Questions and answers at terrestrial panel of WRS-20

1 – 3 December 2020

Question	Who	Answer
What policies can the countries that still have services in the ranges identified for IMT adopt with regard to coexistence with the services of IMT2020.	odmar de sousa	The services of IMT-2020 can be introduced in the frequency bands already used by IMT-2000 or IMT-Advanced as well as in the additional bands in the mmWave identified for IMT by WRC-19. It is understood that IMT-2020 is not compatible with IMT-Advanced or IMT-2000 operating in a same frequency and in a same area. Therefore, administrations may need to make a long-term strategic plan by redeploying or refarming through consultation with the existing operators for transition of their existing system to the new system. Administrations may need to ensure spectrum in the bands not used by existing IMT-Advanced or IMT-2000, at first. 3.5 GHz band, 2.6 GHz band or 700 MHz band have been considered in many administrations for early deployment of IMT-2020.
under which provisions and criteria one administration can examine to find out which receiving satellite earth stations will be affected by its future terrestrial stations. and by using which software the calculation is done.	Naderi Jahromi	With respect to protection of ES of neighbouring administrations criteria and calculation methods contained in RR Appendix 7 are used. RR Appendix 7 contains procedures and system parameters for calculating an earth station's coordination area, including predetermined distances for the frequency bands between 100 MHz and 105 GHz. The procedures allow the determination of a distance in all azimuthal directions around a transmitting or receiving earth station. Tables 7 and 8 of Annex 7 to RR Appendix 7 to the RR specify the system parameters required for the determination of coordination distances for different frequency bands and different services.

		If coordination contours are to be calculated using the detailed methods of Appendix 7, the computer programs of AP7 can be used that are embedded in GIBC, along with the associated BR software (i.e. ITU Digital World Map (IDWM) and GIMS) that are available in BR IFIC DVD-ROM. For compatibility studies between terrestrial station and ES of the same administration the Recommendations can be found at: Contribution 9 to WRS-20 on Terrestrial services in bands shared with space services (itu.int); Frequency sharing and coordination between fixed-satellite and fixed service systems (itu.int) and Mobile, radiodetermination, amateur and related satellite services (itu.int).
If an Administration did not authorize a private company to act on its behalf with the MARS database but has being do so, how does the administration correct this?	Craig Nesty	Only notifications received from Authorities duly accredited by administrations are accepted for updating MARS database. The List of authorized notifiers are available at: https://www.itu.int/mmsapp/NotificationAgency/list. If there is a need to update this List, an official request shall be sent to the BR Director at brmail@itu.int
So, services above 50 km, are those considered as space-based or non-terrestrials?	Munira Jaffar	Systems below 50 km are terrestrial, systems above major part of atmosphere are space. Systems like sub-orbital planes, which are used below and above these limits, are not yet classified as terrestrial or space. In reality, HAPS operate below 22 km and LEO satellites start from about 400 km
can you quickly go over the difference between planned band and unplanned bands, if the question is relevant to this session	Mohamed Moussa	The planned bands are used by planned services, as a result of Regional or World Conference. So the planned bands are subject either to a Regional Agreement or RR Appendix, which normally contain very detailed rules on the use of the band, including requirements to station parameters, mandatory channelling arrangements, coordination procedures, etc. and vary considerably from service-to-service. The approach used is a prior planning for future use to ensure equitable access for Administrations.

		Unplanned bands are frequency bands not subject to any Agreement or Appendix. The coordination procedure is based on the principle of "first come - first served". So, the planned bands are normally much more regulated than non-planned bands.
Is it possible, MIFR to have a recorded frequency assignment or a plan (eg in FSS) and the international coordination of this assignment is not complete yet?	Constantinos BAKALIS	No, it is not possible
Where can I find a description to all parameters in each notice?	Emal Rumi	You may wish to check https://www.itu.int/en/ITU-R/terrestrial/tpr/Pages/Notification.aspx
WISFAT software can be downloaded where?	Oluwatoyin Agboola	The WISFAT is web-based and can be accessed through this address: https://www.itu.int/en/ITU-R/terrestrial/tpr/Pages/Submission.aspx
Can you explain again how ship station registered and why they are not included?	Craig Nesty	individual ships are not included in registration, since they are moving, and it is not possible to assess interference from them, which is the purpose of registration in the MIFR. Ship stations however could be notified via their associated receiving or transmitting coast stations.
which systems/services must register under MIFR?	Dominic Nguyen	All frequency assignments indicated in Nos. 11.3 and 11.9 of the RR shall be notified to the BR
I usually I use E-notices however I would like to know if it accepts ICS	MIGUEL MARIN	Yes, if the output format of the notice is compliant to the BR format. Thereafter, it must be validated using the online validation or TerRaNotices
If some usage of frequency is temporary not in use, for example for one year - does administration has to send notice to MIFR?	Harun Mutapcic	if you plan to resume the operation it is not necessary to cancel the assignment.

