

FAQ - Regulatory procedures for the submission and recording of satellite networks and earth stations

Here is a list of frequently asked questions (FAQ) for the submission and recording of satellite networks and earth stations. It contains questions and answers concerning regulatory issues, BR online tools and BR space software that were raised during previous World Radiocommunication Seminars.

Any further enquiries concerning online tools such as e-Submission, e-Communications can be sent to spacehelp@itu.int, and those concerning BR space software to brsas@itu.int.

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1.1 Is there any specific frequency allocation for NGSO-SDM or these NGSO-SDM systems can use other frequency allocations?

For the NGSO network operating as short-duration mission (NGSO-SDM), it is possible to use all frequency bands allocated for appropriate services which is not subject to coordination. Especially, if the satellite network is using the bands 137.175 - 137.825 MHz and 148 - 149.9 MHz for space operation service, it is beneficial to indicate the NGSO-SDM in accordance with Resolution 32 (WRC-19) as formal coordination procedures under No.9.11A and 9.21 are exempted.

1.2 How to capture a formula describing an antenna pattern? Is it advisable to create a figure in GIMS as well for this?

Please consult the web page of APL first to see if the pattern has already been defined and designated with a standard pattern ID.

<https://www.itu.int/en/ITU-R/software/Pages/ant-pattern.aspx>

If it is not, you can submit the formulas as an attachment, and the Bureau will assign a new pattern ID accordingly. Please note that, for NGSO, if all antenna patterns are provided as pattern ids, then there is no need to capture diagrams in GIMS.

For more detail guides on submission of graphical information for non-GSO, please see the web page:

<https://www.itu.int/en/ITU-R/space/support/nonGSO/Pages/non-GSO-graphical-submission.aspx>

1.3 When the orbital parameters and service area of a notice, which is not subject to coordination, is to be changed, can it be submitted in notification directly according to Article 11? Although it isn't mandatory, but it is better to send the modification of API, is it right? And does the modification of API also need to wait for 4 months?

According to No.9.2, amendments to the information sent in accordance with the provisions of No. 9.1 shall also be sent to the Bureau as soon as they become available. Although changes to orbital parameters and service area are not mandatory to be submitted in API, it is certainly encouraged so as to go through the commenting process under No.9.3, to ensure that there will be no harmful interference caused to other systems as a result of such change. As No.9.3 provides a 4-month period for providing comments, there is a need to wait 4 months for the corresponding notification submission.

1.4 What is the modification of reference body?

The various codes for the reference body are defined in the Preface, and they are as follows:

- E - Earth
- L - Moon
- S - Sun
- H - Mercury
- V - Venus
- M - Mars
- J - Jupiter
- D - Deep Space

The most common reference body is Earth. Any modification of the reference body is possible, but such change must be submitted in a Mod API or Coordination Request, which is mandatory.

1.5 Under what circumstances would you submit a Notice database other than a GIMS database?

Normally, there will always be a notice database with a GIMS database for graphical data. However, for example, for API, when the administration submits all beams and associated earth stations with pattern IDs for their antenna radiation patterns, there is no need submitting GIMS database since there is no graphical data required. And it is possible that in response to a request from the Bureau to submit corrected diagrams, operator may only need to re-submit a GIMS database with the corrected diagrams. This should be submitted through "Others" category on e-Submissions, or alternatively, through e-Communications or BRMAIL as a response.

1.6 How is a steerable beam defined? I.e., if one NGSO system has a Yagi antenna and the satellite can be turned by reaction wheels, is that a steerable beam?

In accordance with RR No. 1.191, steerable satellite beam is a satellite antenna beam that can be re-pointed. So, if there is any plan to re-point the beam when the satellite is on-station, then it will be considered as a steerable beam.

1.7 Which parameters should be considered for commenting based on No. 9.3 for NGSO satellite networks which are not subject to coordination? Is it enough to check frequency overlap, date of receipt, and reference body of both networks?

Please check the frequency bands first to see whether there is any overlap with your usage. And after that, please

check more detail information like orbital information, service area, whether the satellite transmits only over the service area. Details such as power levels should also be checked.

1.8 Is cross validation mandatory for API NGSO network not subject to coordination or validation for SNS database is sufficient?

If for your API NGSO network all antenna patterns are provided as pattern IDs, then there is no need to provide GIMS database, and, therefore, validation of SNS database is sufficient in this case. If you submit antenna patterns in GIMS database, then cross validation is mandatory before submission.

1.9 Is it correct that only the additional frequency band in a modification submission could change the regulatory date limit?

Yes, in general, only the date of receipt for the group containing the new frequency bands (including direction) will have the new date of receipt of the API (or CRC if bands are subject to coordination) and the regulatory date limit of 7 years will be a new one.

The regulatory date limit is the period of seven years granted under No.11.48 from the time a frequency band is received under 9.1 or 9.2 (for API/A) or under Section II of Article 9 (for CR/C). This 7-year limit is calculated from the date the frequency band is received by the Bureau. To submit a frequency range which is same as previously published will not change the original date limit but adding a frequency which extends beyond or outside the original band will result in a new regulatory date limit for the new part of the band in a new group. Please don't capture the new frequency band with the previously submitted band together in one group since the regulatory date is established at the group level. One group has only one regulatory date.

When the modification contains a group which partially overlap with the previous publication, we will keep the whole group with the old regulatory date in order to follow the principle that one frequency one unique regulatory date in API and CR stage.

1.10 Since API/A is the special section for satellite networks not subject to coordination, is it required to resolve the concerns summarized in the API/B prior to notification?

It is not required neither preventing you from a regulatory perspective to submit the notification, but you need to take these comments into account and communicate with those Administrations published in API/B to ensure compatibility between your satellite network and other systems.

1.11 For NGSO not subject to coordination, GIMS have only images? Is it right? How can I make images for antenna pattern in GIMS file?

Yes, for NGSO API not subject to coordination, normally, the Gims database contains only the antenna radiation patterns as images. kindly consult the Bureau's documentation on Antenna Pattern Library (APL) online, which contains the description of antennas from the standard antenna pattern library, available at <http://www.itu.int/en/ITU-R/software/Pages/ant-pattern.aspx> and capture the pattern IDs in your notice database which can represent the characteristics of your antennas if possible.

If there is no pattern ID suite you, you can submit the antenna pattern as images in Gims or formulas in attachments. For more detail guides on submission of graphical information for non-GSO, please see the web page:

<https://www.itu.int/en/ITU-R/space/support/nonGSO/Pages/non-GSO-graphical-submission.aspx>

1.12 Is there a priority date for API?

There is no concept of a "priority" date for an API for those satellite networks not subject to coordination. However, notified frequency assignments will be recorded in the MIFR, which have the right to international recognition, and other administrations have to take them into account when planning their own assignments (see RR No. 8.3). Given that notification can only be receivable a minimum of 4 months after the publication of the API, we can say that the earlier submission of API can therefore be beneficial as it would allow the administration to notify for recording in the MIFR earlier.

1.13 What is the difference of API/A, API/B, and API/C?

API/A is a general description of the satellite network or system for advance publication in the BR IFIC. This information, received by the Bureau pursuant to No.9.1/9.2 of the Radio Regulations, is published in accordance with No. 9.2B.

API/B special section is published in accordance with No. 9.5 of the Radio Regulations. Administrations that have submitted comments under No. 9.3 within four months of the date of publication of the mentioned API/A Special Section are listed in the API/B special section and the table inside API/B contains a summary of the comments. API/C special section contains the information like frequency, direction, service, regulatory dates etc., extracted from the Coordination Request sent under No. 9.30, pursuant to Nos 9.1A/9.2C of the Radio Regulations and is published by the Bureau in accordance with No. 9.1A.

Purpose of API/A and API/C is to inform other administration on planned frequency bands/class of stations/services/characteristics of the network.

1.14 Does it mean that API/C is published for every CR/C? If no, what is the situation that API/C is published?

Yes for all new submission, but not for modifications, only the newly added frequency bands or when orbital info is changed, then it will be published in an API/C. In another words, if a CR/C does not concern a change of information from the previously published API/C, there is no need to republish the API/C.

