporting

- Support the studies to have NON-GSO system post milestone Report in order to ensure that the number of NON-GSO satellite system in the space reflected in the MIFER.
- When developing the post-milestone reporting procedures, some operational flexibility which is necessary for the maintenance of the non-GSO system need to be consider without allowing any abuse

WG-4

7C) Protection of geostationary satellite networks in the MSS operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions

 Support the studies to protect the geostationary satellite networks in the MSS operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions

7D) modifications to Appendix 1 to Annex 4 of Appendix 30B

• Support the only method identified under this topic to align Appendix 1 to Annex 4 of RR Appendix 30B with the values of orbital separation in provisions 1.1 and 1.2 of Annex 4 of RR Appendix 30B. With these modifications

WG-4

7E) Improved procedures under Radio Regulations of Appendix 30B for new ITU Member States

 Supprt the studies and ensure that the improvement procedures under AP30B for the ITU Member States without imposeing any restrictions on the assignment / allotments for the administrations in AP30B

7F) Impact of excluding feeder-link/Up-link service and coverage areas in the bands subject to RR Appendix 30A and RR Appendix 30B

- Support to introduce provisions in Appendix 30A to the Radio Regulations allowing an administration to request exclusion of its national territory from the service area of another administration's satellite network.
- The notifying administration of the interfering satellite network need to reconfigure the coverage of the receiving antenna outside its service area, in order to remove any obstacles to the deployment of national or regional satellite networks from other countries in each of Appendices 30A and 30B of the Radio Regulations

WG-5

2) to examine the revised ITU R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with further resolves of Resolution 27 (Rev.WRC-19), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in resolves of that Resolution

- ASMG administrations support the principle of Resolution No. 27 (Rev.WRC19) to review and examine Recommendations incorporated by reference in the Radio Regulations with a view to update them as appropriate.
- Invite ASMG members to actively participate in ITU-R related working groups on revision of these recommendations.

4) to review the Resolutions and Recommendations of previous conferences with a view to their possible revesion, replacement or abrogation

• ASMG administrations support the principle of Resolution 95 (Rev.WRC-19) in order to ensure that Resolutions and Recommendations of previous WRCs remain relevant and up-to-date.

8) to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC 19);

- ASMG administrations support ITU-R activities aimed to achieve global or regional harmonization of spectrum utilization by removing country names from footnotes or adding country names to footnotes.
- Urge ASMG administrations to review the relevant footnotes.

WG-5

9.2) on any difficulties or inconsistencies encountered in the application of the Radio Regulations

• ASMG Administrations support measures to remove any difficulties or inconsistencies encountered in the application of the Radio Regulations.

9.3) on action in response to Resolution 80 (Rev.WRC-07)

• Supports, as a matter of principle, the full implementation of Resolution 80 (Rev.WRC-07) as a primary mechanism to fulfill the principles embodied in the ITU Constitution.

10) To recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention.

- ASMG administrations support the principle of Resolution 804, which aims to set the agenda items for the upcoming radiocommunication conferences, to provide administrations with sufficient time for to examine the topics that intended to be included in the work of the next conferences.
- Urge the Arab administrations to state the topics to be included in the next conference agenda items.

Technology Working Group

Issues related to Emerging Technologies

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Evaluation of current uses in different parts of the band Future plans to use this band in conjuction with works under 1.5 (Questionnaire circulated and Anaylized) 2.6 & 3.5 GHz

3.8-4.2

GHz

6 GHz

Current and future plans for using these frequency bands Channeling arrangements and private networks Issues related to operating networks at cross-borders (time Synchronization, Signal level, etc) (Under Discussion)

Evaluation of current uses in this frequency band Future Plans for this band and timing associated Link with Issue 9.1c (Under Discussion)

Use of this band or part of it for license exempt applications (i.e WifFi 6 and Wifi 6E)

Related studies in 1.2

(Use of this band or part of it for license-excempt uses announced by several Arab Administrations)

700 &800 MHz

1.5 GHz

600

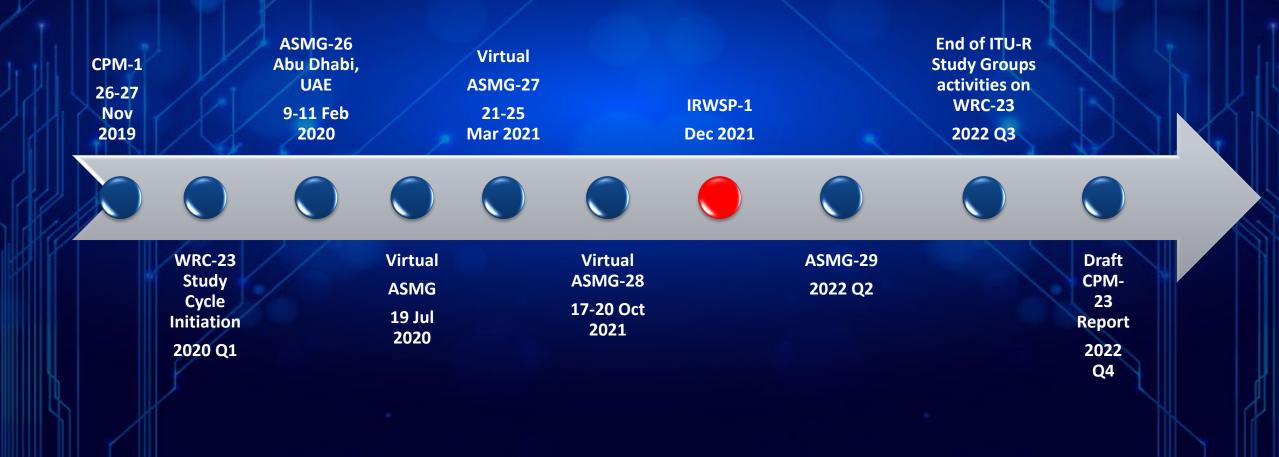
MHz

Use of IMT in these bands Harmonization of Channeling Arrangements used PPDR use in these bands (Questionnaire circulated and Anaylized)

Use of Channeling Aranngemnt G3 in ITU-R M.1036 Compatibility between IMT and other Services in the adjacent bands Announcement to to the industry on this harmonized use

(Announcement Approved by the Plenary)

ASMG Roadmap



ASMG Roadmap



Thank You