Would the recording of this session be made available to the participants? If so, where would it be posted?	Jasmine Khadem	Recordings of all sessions can be watched from archives of webcast: https://www.itu.int/en/ITU-R/information/events/webcast/Pages/default.aspx
Is there any other meaning for "assignment" and "allotment " except defining the types of different plans? Thanks!	LIN ZHANG	1.17 allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions. 1.18 assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions. In a Plan, an allotment is an area (zone) with one or more assignments using the same frequency, while an assignment is one station (geographical coordinates) and its frequency.
Because the three regions are so large, administrations within them may have very different needs. For example, EU vs. Africa. Has there ever been any discussion about subdividing the regions to better address the needs of the administrations within them?	Edgar Reihl	no discussions have been in ITU-R about subdividing the Regions. The sub-regional interest can be achieved through application of Article 6 (Special Agreements) of the Radio Regulations in the current framework. On the contrary, the trend is towards the harmonization of allocations between the Regions
So, any notification sent to ITU is a potential modification to the plan?	Julio Calvo	No. Notifications to ITU can be made for recording an assignment in a Plan or in the MIFR. If a band is not subject to a Plan, a notice could be sent for recording in the MIFR. If a band is covered by a Plan, the notification should be sent to modify the Plan, as a first step when planning. on a second step, once recorded in the plan, 90 days before putting into operation, a second notification should be done to record the assignment in the MIFR. The technical characteristics of the station notified to the MIFR must be in conformity with the one recorded in the Plan (11.34 of RR)

just to confirm, band 87.5-100MHz can be used in region 1 for both Tv and sound. If the band is used for tv, it is regulated by ST61 and if it is used for radio, it is regulated by GE84. would that be correct?	HERNANDEZ JUAN PABLO	Exact. You need to check if your Administration is covered by which Agreement
Does the allotment plan cover all the country area or only the borders when there is a neighbouring country? If it is valid only in the border how the distance to border limit is defines?	Assia BAHRI	The allotments (for GE06 Plan) have been defined by administrations themselves. There are allotments covering defined areas, could be inside the borders or at the borders. There are also national allotments. It was done according to each Administration's need and decision.
How long the coordination period?		It depends on the frequency bands. For the frequency bands shared with space service referring to RR9.16, RR9.18 and RR9.19 or for the frequency bands referring to RR 9.21, the statutory coordination period is 4 months. For the assignments subject to a Broadcasting Plan, each Agreement establishes different coordination periods. For GE06 the total maximum coordination period since the publication in Part A is 2 years and 75 days. For GE84: 100 days For ST61: 12 weeks For GE06 Agreement, there are also 2 specific cases: 1- if it is a short procedure: 40 days (if your Amdinistration is notified as having given its agreement by the notifying administration) 2- 40 days if the notifying administration requested a reminder according to 4.4.10. Please follow the workshop on GE84 and GE06 Agreements next week.
Est-ce que ce possible d'avoir les documents es intervenants en version francaise ?	Filia Balustic	The presentations are only in English for this Seminar. However, the supporting documents are available in the 6 languages at https://www.itu.int/md/R19-WRS20-C/en
Will be Q&A also published somewhere	Gregor Nikolić	Yes, we are planning to publish Q/A session by session