1.15 Can I submit EK, ER, ED in the same group?

Class of stations EK, ER, ED are space operation functions as defined in § 1.23 of the Rules of Procedure. It's possible to capture them in the notice database via BR Software SpaceCap. But generally,

EK: space tracking, may be used for both directions;

ER: space telemetry, space telemetering space station, may be used only in downlink, so captured only for transmitting beam;

ED: space telecommand, may be used only in uplink, so captured only for receiving beam.

There will be fatal errors when you run validation later if you captured ED for downlink beams.

And for frequency bands where there is an allocation for space operation service, please capture class of station ET for it. And you can capture ED, EK, ER together with ET in order to know which function it is going to be used. This applies to API, coordination and notification.

1.16 There are so many mobile satellite services, at the beginning stage, we don't know the real system for future yet, how can I submit them in a filing?

There are many mobile satellite services which listed below, please check the details in RR for the specific frequency band concerned.

In general:

- EI = (EG+EU+EJ)
- EJ = (E5 + E6)

EG Space station in the maritime mobile-satellite service

EU Space station in the land mobile-satellite service

EJ Space station in the aeronautical mobile-satellite service

E5 Space station in the aeronautical mobile-satellite (R) service

E6 Space station in the aeronautical mobile-satellite (OR) service

Please capture them separately based on the allocation of the band concerned. If it is allocated for the whole MSS without specific notes for certain sub services, you can just capture EI for it.

For example, if the band is limited to the use of EJ, then you have to capture EJ instead of EI. And if there are different conditions described in the footnote, for example for E5, then please do not capture EJ for the band, you have to split the EJ into two different groups for E5 and E6 separately.

This is the same for both coordination and notification.

1.17 Do I need to consider EPFD matters in the API/CR stage? Can I consider later and only when I want to submit the notification?

When prepare a filing, you do not need to consider EPFD matters in the API stage; but they should be provided in the CR and Notification stage if the concerned frequency bands/services are related with EPFD exam under Article 22.

1.18 Is there a case to submit both API and CR in the same portion of frequencies?

Normally no, unless the allocation is subject to coordination for one region but not for another, or it's subject to coordination for one service but not for others. You need to submit it based on the allocations identified in Article 5 in API and CR separately.

1.19 If a system designed to use one carrier frequency for a service which partially subjects to coordination, how to file it to ITU?

It would depend on the assigned frequency, the frequency bandwidth, the emissions, and the class of stations concerned etc.

We do not encourage to submit such kind of filings. The best way is to split it into small portions in the correct formats to go through either A-N or C-N procedures as presented in the webinar. And when you notify them, you can merge all API and CR into one notification, and possible into one beam/group also to have a unified carrier frequency assignments recorded in the MIFR in the end. But make sure the orbital parameters for both API and CR are same when you want to do so.

Any parts subject to coordination have to be removed from API/A publication. Even though you request for No. 4.4, it's not allowed to be published in the API.

If administration insist to have all of them in the CR publication, then the parts not subject to CR will be deemed for information only, there is no technical examination and no findings on that portion.

1.20 For modification, if there is no change of the diagrams, do I need to submit again? since it was captured with attachment numbers in the past, do I need to capture them again in the Gims database? If not, how can I pass the cross-validation for this mod notice?

For modification, if there is no change of any diagrams published, there is no need to submit Gims database again. But please mention it in the note with your submission, and keep the same diagram number or attachment number as it was published before.

If there is no Gims database newly created, no need to run cross-validation on it. Just run a simple validation is enough. You can ignore those error messages occurred for the diagrams if you are in certain.

This is same for both coordination and notification.

1.21 What are the actions taken by the Bureau prior to the publication of an API/A special section?

Bureau checks the completeness of the information submitted in SNS and GIMS database format, to be sure that all mandatory information specified in Appendix 4 are provided. Bureau also established the receivability and date of receipt of the notice in accordance with the Rules of Procedure on the receivability of space notices.

In this respect, the Bureau checks to be sure that the frequency bands/services are not subject to coordination, so that they can be submitted in an API.

As an assistance to administrations, the Bureau also verifies that the frequency bands/services are in accordance with the Table of Frequency allocation of Article 5, and if not, advises the administration of the need for the application of No.4.4.

2. Coordination Request

Q&A related to EPFD analyses can be found in Frequently Asked Questions (FAQ) section of EPFD Support Site:

<https://www.itu.int/epfdsupport>

2.1 Is there a difference between subject to coordination vs. subject to agreement when these words appear in the Article 5 footnotes?

Subject to coordination implies bilateral negotiation between two administrations.

Subject to agreement implies that operating administration shall obtain an agreement from affected administration. In most cases, Article 9.21 procedure applies for the case subject to agreement. In those cases, the assignment can be recorded with favourable finding subject to the condition that it will not cause harmful interference nor claim protection from the service of objecting administration from which agreement was sought.

2.2 How can I indicate which diagrams or/and attachments have been changed?

Please submit modified diagrams or attachments with your modification notice. Also, you may provide additional information about modification in an attachment to your submission.

2.3 How can I indicate that orbital information (for NGSO networks or systems) or/and beam level information or/and group level information or/and associated earth station/space station information have been changed?

When you prepare modification notice please use "Clone" function (indicating that cloned notice will be Mod) of target notice in BR software SpaceCap and keep in this cloned notice only beams, groups, associated earth stations/space stations which you are going to modify. For kept beams, groups and etc. please set action code "M". If you want to add or suppress any beam, group, associated earth stations/space stations please set action code "A" or "S" respectively for them. For orbital information of NGSO there is no action codes in the current structure of database, therefore, to modify this information only provide modified orbital information in your modification notice. Please note that if you are modifying parameters of orbital plan, then all beams associated with this orbital plane shall be considered with action code "M".

Also, you may provide additional information about modification in an attachment to your submission.

2.4 What is the difference between API/C and CR/C?

In accordance with No. 9.1A upon receipt of a CR/C (coordination request), the Bureau will generate and publish an API/C that includes the frequency bands contained in the CR/C as well as the regulatory 7-year limit for those bands.

2.5 Is The CR/C special section published on the BR-IFIC is the same as API/C?

The API/C only shows the frequency bands and the regulatory date limit. The CR/C special section which will be published approximately 4 months from the official date of receipt will be more complete and will include the results of the formal examination with respect to completeness and correctness, as well as the Bureau's findings.

2.6 Is it possible to submit the CR/C with the same satellite network name at the same orbital location with new notice ID to benefit the regulatory deadline limit?

Submitting a second CR/C for the same name and same orbital position will not prolong the regulatory deadline limit, and it will be published as a modification with the same target notice id. Any new frequency bands in the second submission will be given a 7-year limit date from the date of receipt of the second submission.

2.7 ESIM Submission in range 19.7-20.2 GHz is in CR/C or Notification?

The use of the bands 19.7-20.2 GHz and 29.5-30.0 GHz by ESIM under Resolution 156 must first be submitted as a CR/C. Please use class of station UF for at Earth station level and class of station EC at group level. Please remember to also include a commitment in accordance with resolution 1.5 of Resolution 156.

2.8 What is the purpose of a request for coordination (CR/C)?

In accordance with No. 9.6 before an administration notifies to the Radiocommunication Bureau or brings into use

a frequency assignment subject to Nos. 9.7 to 9.14 and 9.21, it shall affect coordination, as required, with other administrations and, therefore, submit to the Bureau a request for coordination in accordance with No.9.30. This coordination request shall be published in Special section (CR/C) in accordance with the provision No. 9.38.

2.9 What is the difference between CR/C and CR/D?

CR/D contains information on the status of the coordination procedures (which establishes the requirement of coordination for subsequent actions) under Nos. 9.11 to 9.14 and 9.21, published in accordance with 9.53A. Specific provision(s) (Nos. 9.11 to 9.14 and 9.21) corresponding to the subject station is/are indicated on the front page of the Special Section.

2.10 What is the coordination arc criteria for GSO networks in Q/V band?

In accordance with Appendix 5 for frequency bands above 17.3 GHz:

- the coordination arc of $\pm 8^\circ$ of the nominal orbital position applies for coordination between FSS networks or systems,
- the coordination arc of $\pm 16^\circ$ of the nominal orbital position applies for coordination between FSS and BSS networks or systems,
- no coordination arc applies for coordination between other networks or systems.

2.11 Can I submit frequency bands not subject to coordination in the coordination request (CR/C)?

No, request for coordination is only for frequency subject to coordination under Nos. 9.7 to 9.14 and 9.21.

2.12 What is the difference C/I and C/N?

C/I is Carrier to Interference ratio. C/N is Carrier to Noise ratio, where N is Noise power due to Thermal Noise at the Receiver only.

2.13 Why the C/I and C/N calculations in the BR examination are conducted in the clear sky, i.e., not taking into account the rain and/or other atmospheric losses? When two administrations seek assistance from the BR, does the BR apply the same procedure, i.e., the clear-sky consideration?

In the C/I calculation, the C/I requirement of a link is derived using the C/N. The C/N objective data item in Appendix 4 is the performance objective of the link under clear sky conditions. Therefore, the C/I calculations is carried out considering clear sky conditions. The only loss taken into consideration is Free Space Loss. The same method is used when carrying out C/I calculations for No.11.32A examination or for assistance.
Rec. ITU-R S.741 and RoP associated consider clear sky conditions.

2.14 Which one is more accurate in coordination: C/I or DT/T?

C/I is normally used for coordination between administrations as it more accurately indicate interference situation compared to DT/T. Furthermore, C/I is also used by the BR for No. 11.32A examination.

2.15 What to do if the required operating organization is not listed (field A.3.a)? Is it possible without it?

No, the operating agency code is mandatory information to be captured in your filing when a filing is submitted. If it is a new operating agency and it is not listed in the Table 12A/12B in the Preface to the BRIFIC, a nomination of the new satellite operating agency should be requested by Administration to BR at the same time with the submission of notices from your Administrations to the ITU BR. The Bureau will then assign an operating agency code for you. Please see the details [here](#).

2.16 What is the maximum bandwidth (all carriers) to be specified in field C.8.g.2 if the bands intersect?

The width of the frequency band, at the transmitting Earth Station Antenna, that contains the carriers in the Assignment Coordination Group's Bandwidth should be provided.

2.17 How to ensure protection of GSO from NGSO for frequency bands not subject to EPFD limits? Are EPFD limits in article 22 applied to single NGSO satellite or to single NGSO constellation?

Coordination should be effected between GSO and NGSO in application of Section I or Section II of Article 9 depending on the case. With respect to FSS and BSS GSO, No 22.2 applies.

EPFD limits in article 22 are applied to a NGSO constellations.

2.18 No. 22.2 is to protect GSO FSS and BSS from NGSO . For those scenarios not under No. 9.11A and No. 22.2, then there is no coordination under Section II of Article 9 but No. 9.3 can apply for providing comments . In those situations where GSO is protected from non-GSO by using hard limits in Article 22, does it guarantee no harmful interference or just reduce the probability?

For this specific scenario, i.e., frequency bands not subject to coordination under Section II of Article 9, PFD Hard limit should guarantee no harmful interference.

2.19 If I capture EK, ER, ED for a beam with multiple main services, like EC, EI, EB, how will it be processed or examined further?

It is recommended that one main service should be included in the group of assignments having EK, ER and ED in order to avoid application of unintended provisions by the Bureau.

If multiple main services are indicated in a group, the BR will apply the minimum number of provisions to EK, ER, ED examination when possible.

For example:

In frequency band 17.7 GHz – 17.8 GHz with EV, EC, ED, EK and ER, BR will apply Nos 9.7 and 9.11 only to EV.

The ED, EK, ER will only subject to No. 9.7 following the EC, except if the operator put the ED, EK, ER in the same group with the EV without EC.

Another example:

In the band 7250-7375 MHz with EI, EC, ED, EK and ER, so Nos. 9.7 and 9.21 only apply to EI, the ED, EK, ER will be subject to No.9.7 only following the EC not EI, except if the operator put the ED, EK, ER in the same group with EI without EC.

Usually, we will use the best case for TT&C findings, unless the TT&C is in the same group with EC, and if such EC is unfavorable, then we give unfavorable for the TT&C also, since one group only has one unique finding. This is the same for both coordination and notification.

2.20 In the band 17.7-17.8 GHz, what kind of procedures/provisions will be applied between NGSO systems (s-to-E) and GSO networks (s-to-E)?

For non-GSO (s-to-E) in R2 it is not subject to coordination, in R1 and R3 it is subject to coordination under No. 9.12. Between NGSO systems (s-to-E) and GSO networks (s-to-E) in this band No.22.2 applies.

2.21 Why hard limits are not enough for protecting other services?

In general, when the hard limits are specified, coordination procedure in Section II is not applicable for that specific interference situation (see No. 9.6.3). However, in a few special cases further condition including the coordination is established together with the hard limit.

2.22 What is the parameter in the NGSO filing or the type of service to determine if NGSO network should be subject to coordination or not?

It would depend on assigned frequency assignment, bandwidth, direction of transmission and its class of space station. In some cases, it also depends on the service area. Please check the Table of frequency allocation in

Article 5 contains footnotes which may include a reference to coordination provisions under 9.11A (9.12, 9.12A, 9.14) and/or 9.21 for specific frequency bands and services. In such case CR/C will be required. By the way, all mandatory characteristics required is listed in Appendix 4 of the RR. As presented, to identify it's subject to coordination or not, please read the detail footnotes for the bands/service concerned in Article 5 of the RR.

2.23 Do I need to provide EPFD information (such as pfd or e.i.r.p. masks) at the same time with all other information required in accordance with Appendix 4 of Radio Regulations?

Yes, all information required in accordance with Appendix 4 including EPFD information shall be provided in the same and submitted to the Bureau using e-Submission system (<https://www.itu.int/ITU-R/space/e-submission>).

2.24 Does the Bureau publish EPFD information (such as pfd or e.i.r.p. masks, parameters required for EPFD examination and etc) in BR IFIC or/and BR website?

Yes, you can find this information in BR IFIC (\Database\EPFD) and in the ITU website (<https://www.itu.int/ITU-R/go/space-epfd-data>).

2.25 I note that No. 9.52 apply also in case of coordination request submitted under No. 9.21 which implies that reason for disagreement including assignments responsible for the disagreement should be identified. In case an administration indicates its disagreement under No. 9.52 without providing any rationale for it can I invoke No. 9.60? If not, does this means that there is no consequence for an affected administration not complying with No. 9.52 in the context of No. 9.21 and as such no recourse for the notifying administration in this context?

When administrations are identified under 9.21 they have to send their comments through SpaceCom to notifying administration an BR, and a CR/D will be published by the BR. Request for assistance under 9.60 can be evoked only when coordination under 9.7 to 9.7B or 9.15 to 9.19 are involved.

2.26 Are the modifications subject to comment?

It depends on the modifications. if modifications of the CRC related with the additional frequency assignments, Beams, etc, the period of comments will be reopened for the new groups. but if the modifications related with the review of EPFD where the date is not changed so not subject to comments under 9.11A. sometimes modification also related with the corrections, and so period of comment is reopened only to specific administration or specific provisions, so you must look carefully on the publication of the modification of CRC.

2.27 Does the BR have any plan to make SpaceCom comment applicable to coordination requests under provisions which are currently in correspondences only (such as 9.7)?

If your administration and the satellite networks have been identified under 9.7 in the CRC, actually you do not need to comment/confirm. You can comment under 9.41 for coordination under 9.7, if your administration or satellite networks has not been identified. and this can be done with SpaceCom, you comment under 9.52, but not with the SpaceCom.

2.28 Is it allowed comment for 9.41 with C/I calculation not dT/T calculation?

The dt/t method is used for seeking inclusion into the coordination process under No. 9.41 while the C/I calculation methodology is used by the Bureau when carrying out examination of probability of harmful interference under No.11.32A, you may also refer to the related section in the Rules of Procedure, under Nos. 9.41-9.41.

2.29 Should the Affected Administration send comments to all Administration listed in the No.9.7 coordination list in the CRC of affected administration within 4 months?

If you are an affected administration that already listed under 9.7 in coordination in CRC, you do not need to send

comment again, as the identification under 9.7 is already mandatory. And as affected administration, you are not required to send comments to all administration listed in the 9.7 in the CRC. The notifying administration shall coordinate with all the administrations identified under 9.7.