What are the advantages, if any, and the differences between a frequency assignment published in Part B and a current assignment published in MIFR	Vilineya Misheva	A frequency assignment published in Part B of a Plan means that the assignment is recorded in the Plan. The Plan contains the planned stations which will be put in service at some point but are not necesarilly in service yet. On the ohter hand, an assignment submitted for publication in the MIFR means that the assignment has been put already in service.
How to identify services that may or may not cause harmful interference?	António de Almeida	If the foreseen interference from a service is higher than the permissible or accepted interference vis-à-vis another service, the former service may cause harmful interference. For the services part of a Regional Agreement, the Agreement contains mechanisms to define the administrations to be potentially affected. These mechanisms provide the basis of compatibility calculations. If the services are in operation, then harmful interference can be assessed and measures by radio monitoring.
Do aeronautical assignments inserted in ICAO registers enjoy the same "international recognition" as assignments recorded in the ITU MIFR?	federico bergamasco	No
In Ms. Pinnagoda's presentation, it has been said the reference for notification format would be the Preface (to the BR-IFIC). I think the specification for TerRaSys input format for the electronic notification is in the respective Circular Letters which contain the format specification and have been signed by the BR Director.	Klaus Huber	In the presentation, it was said that the Preface to the BR IFIC is essential when notifying as there are many codes and symbols used for specific data items. Correct. Circular Letters have a formal status for identification of notification format. BR will need to update some Circular Letters. As a handy and up-to-data source of information the Preface could be used for notification purposes. The technical characteristics for different services/frequency bands are also listed in Appendix 4 of RR.

Q&A PANEL 2 December 2020

Question	Who	Answer
What kind of Terrestrial Radio Station should be notified or recorded?	**Osmond Aritonang**	Frequency assignments to be notified are indicated in provisions Nos. 11.3 to 11.9 of RR
The ITU BR encourages harmonious bilateral coordination especially for neigbouring administrations without necessarily involving the BR (up to notification stage). How does the BR-terrestrial advise administrations to deal with administrations that take long to respond to terrestrial coordination requests especially for broadcasting services!?	**George William Kasanga**	If the coordination concerns stations under a specific Agreement (Plan), the first thing to do is to see if there are provisions in the corresponding agreement on how administrations might request assistance to the BR (such as sending reminders to administrations who have not given a reply regarding a coordination request). In difficult cases, administrations might request the BR to assist with coordination requests, which can lead to the organization of specific bilateral or multiateral coordination meetings to reach an agreement.
should every planned assignment be notified in the software?	**Ziyad Aldobaian**	Yes, assignments are to be notified as Plan modification to update the concerned Plan
dose the PREFACE have the force of law or is it just a reference ?	**Sheng Gao**	No, it is a reference document containing description of the content of the BR IFIC
What is the fundamental difference between OT and CP (nature of service) in terms of frequency assignment protection parameters?	**Maxim Novikov**	According to the definition of CP and OT, CP: Station open to public correspondence OT: Station open exclusively to operational traffic of the service concerned Both CP and OT are allowed for fixed and land mobile services. There is no provision to differentiate the protection criteria between them. CP is used for public communication, e.g. cellular; while OT may be used for private network, e.g. PPDR. In such case, the protection criteria of I/N =-6dB could be apply to CP. The stringent protection

		criteria of I/N=-10dB could apply to OT. However, the value of nature of service is not examined by the Bureau. It may be used for coordination between administrations for determination of the protection criteria because it can express the nature of the system if agreed between administrations.
		CP is not allowed for notification of frequency assignment in the bands allocated exclusively to the aeronautical service (RR Appendixes 26 and 27).
What about frequency interference on borders for mobile stations? how to deal with that?	**Abdullah AlShehhi**	Interference to the mobile service could be resolved through bilateral or multilateral coordination. Best way would be establishment a mutual agreement according to Article 6 of the Radio Regulations. A technical guidance is given in Recommendation ITU-R SM.1049 (A method of spectrum management to be used for aiding frequency assignment for terrestrial services in border areas). In addition to generic ITU guidelines, regional organizations also provide comprehensive guidance/recommendations for cross-border coordination. e.g. CEPT: https://docdb.cept.org/document/category/ECC_Recommendations. If you search there for "cross-border" you will find according documentation.
There several terminologies in APP 4 such as transmitting station, receiving land station and typical transmitting station. What's the difference between them? (Is there any definition in Radio Regulation)	**Sheng Gao**	There is no definition. Transmitting station generates emission and transmits a signal. Receiving station receives a signal. "Land station" means a station at a fixed position. Typical station is a station having standard parameters. Assignments can be notified in the form of typical station with indication of the parameters and the zone where such typical stations operate
How long will be the commenting period (affected admin)/examination once the notice are publish in Part 1, before it publish in Part 2?	**AZILA ZAKARIA**	The time frame for the publication in Part 2 depends on the frequency bands. In general, if the frequency in not shared with space services it will be published in 2 weeks and not more than 2 months. It is only for Plan modification notices for which the Bureau