2.30 How are cases of coordination handled for which there are no provisions? For example, NGSO vs NGSO in 18.6-18.8?

It's not subject to coordination. the article 9.3 applies, additionally please note, for the use of 18.6 - 18.8 in the fixed-satellite service, is limited to geostationary system and systems with an orbit of apogee greater than 20 000 km (No. 5.522B)

3. Notification

3.1 What are differences between Notification, Due Diligence, and Bringing into use assignments in relating to Notification notice and Resolution 49 notice?

Notification is final stage, i.e. the procedure for recording frequency assignments is the MIFR. But for your assignments to be recorded in the MIFR, you should have to submit the due diligence information (Res49 or Res552 information which is the information related to the spacecraft manufacturer and launch services), you should also confirm the bringing into use of those assignments in accordance with No. 11.44B.

3.2 Can notification be submitted together with CR/C at the same time?

Nothing prevents from submitting both at the same time. Only the publication of coordination submission can give the list of affected administrations. If coordination requirements are identified in CR/C, the notified assignments will receive unfavourable findings under No.11.32.

3.3 Will addition of a new associated Earth Station in an existing network, result to a new date of receipt?

Yes, addition of a new Earth Station will obtain a new date of receipt for the assignment concerned.

3.4 Is there any possibility that an assignment has been recorded in the MIFR, then only it is realized the coordination agreement has not actually obtained from certain administrations? If yes, how is the procedure?

Administration can review and comment about the status of the agreement of coordination. It should indicate the network and submit the valid argument. Then, the Bureau will communicate with the notifying administration and review the subject network appropriately.

3.5 The Bureau would like to highlight that if the notice is also received beyond the seven-year regulatory.

No, as long as it is beyond the seven-year regulatory period. it is not receivable. However, if ADMINISTRATION have good reason for such omission, they can try to go RRB to ask specially.

3.6 Do we need to resubmit notice after it is returned? Can we just request the Bureau to automatically process return notice as resubmission?

Yes, a resubmission will have to be done by the administration if notice is retuned under Nos.11.37 or 11.38. If there is no change in characteristics, it is currently possible to just resubmit with a simple letter.

3.7 If the RAS frequency assignment is used under No. 4.4. what kind of confirmation is needed: is it enough to mark C2c box in the notification mdb file (that frequency assignment is filled under No.4.4. or any free format confirmation in the attachment to the notification is also needed?

Tick the check box for 4.4 in the group level via SpaceCap is OK for us.

3.8 I have some difficulties to understand the following statement in relation with the resubmission after six months in addition, the Bureau would like to highlight that if this notice is also received beyond the seven-year regulatory period as stipulated in the No. 11.44.1, the notice will not be receivable I understand that the initial notice for the purpose of notification under Art 11 has to be received prior to the end of the regulatory period, however, the statement referred to above seems to suggest that there won't be any resubmission of a notice once the 7-year period. I'll like to confirm that this statement has nothing to do with resubmission of notice following a RoN.

The first notification indeed has to be received within 7 years. However, sometimes a notice is returned under No.11.31 In such a case for example in NGSO not subject to coordination, the notice will not be receivable and API stage is again required, this concerns resubmissions received after 6 months. After the 6-month deadline it is considered as a MoD with a new date of receipt and shall be received by the Bureau before the 7 years regulatory period, I would like as a NEW SUBMISSION (not Mod).

3.9 Question regarding software. I wanted to do modification of already published notification. I cloned it according to ITU demos, however I was unable to unmark First notification. How to unmark it without filling in manually the whole notification? Or does it not make any difference?

When you clone, you select action code ADD (since is first notification) as well as the category of notification please.

3.10 To clarify my original comment, the resubmission of a notice within the six-month period can actually occur after the seven-year period with no impact on the date of receipt. Is this true?

Yes, you are right if it sent within the 6-month deadline: the resubmission can arrive at the Bureau even after the 7 years.

3.11 What is the process of submitting comments to Part1-S files which contains modified characteristics compared to API-A (11.28.1)?

In case of 11.28.1, please send comments to notifying Administrations by correspondence (e-Communications, email or telefax). In case of send via e-Communications, category is Comments on Part-IS for networks not subject to coordination. Notifying and commenting administrations shall thereafter cooperate to resolve any difficulties. However, the characteristics of stations published under API-A could be modified at notification. Administrations should seek to contact the notifying administration and request that the modified characteristics are coordinated with them.

3.12 Does the BR have intention to incorporate Res40 within the Res49 database? In a sense a confirmation that the satellite has not been used previously (with a tick box for example) or where the satellite has been used previously?

The Resolution 40 is currently published on the web and there are currently no plans to include it in the SRS database.

Please note that the Resolution 49 can be provided before the frequency assignments are brought into use while the Resolution 40 should be provided when bringing (back) into use frequency assignments.

3.13 In case asking the Bureau to use previous GIMS data for notification of non-subject of coordination satellite is this require cross validation or only SRS validation?

If there is no change for the diagrams submitted before, when you prepare a modification, you can just indicate in note, also tick the check box in notice database, there is no need to submit GIMS again, and no need to run cross validation since you do not have the GIMS mdb.

3.14 For the assignment that has unfavourable findings in notification stage after returning to notified administration can resubmit as part I, does it mean that no modification is needed in this stage or the unfavourable findings should be resolved even for publication of part I?

Yes, the resubmission means there is no change of the characteristics of your filing, except the coordination agreement. So no need to send mdb anymore, you can just indicate the situation in your correspondence to the BR. That would depend on what type of unfavourable finding that the assignment has received. If it is returned because of coordination has not been completed under No.11.37 for unfavourable finding under No.11.32, or returned under No.11.38 for unfavourable finding under No.11.32A, you could resubmit the notice without any modification with a simple letter through e-communications with any update of coordination status if there is any, to be further considered in the resubmission. However, if the findings are returned under No.11.31 or characteristics of the assignments are not within those in the Coordination Request, then you may require to carry out some modification on the notice. Also please note that a notice returned under No.11.36 for unfavourable finding under No.11.31 could not be resubmitted under No.11.46. The last line should be read. However, if the findings are returned under No.11.36 for unfavourable finding under No.11.31 or characteristics of the assignments are not within those in the Coordination Request, then you may require carrying out some modification on the notice. Also please note that a notice returned under No.11.36 for unfavourable finding under No.11.31 could not be resubmitted under No.11.46.

3.15 If I modify antenna pattern that I publish in API and the new antenna pattern is PDF, so to submit notification need to make this PDF file for antenna pattern GIMS file?

If it's already published in the API already, it in the GIMS reference database already. As long as there is no change in the notification, there is no need to send the pdf again. You should however request in a cover letter or attachment to the notification for the Bureau to make use of the same diagrams published in the API.

3.16 For those unfavourable findings that cannot be resubmit again, can we interpret that these unfavourable findings were exist also in CR/C stage? If such unfavourable findings exist in CR/C. Why the BR don't examine and request Administration to resolve these unfavourable before CR/C publication, due to the fact that such assignment cannot be notified and if these unfavourable is prevented by BR in CR/C stage how can it occur due to the fact that the modification in part II is decreasing not increasing.

It is possible that such unfavourable findings could also exist in the CR/C stage as well. During the publication of the CR/C such unfavourable finding would have been indicated and explained in the publication. Therefore, it is important that Administrations check their Coordination Requests after they have been published to ensure that all findings are favourable at that stage. If not, they should rectify any unfavourable finding and submit for Coordination Request again so that they would not encounter complication at Notification.

3.17 Is there a timeframe for how long BR will finish process any Notification submission before Part II-S or Part III-S is published?

There is no timeframe for the Part II-S or Part III-S to be published. The Bureau treats any filings as promptly as it could. However, sometimes there are additional clarifications, missing information required from administrations or inquiries that needs to be carried out like 13.6 etc. and this can take some time before the Bureau could treat the filings and give findings. For non-GSO not subject to coordination, on average Part II-S or Part III-S is published after 4 months from Part I-S.

3.18 I mean isn't it a good idea that include such unfavourable findings to include among those issues that cause the file not to be receivable. Because we know these issues eventually should be removed and never can publish in part II-S, or it has some advantages if we allow them to be exist in CR/C and then modified later.

Please take note that assignments that are unfavourable under 11.31 could still be recorded in the MIFR for information, if it was requested for the application of No. 4.4. Please also refer to the Rules of Procedure on No. 4.4.

3.19 Is it necessary to inform the Bureau about the use of Amateur satellite frequencies or is it enough if we do all the necessary coordination with the national Association of Radio Amateurs?

Satellite Networks in the Amateur Satellite Service must also be notified to ITU following the procedures in Art 9 and 11 of RR.

3.20 Could we submit one notification containing both bands subject and not subject to coordination?

- Yes, it is possible to submit one notification covering both frequency assignments subject and not subject to coordination bearing in mind that the date of receipt of the notification should be considered at least four months after the date of publication of the API (due to the bands not subject to coordination).
- In this case for the calculation of cost recovery, the category of the combined notification will be based on the coordination provisions that are applicable in the notice.

3.21 I have seen if we modify the spectrum of one beam for a satellite network, we need re-sub all the beams (status is new) of this satellite network. Can BR know which beam I have modified?

When treating a notification, the Bureau will carry out a detailed comparison of the notified characteristics with the coordination characteristics. Therefore, the Bureau will be aware of any modifications that has been made at Notification. With respect to an API or coordination request, when submitting a modification notice, if you are changing the spectrum of only one beam, you do not need to resubmit the other beams for which no information has changed.

3.22 If one group of the beam be found unfavourable in coordination stage due to excess of pdf based on 22.40, what would be the process for resubmission? Is it ok to send a letter to have new EIRP density of each emission or need a new mdb?

If you received unfavourable finding at the coordination stage for 22.40, you should submit a modification to the coordination request. This modification (to the coordination request) should be a new mdb.

3.23 qqqqlf some part of the assignment be eligible to enter to MIFR, is it possible for administration to request publication of part II-S for that part of assignment? And the rest of the file can enter to MIFR under those filings and without cost recovery if the unfavourable findings resolved in the regulatory period?qq

It is possible to notify part of your Coordination Request at Notification. Cost recovery will be charged as per the calculated units of your notice received at notification. Cost recovery fees will be based on the total number of assignments: those published in part 2 and part 3.

3.24 Regarding milestone approach for the BIU of the 1st satellite of the constellation there is a requirement of 90 days continuous work, but not for the rest of other satellites which have to be deployed based on milestone approach. If I understand well the objective of that 90 days is to prevent spectrum/orbit warehousing. So: a. Is it the first time that RR ignoring this requirement (90 days) in the BIU process or we had such a situation relating to other GSO or non-GSO satellite services? b. What evidence is considered to be provided for claiming deployment of other satellites in the constellation (not the first satellite) and does it cover preventing use of 1 satellite to be used for several orbital positions in the constellation and causing unreal percentage of deployment?

- a. It is not ignored. The conference (WRC-19) decided that the first spacecraft set the BIU within the 7 years Regulatory time, but then the full deployment is monitored through the implementation of Resolution 35, which refers to milestones based approach.
- b. The administration shall submit the information detailed in Annex 1 to the Resolution 35, which includes launch information and space station characteristics. Furthermore, under Resolve 8 of this Resolution, it should report if any of the space stations have been used to satisfy milestone obligations associated with frequency assignment of any other non-GSO system subject to this Resolution.

3.25 Regarding BIU: how (or where) is continuous use defined?

This terminology is referred to in No. 13.6. Whenever it appears from reliable information available that a recorded assignment has not been brought into use, or is no longer in use, or continues to be in use, but not in accordance with the notified required characteristics 1 as specified in Appendix 4.

3.26 Does the notifying Administration need to send a separate correspondence to the BR to advise about the starting of the 90-day BIU period for a GSO? Or the notifying Administration only needs to advise the BR about the end of the 90-day BIU period within 30 days immediately after the 90-day BIU period?

The Administration does not need to inform of the starting of the 90-day period, except if the 7-year limit is reached, as under 11.47, the administration shall provide the information on the BIU at least 30 days before the 7 year period.

3.27 Does the milestone approach guarantee spectrum/orbit e that one satellite is not able to?

WRC-19 decided that this could address efficient spectrum and orbit utilization and we will see in the next few years the results.

3.28 Is there a limit on how many numbers of times an administration can BBIU at the same orbital position and satellite network?

There is no limit on the number of times of suspension and BBIU. It has to be in accordance with No. 11.49.

3.29 Does the milestone approach guarantee spectrum/ orbit warehousing (no satellite can be register on several orbital position) due to the fact that 90days of continuous work is just subject to the first satellite of the constellation and not needed for the others?

The milestone-based approach was studied in detail during the WRC-19 study cycle for 4 years and decided at the WRC-19. The concept behind the Resolution is to have a good balance between allowing a certain time frame for those NGSO systems to be deployed fully while reducing the probability of warehousing.

3.30 Can an administration notify BIU for more than one satellite using one filing?

Yes.

3.31 Is RES 40 required only for short period of BIU?

The Resolution 40 should be provided when bringing (back) into use frequency assignments to a GSO satellite network whatever is the period of use.

3.32 After PART II-S is published, how will the BR publish the coordination status update (such as coordination agreement is reached for an affected Administration under 11.41)? Will the BR publish a new PART II-S or just update the coordination status on SNS?

After a No.11.41B coordination status update is carried out, the results will be published again under Part II-S.

3.33 What happens if an operator misses a deadline according to Resolution 35 due to delay or reduced business case?

If the Resolution 35 information is not submitted within the deadline, the Bureau will send reminders before taking any action.

If a milestone is not met, the administration should submit the modifications to the characteristics of the recorded

frequency assignments in order to reduce the number of space stations as described in Resolve 11 of the Resolution.

3.34 Is the period of validity of frequency assignments counted from the date of receipt of the notice?

The period of validity is an information required in A.2.b of Annex 2 of Appendix 4, and is described in Resolution 4 (WRC-03). To compute the expiry date of frequency assignments, it is counted as the period of validity in number of years, after the date of bringing into use.

For non-geostationary satellite networks operated as short-duration mission under Resolution 32 (WRC-19), the period of validity is limited to 3 years, and the date of bringing into use is the launch date of the first satellite.

4. Res 49

4.1 Is RES 35 replacing RES 49?

No, information required by both resolutions need to be provided, as appropriate.

The Res35 is the milestone-based approach for NGSO - to be provided for bands and services listed in the Resolution after 7years limit. The Res49 is due diligence information - to be provided within 7years limit + 30 days for FSS, MSS, BSS subject to coordination.

4.2 The frequency bands listed in RES 49 must be fully consistent with those in notification?

Yes, that is the purpose of RES 49.

The RES 49 must be fully consistent with the frequency band as whole operation range for FSS, MSS, BSS subject to coordination.

4.3 How reliable is the RES 49 information submitted to ITU reflecting the actual satellites in the space?

RES49 can be provided in advance before the frequency assignments are brought into use. Furthermore, RS49 are only provided for FSS, BSS, MSS subject to 9.7, 9.11, 9.12, 9.12A, 9.13 only. To have a better picture of actual use of radio frequency spectrum, please refer to the Master Register recorded assignments that have been brought into use.

4.4 Is there any requirement to update information under RES49 for replacement of satellites?

Administration can submit the modification of Res49 any time.

5. Earth Station

5.1 Do Earth stations already listed in a satellite network filing still need to be filed? Specifically, an operator in the EESS with earth stations still need to submit each of these stations?

Yes, Earth stations need to follow the different coordination procedures with regard to neighbouring Terrestrial stations.

5.2 Is it necessary to promote coordination if a small area of another administration is involved? For example, 1-5 percent of the territory?

When the AP7 Coordination contours include the territory of your neighbouring country (Adm A) and when the coverage is less than 5 % as defined by Section 1 of AP7 of Rules of Procedure, your Administration can notify the earth station without the coordination with the subject Administration (Adm A).

However, you need to note that the notification of this earth station may not be protected from the current and future system in Adm A because you have not gotten any agreement from Adm A.