		will publish the potential affected administrations in Part A and the time period for comments depend on the Plan.
from what I have understood the notifications is to notify the world about existing and planned assignments ? is there a different process if the assignment is not allocated in the region by the ITU?	**Ziyad Aldobaian**	Administration can request to record the assignment which is not in accordance with the Radio Regulations in the MIFR by explicitly mentioning that it will be operated under the condition of RR 4.4 in the assignment remarks field. With this the notifying Administration takes responsibility that the station will operate on non-interference and non protection basis. The assignment would be recorded in the MIFR for information purposes with the finding reference to "RR8.5".
often, frequency assignments used in the ICAO plan are not reflected in the MIFR. However, in the case of a coordination request, administrations may refer to frequency occupancy in the ICAO plan. Can you explain this situation and the Bureau's position in this case.	**maxim novikov**	ICAO has established frequency assignment planning criteria to secure that frequency assignments for aviation can operate without causing (or being subject to) harmful interference. The ICAO frequency assignment plan contains this information reflecting the frequency assignment planning criteria that have been developed by ICAO and which are applied in the international coordination of frequency assignments through the ICAO Regional Offices. However, not all necessary frequency parameters for assessing the interference are recorded in the ICAO database, it's recommended to use both databases for coordination. There is a project between ICAO and ITU to make a software tool which will assist administrations to identify the missing records in the MIFR with respect to ICAO assignments plan and help to make notifications for the MIFR.
Is ST61 applied for Digital TV? thank you	**Osmond Aritonang**	Yes, in the frequency band 41-68 MHz and with condition that protection and interference envelopes are not higher than the ones of the Plan entry one. There is no specific regulation on this, but this was the practice for the other frequency band that was moved to GE06 after RRC-06. For the introduction of digital sound in the ST61, it should be done according to the Rule of Procedure (RoP) A2/ST61 Paragraph 5. This RoP specifies that the same coordination distances as analogue systems will be used.

There are some provisions in RR related to transmitter, for instance, the power delivered by a transmitter to the antenna of a station. What's the difference of the terminology between transmitter and station. Could a station contain many transmitters?	**Sheng Gao**	The term of station is defined as "one or more transmitters or receivers or a combination of transmitters and receivers at one location for carrying on a radiocommunication service, or the radio astronomy service." by RR No. 1.61. A station may have many transmitters.
Is there a digital television plan for Region 3 countries? If no how are television stations coordinated in this this region?	**Bharati RAMREKHA**	There is no digital television plan for Region 3 countries, with the exception of Iran, that is part of GE06 Agreement. Television stations can be coordinated in this region via bilateral or multilateral agreements between concerned administrations.
How long the maximum period of coordination?	**Osmond Aritonang**	Different Plans have different coordination periods. For GE06 the total maximum coordination period since the publication in Part A is 2 years and 75 days. For GE84: 100 days For Stockholm 61: 12 weeks
shall administration needs to complete all coordination required before submitting Part B ? If not, what is the Part B procedure for this case ?	**Yulrama Indra**	Yes
Now with most of the terrestrial frequencies mainly MW and SW becoming free some of the used ones. How does ITU consider this? Is it reallocated for others or it's reserved?	**Rajen Biswa**	It is decided by ITU administrations at WRCs. For example, WARC-92 reallocated 10 HF bands from the fixed and mobile services to broadcasting service. Now there are some trends in administrations to initiate the process of re-consideration of allocations in HF bands, in order to optimize its usage and enable digital technologies.
When notifying a base station, which has several antennas like 2*2 or 4*4 MIMO, how to notify the power in MIFR ? Will we notify the power antenna by antenna or the power from all antennas in a station ?	**Sheng Gao**	The Radiated Power should be aggregated for all antennas. The Power to antenna is now under discussion in Working Party 5D. As soon as Working Party 5D decides on this Administrations will be informed.