5.3 Note that some GSO earth stations go through the coordination and notification under No. 9.7A in relation to NGOs in some frequency bands, with CR/C publications. Can they go through the coordination and notification

process Nos. 9.17, 9.17A rather than use CRC under No. 9.7A?

The inclusion of Earth station in the CR/C is related to the coordination with respect to the NGSO satellite system in the FSS.

Nos. 9.17, 9.17A are only related to the coordination of Earth station with regards to Terrestrial system or other Earth station transmitting in the opposite direction. The concept is different.

5.4 What is the difference between mode 1 and mode 2 in AP7? Can both of them be used to calculate the axillary contour?

Difference between mode 1 and mode 2 propagation is detailed in Section 1.5 of Appendix 7.

Auxiliary contours which are applicable to both modes are explained in Annex 6 of Appendix 7. For the generation of auxiliary contour for propagation mode 1, any imaginary reduction in the value of minimum required loss can be introduced (for example 5, 10 and/or 15 dB etc.).

For the generation of auxiliary mode 2 contours, an offset in the pointing angle between the terrestrial station and the earth station (for example 1, 2 and/or 3 deg etc.) can be considered as an example. This offset angle avoids the direct pointing to the victim system so that the potential interference become reduced.

5.5 Is it possible to calculate permissible interference power of an interfering emission Pr(p) for higher percentage of time e.g., for 1% or 10%?

The permissible interference power Pr(p) calculated by using equation No. 127 does not depend on the percentage of time during which the interference may exceed the permissible interference power (p). Currently, AP7 has no function or possibility to manipulate the percentage of the time different from those indicated in Tables of that Appendix.

5.6 Does a receiving Earth station in C band need to be coordinated and registered in the MIFR?

If receiving Earth stations want to be protected, they have to be coordinated and then registered in the MIFR. Especially, it is important for a specific earth station to be notified in order to be protected from interference cause by terrestrial services.

5.7 Is it possible to submit several earth stations for coordination and notification in one .mdb base?

No, each specific earth station is requested to be submitted separately on e-Submission system. If 1 SNS file includes multiple earth stations, an error message is shown and the submission is blocked on e-Submission.

5.8 Why only one earth station in the base needs to be sent through the e-Submission system?

Since 1st August 2018 (Circular Letter CR/434) all administration are asked to use the e-submission system to send any kind of filings. On the current functions on e-Submission system, each specific earth station is requested to be submitted par submission.

5.9 When an earth station registered and enter in MIFR then the related satellite in orbit, is the related E/S should remove from MIFR or can be exist and work with the replaced sat. I saw some stations yet exist although this case happened.

Yes when the satellite is suppressed, the corresponding E/S should also be suppressed/removed from the MIFR. Then A new submission of this ES could be sent to the Bureau with the replaced satellite.

You can still see in our databases some earth station with a suppressed satellite, but we are in the process of cleaning up all these cases.

5.10 Do VSAT Earth stations, used by Telecom operators, need to be coordinated?

All Earth stations, including VSAT, that may cause interference across border need coordination.

5.11 Is it possible to show an example of filling out an application for coordination for 2 frequencies for reception and 2 frequencies for transmission, with different bandwidths and different maximum power?

Please kindly check GIBC excercise.zip in the following link. It contains what you are looking for.

[https://www.itu.int/en/ITU-R/space/WRS20space/24%20Coordination%20of%20Earth%20Stations%20\(Appendix%207\).zip](https://www.itu.int/en/ITU-R/space/WRS20space/24%20Coordination%20of%20Earth%20Stations%20(Appendix%207).zip)

5.12 Is NGSO (Leo/Meo) ground control station considered as an earth station and does it require the coordination

Yes, a ground control station may be considered as an earth station. If an Administration wants to guarantee the interference control and international recognition for this specific control station, it is required to notify it through the coordination process with neighbouring countries of the Administration.

5.13 What is the difference between Specific and typical earth station?

Specific Earth station has a precise location, which is required to be captured in the SpaceCap, once you select specific type. Typical Earth station has typical parameters which covers multiple Earth stations. There is no specific location for typical Earth station, and it can be deemed that multiple Earth stations are operated in the service area with the parameters same or within the ones designated as typical parameters on a SNS file. Concerning the regulatory procedure, there is no difference for recording a typical or a specific earth station included in the notice of associated satellite network/systems. However, for notification of earth station, No.11.17 of the Radio Regulations applies. Except mobile earth station, an individual notice (usually as Specific earth station) has to be notified if coordination with respect to terrestrial services or earth station operating in the opposite direction is required.

For coordination of mobile earth station (usually as Typical earth station), paragraph of 1.4.6 of Appendix 7 applies. The coordination area is determined by extending the periphery of the specified service area by the predetermined coordination distance (see Table 10 of Appendix 7).

5.14 Are the min and max distances of propagation mode 1 and mode 2 reflected in the plotted contours?

Yes. These Min & Max distances are the guideline of the calculation range. Any calculated mode 1 or mode 2 should be inside this range: Min <= calculated mode 1 or mode 2 <= Max.

5.15 If the Earth station is just receiving and does not transmit, are propagations mode 1 and 2 of Annex 6 in Appendix 7 applied or is there just 1 contour because there is no transmission from it?

Mode 1 or 2 n in Annex 6 of Appendix 7 are related to Propagation mechanism, so that they should be applied to any direction of transmission. Therefore, for Receiving only earth station, it will have Mode 1 and mode 2 lines.

5.16 If one affected administration continues to disagree, can the notifying Administration plot an auxiliary contour removing the overlap with the disagreeing Administration and without changing the other part of the contour? Does it need to inform other agreed ADMINISTRATIONS or not if the new contour is the same from the agreed ADMINISTRATION point of view.

In that situation, both notifying and affected Administrations should try any means to resolve the difficult situation. The coordination requirement of the Earth Station shall be based on Main line (not auxiliary line) of Mode1 and Mode 2 (in Coordination contour of GIBC/AP7).Auxiliary contour can be used only in order to reach possible agreement in the coordination process between the concerned Administrations.

5.17 What is the maximum usable total bandwidth for an (fixed) Earth Station in the frequency band 27.5 to 30 GHz / 31 GHz? (This means all the 'carriers' used. If multiple carriers are used, what is the limit to a single carrier bandwidth?)

The bandwidth (BW) will be limited by a transponder BW of the associated satellite. The total BW needs to be within the BW of the spectrum range allocated to concerned space services.
There is no other specific rule.

5.18 Is it necessary to coordinate TVRO receive-only earth stations?

Gateways that receive broadcasting signal to be redistributed, should be coordinated and notified in order to be protected from harmful interferences. In case of massive end user TVROs, it depends on the Administration to accept a potential interference without international recognition and protection or not.

5.19 Is it necessary to coordinate VSAT stations? What about short-term (5 days) VSATs used for international broadcast of sporting events?

If it is a VSAT which is operated for a short-term (5 days) for only an event, there is no point to register it in MIFR. The process of recording in MIFR will be minimum a few months. However, it is important to coordinate frequency which might cause harmful interference to neighbouring countries before its operation.

5.20 Does the entire Earth Station coordination process need to be repeated for all new future Space Stations supported by this Earth Station? Does this depend on whether the frequency and elevation angles are kept the same? For instance, for an NGSO ES where transmitting and receiving capabilities remain the same and elevation masks remain the same, does the coordination process need to be repeated every time a new Space Station is supported?

Yes in accordance with regulatory provisions, the same coordination process is necessary when the earth station is associated with a new space station because the associated NGSO become different.

5.21 If a new satellite replaced the previous, but under the same filing, is the notified earth station is still valid or need to start notifying process?

The recorded earth station is valid if the characteristics of the notified earth station is not modified in your assumption.

6. Cost recovery

6.1 Cost of recovery fee is 7030 CHF for notification is it paid once and if more than one satellite in the same notifying file it is the same value and only one satellite for one notified orbital plan, but the notification itself can has more than orbit each orbit has its own satellite in the same notification?

That is the cost recovery fees for submission of Networks not subject to coordination even if the submission contains many satellites in many orbits.

6.2 Say we have an amateur payload on a commercial satellite, is the cost recovery fee of 570 CHF applicable for the amateur payload filing?

Submissions containing only amateur satellite service bands are exempt from cost recovery.

6.3 If a satellite cannot bring into use before the expiry of the 7-year period due to uncontrolled launch failure and accordingly its first attempt for notification was returned as Part III-S. But later the RRB grants the extension of the 7-year period for the filing. So, six months or an even longer period after the first notification was returned as Part III-S, the satellite is relaunched successfully. In this case, when the notifying Administration makes the 2nd attempt to submit the notification, will it need to pay extra cost recovery for the 2nd notification attempt?

This Part III-s is based upon the result of technical examination under 11.31 or lack of completion of coordination under 11.32. But, if the notice is returned under Nos 11.37 and 11.38, then there will be no cost.

In your assumption of 2nd notification based on RRB decision, Administration may submit the frequency bands

returned under No11.31 or submit additional frequency band. In this case, Cost recovery should be applicable.

6.4 Is Earth station subject submissions to Cost recovery?

- Submissions of notification of earth stations are exempt from cost recovery
- Large Earth stations submitted to ITU for coordination purposes under 9.7A are subject to cost recovery with category C1

6.5 How do you apply free entitlement for a network submitted at the same date under Appendix 30 and Appendix 30A in the Regions 1 and 3 Plans?

Free entitlement shall be applied to both submissions for satellite networks with the same name and received by the Bureau on the same date.

6.6 What are the conditions for applying free entitlement?

Free entitlement must be requested:

- by notifying Administration
- for the year of receipt
- before the due date of the invoice

6.7 What are the consequences of not paying the invoices?

The publications (Special Sections and Parts) related to the corresponding filings will be suppressed, and the Administration will still have to pay the amount concerned.

7. BRIFIC

7.1 Is it possible to upload IFIC space service DVD for training purpose like terrestrial workshop do?

You cannot upload BR IFIC space services for only training purposes. But if you want to download the ISO format of BR IFIC DVD, you are invited to contact Sales Department: sales@itu.int

7.2 To access the BRIFIC are you going to pay the ITU a fee?

The BRIFIC is a paying service. However, each member state receives a free copy. More detail please see here - <https://www.itu.int/pub/R-SP-LN/en>.

8. BR Online tools and Space Software

8.1 Where to find the meaning of all acronyms shown by SNS online?

You may check preface https://www.itu.int/en/ITU-R/space/Preface/preface_e.pdf. While there is no comprehensive list of acronyms, here is the names for SNS and SNL. Let us know what others you have difficulty with:

- SNS is Space Networks Systems.
- SNL is Space Network List.

8.2 For MODs to NGSO constellations, what is the quickest way to know whether the date of protection has changed?

This information can be found in the special section in the IFIC or in the SNS Online system, using following link: https://www.itu.int/sns/query_builder.html

8.3 What is the objective of using the wording of PART A and PART B in SNL, based on my experience both of them will show the result of filing which are in different stage (part I II III), will you explain for which query one of them is not useful and the other is useful?

They serve different purposes. Please use the one that you find most useful.

- SNL Part A gives information on the use of the frequency spectrum, the occupancy of the geostationary orbit and non-geostationary orbit.
- SNL Part B gives information on all reference publications (special sections and PARTs) related to the space services. Parts when related to SNL is only a legacy from the book version before 2000. Today in SNL online version, the equivalent to the old (Part B) is the most important. In the ITU Space Explorer new project, the parts will disappear. When we are referring to Parts I, II or III, it is by default the parts of the Circular BR IFIC when it was in a Book format with the Notifications notices were published in Part I and results of examinations in Parts II or III. The Parts A, B, C, D of the AP30/30A and maybe AP30B Plans Special Sections are also indicating. It is another meaning and also a legacy from the time when publications were in a book format.

8.4 When an Administration nominates a focal point as Administration Manager in the e-submission platform, what happen to the paper correspondence (faxes) that the Bureau send to that administration when it is identified as affected in a notification. It is maintained or suppressed?

Administration Manager on e-Submission and focal points of correspondence by email or faxes are not directly connected. Therefore, correspondence from BR will be delivered to the focal point in your Administrations by email.

If your Administration has been registered on e-Communications, Administration Manager on e-Communications will receive the same correspondence from the Bureau via e-Communications at the same time with email sent to the focal point.

8.5 Are any attachments required to the .mdb base when being submitted via e-Submission?

There is no common mandatory attachment other than mdb file. However, another attachment such as technical justifications, information about a new operating agency may be required according to the circumstances of notices or SpaceCom comments. For a new operating agency, please see the details [here](#).

Any cover letter is not mandatory, but it is recommended if a notifying Administration wishes to inform information concerned the notice to the Bureau.

8.6 No use of SpaceCom and e-submission for comments under 11.28.1. Correct?

Correct. Comments under 11.28.1 is not subject to SpaceCom comments. Your administration can send correspondence to a notifying administration. BR recommends your administration to send correspondence to a notifying administration copying to BR via e-Communications. .

8.7 If we send SpaceCom comments file via e-submission system to the BR is it necessary to attach a *.pdf file with the official letter signed by somebody from the Administration (e.g., the Minister or the Deputy Minister)? Or sending any comments using Administration manager account is enough to verify the information?

The pdf file of a letter is not mandatory for SpaceCom comments via e-Submission, however can be attached in "other" fields for information only and should be related to the comments file (mdb) if your Administration wishes.

8.8 Operators' user roles: so if an agency is listed in Table 12A/12B then it can be given a user account - correct? Therefore, a satellite operator, if listed in Table 12A/B, can be given a user account? Therefore, as FFA suggests, an operator could in theory bypass the Administration? However, a satellite operator must submit through its Administration, what would be the purpose of an Operator user role? Perhaps it is only for agencies that are not satellite operators?

Administrations can nominate a new operating agency to BR. Agencies in Table 12A/12B can hold user accounts if a user in your Administration creates user accounts for the listed operator on e-Submission. Operator users on e-Submission can submit filings to Administration. Administrations receive filings from operator, and can submit them

to BR.

Operators cannot send filings to BR directly via e-Submission. An operator can send their submission through e-submission to its administration. The operator role can create, modify, and control their own filings before sending them to their administration.

8.9 What Administration A of the earth station tries to contact Administration B whose terrestrial service is affected to proceed coordination; what communication channel shall be used? Shall the e-Communications website be used?

Yes, e-Communications can be used for coordination or communication between Administrations."

8.10 When using e-Communications, once we have sent a communication, is it possible to resend it to an e-mail address?

Yes, possible. Your Administration can send a letter again by email to BR or other administrations even if the letter has been sent via e-Communications. However, when your administration sends correspondence to the Bureau via e-Communications, the same correspondence is not required to be sent to the Bureau via e-mail or telefax again. Please just choose one communication means to contact the Bureau, because every correspondence has to be recorded, distributed and considered, even though it's disregarded in the end due to the repetition. There are still lots of work behind.

8.11 Whenever administration submits communication to BR and/or other Administration, could it be set-up so that operator of corresponding satellite network receives a copy of e-communication?

On the current functionality, operating agencies cannot hold access rights to e-Communications, which cover correspondence between Administrations and between Administrations and the Bureau. Future releases would enlarge the system to allow Operator users and Intergovernmental Satellite Organizations (IGSO) users to access the system.

8.12 1) Sometimes BR sends letters with reminders considering BR IFIC publications to many different administrations. Is it possible to reply only to the BR excluding all other administrations? 2) Is it possible to delete the letters from other administrations which our administration receives because of the mistake explained in the first question? 3) Are you planning to give the possibility to make folders with the incoming correspondence?

BR will be updating the system to reply only to BR. Now what you can do is to create a new correspondence, and copy the text over, and put BR only as TO. It is not possible to delete letters once it is sent. This is similar to email and postal mail. We do not plan to create folders yet, perhaps in the future.

8.13 We note that the BR continues to send messages by email and the same message by e-Communications. Is there a planned timeframe to cease this practice?

There is not any planned timeframe, but BR hopes e-Communications will be the sole communication means to send/receive administrative correspondences on space services in future.

If an administration informs BR that it wishes to receive solely by e-Communications, then BR will discontinue sending email to the administration. The Bureau welcomes this request from Administrations.