Is the terrestial and space MIFR same database?	**Antti Tyrväinen**	"physically" no, conceptually yes". The MIFR is a single unit of data, containing recorded frequency assignments. However due to differences in the structures and data elements, the MIFR portions for space and terrestrial are dispatched separately on the corresponding BR IFICs. The Bureau is however having plans for consolidating an interface to query both databases and present the MIFR as a common single data unit"
What is the differences between Plan and MIFR?	**Osmond Aritonang**	MIFR : all frequency assignments that are in operation. Plans contain planned frequencies for future use. These reservations of frequencies are done during Regional planning conferences. MIFR contains assignments in operation associated with: • Plan allotments / assignments • other stations operated in non-planned bands
will the revised assignments have the same status (primary) if they are reviewed by the Bureau (part 2B) or not in this case?	**maxim novikov**	Based on RR 11.50 when new or modified regulatory provisions enter into force, the findings of the recorded assignments concerned shall be revised and updated by the Bureau with a view to reflecting their compliance with the modified regulatory provisions/allocations. If there is no change in allocation status and it is not subject to any additional condition based on WRC decision such assignment would not be subject to the review under RR 11.50. However, when a change to Article 5 results: 1) in downgrading of the category of allocation the status for this assignment would be changed to secondary or 2) when a change to Article 5 results in abrogation of an allocation to a radiocommunication service this assignment would be suppressed unless the notifying administration requests to retain it in accordance with No. 4.4.
I found the language in Art. 21.5, " the power delivered by a transmitter to the antenna of a station". And I found the language in APP 4, 8AA in table 1, which is "the power delivered to the antenna	**Sheng Gao**	"power delivered by a transmitter to the antenna of a station" in Article 21.5 = "the power delivered to the antenna transmission line" - feeder loss of antenna transmission line. But since the feeder loss not indicated in notifications, BR considers they equal.

transmission line". Whats the difference between these two descriptions,		
Currently, application by drone as mobile user terminal under mobile service is planning and this will be increasing. In this situation, what kind of category does such application belong to?	**SKY Perfect JSAT**	Drones are considered as aircraft and classified as the aeronautical mobile service
Sorry, application using drone is land mobile? or aeronautical mobile?	**SKY Perfect JSAT**	Drones are considered as aircraft and classified as the aeronautical mobile service
If there are no bilateral treaties for ground service between countries. Can i immediately notification in BR IFIC ?	**Oleh Oriekhov**	All assignments indicated in nos 11.3 and 11.9 should be notified
How to insure the terrestrial stations notified to BR are the real ones.	**Hong Ren**	Notification process is based on declarations of administrations by submitting under Article assignments with date of bringing into use
There are some provisions in RR related to transmitter, for instance, the power delivered by a transmitter to the antenna of a station. What's the difference of the terminology between transmitter and station. Could a station contain many transmitters?		In a notice for a station, multiple operations can be included. The operation is for each separated antenna. (E.g. 3 sector antenna can be notified with 3 operations with different power.)
Do ITU check compatibility of the transmissions of each notification? What action will be taken for incompatible transmission station to be notified?	**Muditha Priyangana Gunasinghe**	The compatibility checks depend on the frequency band whether an assignment is made in the planned band, shared band or other band. There are different conditions for these checks depending on the specific case. As for example for the planned bands: in addition to specific technical conditions of the particular Plan the BR checks: is the notified frequency is covered by allotted channel listed in appropriate plan; does the geographical area or the Administration correspond to the Plan allotment; is the receiving area is within the allotment area. Administration can request to record the assignment which is not in accordance with the Radio Regulations in the MIFR by explicitly mentioning that it will be operated under the condition of RR 4.4 in

		the assignment remarks field. With this the notifying Administration takes responsibility that the station will operate on non-interference and non protection basis. The assignment would be recorded in the MIFR for information purposes with the finding reference to "RR8.5".
In the coordination of mobile service, usually we consider base station, is it necessary to consider user terminal? How?	**Hong Ren**	In the coordination under ITU procedures, we consider both transmitting base stations and transmitting mobile devices. For example, when assessing interference from a user terminals , BR takes the power of the terminals, the area of their locations (for example a circle around a base station) and calculate interference to a neigbouring country
Is it necessary to notify base stations for public mobile communications?	**Hong Ren**	Yes, if the station can cause harmful interference to stations of other countries or you wish to obtain international recognition for this assignment
The difference between Route and Off Route was not clear	**Zamba Leonel**	RR:1.33 aeronautical mobile (R)* service: An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes. 1.34 aeronautical mobile (OR)** service: An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes. Usually Route = civil aviation, Off-Route = other aviation
What is the difference between 9.16 and 9.18?	**Intan Dzulkifli**	9.16 is coordination of terrestrial transmitters against earth stations of NGSO satellite systems 9.18 - is coordination of terrestrial transmitters against earth stations of GSO satellite systems
in these 2 cases: a- notifying is a transmitting terrestrial station and affecting is a reciving earth station	**Reza Naderi Jahromi**	1 - Yes, your understanding is correct. We must look at the coordination contour of the earth station of the neighbouring countries. 2 – In order to identify potentially affected ES of neighbouring countries the necessary bandwidth overlap should be used. You may

b- notifying is reciving earth station and need to coordinate with terrestrial station for notification purpose. 1- Is it a correct unerestand that :in order to achieve the coordination requirments in both above mentioned cases we need to look from receiving earth station point of view in the other words we should use space software of app7 and plot the coordination contour around the receiving earth station even when we are a terrestrial party. 2- there may be a lot of involved receiving earth stations in neighbouring countries or even farther of a notifying terrestrial station. so for an upcoming terrestrial station, How is it possible to consider all those receiving Earth stations (that may be as many as 1000 individual examination and plotting the coordination contour for all of them) in order to see which of them encompass the geographical location of his terrestrial station.		also consult your national data base with the ES of neighbouring countries that were coordinated with your Administration under RR 9.17. In addition, for calculation of coordination contours, the computer programs of AP7 can be used that are embedded in GIBC, along with the associated BR software (i.e. ITU Digital World Map (IDWM) and GIMS) that are available in BR IFIC DVD-ROM.
How ITU involve to mitigate interferences caused by other administrations when there is no consensus? What will happen if the station causing interference is not notified?	**Muditha Priyangana Gunasinghe**	Where practicable, the operators concerned should be directly involved in resolving problems of harmful interference. If satisfactory results cannot be achieved through bilateral cooperation, the affected administration may request the assistance of BR. All the details of the case should be supplied in Appendix 10 Report format. BR examines the Report, the status of assignments and the causes of interference. BR then communicates its conclusions and recommendations to the administrations concerned. BR's intervention helps to resolve most cases.
Where I can found power limits for earth stations below 1 GHz (as ex. 148 MHz, 161.9375MHz)? Since in Art. 21 is only above 1 GHz.	**Viktor Stooss**	There are limits in Article 5 footnotes, for example, 5.218A, 5.264A, 5.268 etc. In addition, Appendix 5 has some threshold values
some regional interference meetings may decide to reduce power, or avoid mobile services on borders	**Abdullah AlShehhi**	Correct, but this would be decision of the national regulator. ITU is not in a position to intervene/comment on such national decisions.

and this may affect on customers who lives on the boarders..		
agree, but ITU will assigned frequency for such stations or areas, as i understood?! coreect me pleases	Abdullah AlShehhi	ITU does not assign frequencies to countries. ITU rather allocates bands to Regions or countries and national regulators assigned frequencies to its stations, based on ITU allocations
Is it possible for the WRS20 to share a complementary Maritime manual with participants!?	**George William Kasangaki**	Unfortunately, this is a publication which is for sale. This was decided by the ITU Membership
What is the difference between IFL and MIFR?	**Intan Dzulkifli**	IFL was replaced by BRIFIC at WRC-19. BRIFIC = MIFR + Plans + common frequencies

Q&A PANEL 3 December 2020

Question	Who	Answer
how can the ITU help when the administration has no agreement in the coordination process?	**abedallah Mahfoudh**	The Radiocommunication Bureau will commit to provide all procedural and technical assistance to resolve the issues in question. Nos. 9.60 and 9.61 of the Radio Regulations guides when and what an administration can seek BR's assistance how BR should commit to the request. Similarly, Nos. 4.1.4.13 and 4.2.4.12 of GE06 Agreement guide the way to seek BR's assistance.
What kind of Terrestrial Radio Station should be notified or recorded?	**Osmond Aritonang**	Frequency assignments to be notified are indicated in provisions Nos. 11.3 to 11.9 of RR
What is the method used by ITU to allocate MMSI numbers for each country and where we can find allocated MMSI number slots for ech country in ITU website?	Muditha Priyangana Gunasinghe	Ships participating in the maritime radio services should be assigned a nine digit unique ship station identity in the format $M_1I_2D_3X_4X_5X_6X_7X_8X_9$ where in the first three digits represent the maritime identification digits (MID) and X is any figure from 0 to 9. The MID denotes the administration having jurisdiction over the ship

		station so identified. The responsible administration shall assign MMSI to the station in accordance with the provisions described in Annex 1 of Recommendation ITU-R M.585-8. (https://www.itu.int/rec/R-REC-M.585-8-201910-I/en) MID numbers allocated to Administrations can be found at: GLAD: https://www.itu.int/en/ITU-R/terrestrial/fmd/Pages/glad.aspxhttps://www.itu.int/en/ITU-R/terrestrial/fmd/Pages/glad.aspx
What does that require? And does this require the participation of the communications administration?	Oleh Oriekhov	The ITU is responsible for the management of MID resource. Each administration has been allocated by ITU one or more maritime identification digit (MID) for its use. The responsible administration shall assign MMSI to the station in accordance with the provisions described in Annex 1 of Recommendation ITU-R M.585-8. (https://www.itu.int/rec/R-REC-M.585-8-201910-I/en)
Is H266 used in presently deployed Digital TV technologies? If so please give some examples.	Muditha Priyangana Gunasinghe	H.266 was adopted recently (July 2020). There are still some work and research going on to implement it from both hardware and software sides. It is planned to be used especially for UHD 4k and 8K.
New broadcasting standards save spectrum band use, but does it also requires investment in the deployment of new infrastructure? If so, will this enhance the divide in the access to information?	raquel renno nunes	It will definitely require some investment and changes in both encoder and decoder. The cost will be defined by the number of adoption (demand) and the number of manufacturers (competition and offer)
Can the Digital Radio Mondial system be operated within the parameters defined in the GE84 FM Radio plan ?	Bharati RAMREKHA	Yes, but only if in accordance with section 3.1 of Chapter 3 of Annex 2 to GE84: not cause greater interference, Nor require higher
En América Latina, la televisión digital no tiene fuerza, peor aún la radio digital, cuál cree que sería una estrategia para potencializar estos servicios y su adopoción, o tal vez deberíamos abandonar los esfuerzos para su promoción, dados los avances tecnológicos que muestran opcione sustituibles.	Alonso.Llanos	Today, there multiple ways to provide TV, such as DTT, OTT, satellite, soon 5G Broadcast, etc. The decision to adopt whine one (s) depend on the Country's strategy and vision, based on the number of viewers, coverage and number of connected population..

what future for the TNT ? as the VoD has gained much more bigger coverage.	Moussa TRAORE	There are many instances and organizations actually discussing the future of DTT, and how can DTT cope with other broadcasting technologies. To be followed.
Is it planned to broadcast television in UHD? In this case will the infrastructures fulfill the necessary requirements by using VVC/H266 or will it be necessary to change equipment, find new frequencies. It will be necessary at least to change receivers that will must decode VVC/H266	Emmanuel BEAUMONT	No need to change frequencies. However, changes in the equipment (transmission and reception) will have to adapt.
Plusieurs pays africains font encore de la radiodiffusion sonore analogique, rendant la bande FM saturée. comment faire pour migrer vers la radiodiffusion sonore numérique ?	Brunot EVINA	This is a national decision. Indeed, FM band is congested, and Digital Radio can be a solution to cope with the congestion or at least a big part of it. I think it is important to start discussing with all analogue radio stakeholders provide awareness about the benefits. It is also important to benchmark the price of radio devices and ensure that all population can afford it or subside for the poorest category….
The ITU and IMO agree new facilities or enhance an existing one. However, ship operators (for understandable commercial reasons) take many years to update equipment. For example, Channels 87 and 88 were still not widely deployed on ships, over ten years after they appeared in Appendix 18. How do participants think that the pace of change can be accelerated (to realise the benefits of technological advances), without imposing unreasonably on operators?	Fraser Murrey	Over the last decade, the use of channels 87 and 88 was changed by each WRC i.e. WRC-12, WRC-15 and WRC-19. WRC-12 allowed the use of channels 87 and 88 for implementation of AIS technology. Afterwards WRC-15 modified the assignment and WRC-19 eliminated AIS applications from these channels. These changes may lead to delay the production of the equipment and the upgrades on board vessels.