8.14 When we submit the comments to a BR IFIC, is it necessary to send the communications to the notifying administrations and the BR as well?

Basically, comments to BR IFIC are requested to be sent to notifying administrations and the Bureau according to the Radio Regulations.

If the comments are required to be submitted with SpaceCom software, a SpaceCom comment file shall be submitted to the Bureau via e-Submission. Further, comments are sent to notifying administrations. The Bureau may be copied with the communications sent to notifying administrations.

8.15 How can we get the new Space application?

The latest version of BR software is here - <https://www.itu.int/ITU-R/go/space-software/en>

You can have it on every BR IFIC or ITU website at <https://www.itu.int/ITU-R/go/space-software/en>

8.16 Please any documentation / complete guide to the BR software?

GIMS has an integrated help (using F1 key). Then tutorial is available on ITU Web site. Please refer:

<https://www.itu.int/ITU-R/go/space-software/en>

If you have any specific question, you can contact to brsas@itu.int. A lot of the applications have some or even substantial documentation, all should be accessible either from that site, or from within the applications (help menu).

8.17 That is to say I just write a note to describe clearly which beam I want to modify, and the other beam remains the same as before.

Explaining what modifications you are making in a note or in a letter is always helpful, but it is important that the modified data is included in your mdb file. The Bureau will see that the frequency band has changed and will know which beam is being modified because it has been included in the MOD notice.

8.18 Can operator(s) see the SpaceCom comments submitted by its notifying Administration for any specific IFIC?

The administration may inform/send the copy as well to the operator(s) what it is sending to the notifying administration and ITU. Else you will see the comments also when the BR published the special sections.

8.19 What is Cross-validation esp. as compared to validation?

Cross validation is the validation of the SNS data against Gims data to be sure that you have provided all diagrams as indicated in your submissions.

8.20 Are the Validation and GIBC PFD in the BR software tools different? After completing all the examinations available in the BR Software, and submitting the coordination request, how can I check the compliance for favourable finding?

You should run BOTH software before submitting your notice to BR.

Findings can be checked in the publication of the CRC in the corresponding IFIC.

8.21 After the BR has received the NGSO filing with the masks, when are they published on BR website?

They are published on the BR website at the same time as EPFD examination results.

8.22 Is it possible to check if notice contains assignments in, for example, 14.5-14.8 GHz in Region 3? How can I calculate PDF limit?

You would need to use BRSIS SpaceQuery software to see whether the notice contain assignments in 14.5-14.8 GHz - note all beams in 14.5-14.8 GHz. Check GIMS if these beams contain gain contour covering Region 3. If you wish to calculate PFD Limit itself you would need to use GIBC PFD GSO module.

8.23 Where can be found the Hard limit values used in the GIBC Software?

Please refer to Provision No. 21.16 of Volume I of Radio Regulation.

8.24 Do GIMS and IDWM need to be installed before running GIBC as indicated in <https://www.itu.int/en/ITU-R/software/Pages/gibc.aspx>?

No, there is no need to install IDWM separately.
IDWM runtime libraries are included inside both GIMS and GIBC.

8.25 What is the easy way to find if my country is in the footprint of a satellite? Can the frequency band used as a filter criteria in the search?

You may do it easily using GIMS software.

8.26 It is published but need to send again because it has design modification, so must send new modification as PDF or GIMS?

If the diagrams are modified, you need submit them in GIMS mdb format.

8.27 How can I find the database of GIBC to examine PFD limits?

can use this database to run the GIBC PFD limits.
But, if you want to check the pfd limit of a satellite network already recorded in ITU database, you may use the SRS_all database available in IFIC publication.
The step-by-step guidance of using the software is available in the video <https://www.itu.int/en/ITU-R/space/Pages/wrs2020SpaceWorkshopVideo.aspx>

8.28 Does GIBC PFD (Terr serv.) check for PFD limit in the band 14.5-14.8 GHz in accordance with No. 22.40?

Yes, it does . You can click on the View Notes button on that module. There is a document to explain what is checked.

8.29 Is it planned in the future to add an ITU software to calculate C/N & C/I margins within the ITU software package?

No, It is not foreseen to include C/I software as part of the ITU software package. Nevertheless, there are many commercially available C/I software packages in the market.

8.30 Further question regarding EPFD Mask, how soon one NGSO EPFD MASK available in BR website after BR received NGSO filing with the Mask? We are requested coordination from one NGSO but it seems no EPFD Mask available for the specific NGSO time being on BR website.

They are published on website at the time of EPFD examination.

8.31 How can I find the earth stations (Rx and Tx) in the neighbouring countries that have to coordinate with my country? Can the frequency band be used as a filter criterion in the search?

The best way to find that information would be to use MS Access query (your own-made query) on SRS.mdb. In other way, you could try BRSIS program. If you have any specific question, you can contact to brsas@itu.int

9. Appendices 30/30A/30B Common Questions

9.1 Can an administration coordinate with another administration by sending a letter via telefax or by e-Communications?

To coordinate with another administration, all means of communications can be used as the choice of each administration. However, if both administrations have accounts in e-communications, it is advisable to use e-communications.

From the Bureau side, it is necessary to be informed that an agreement has been reached (or that the interference has been eliminated) when you submit a Part B or a notification, as appropriate.

9.2 The 3 years extension is only applicable for launch failure? What about other reasons which may constitute force majeure?

§ 4.1.3 bis of Appendices 30 and 30A and 6.31bis of Article 6 of Appendix 30B specify the cases as well as the conditions to be met in order to obtain a maximum of 3 years (only one time) of extension to the regulatory time-limit for bringing into use due to launch failure without a need to submit the request to the Radio Regulations Board (RRB).

For other cases including those that constitute the force majeure shall be submitted to the RRB for its consideration.

9.3 For the modification submission, does the ‘first-come first-served’ principle apply after the network is entered into the LIST or only after successful completion of coordination with affected networks?

The assignments entered in the List cannot be directly modified. The procedure of Article 4 (AP30/30A) or Article 6 (AP30B) needs to be started again and the coordination requirements shall be fulfilled before the new modified assignments could be entered in the List. When applying the Article 4 (AP30/30A) or Article 6 (AP30B), the “first-come first-served” principle applies based on the official date of receipt of the notice intended to modify the assignment in the List.

9.4 Where can we find additional information on shaped beams?

It can be found in the GIMS reference database (\Databases\GIMS_Data\grefdbXXXX.mdb – where XXXX represents the number of BR IFIC), which is included in all BR IFIC. Installation of the GIMS software application is required so that the relative antenna gain contours, boresights, service areas and the gain towards GSO diagrams can be viewed graphically. For AP30/30A, not only co-polar antenna gain contours but also the cross-pol antenna gain contours can be found.

9.5 What do test-points exactly mean in AP30/30A/30B? Is it to check hard limit on those points?

To calculate interference from/to other satellite networks, we need to know where transmitting/receiving earth stations are located.

For AP30/30A/30B, such locations are determined by a set of test-points. For assignments/allotments in the Plans, test-points were determined by the Conferences that established the relevant Plans. For other submissions in AP30/30A/30B, test-points are submitted by the notifying administrations.

Because transmitting/receiving earth stations are supposed to be located at those test-points, they describe the associated service area for a satellite network and thus they should be homogeneously distributed.

In terms of technical examinations by the Bureau, test-points are used for the calculation of interference and checking of hard limits.

9.6 Are there measures that protect developing countries from developed countries in the field of space?

To ensure the equitable access to the GSO orbit/spectrum among the ITU Member States (including both developing countries and developed countries), two space services Plans were established (i.e. BSS and associated BSS Feeder-link Plans as contained in Appendices 30 and 30A; FSS Plan as contained in Appendix 30B).

In addition to the above-mentioned space services Plans, there are other mechanisms to facilitate the access to the GSO orbit/spectrum, especially by the developing countries, like Resolution 170 (WRC-19) in Appendix 30B and Resolution 553 (Rev.WRC-15) in the frequency band 21.4-22 GHz.

AP30/30A/30B contains the commenting procedures in order for an administration to protect its resources potentially affected by satellite networks of other Administrations. An administration can request for assistance of the Bureau in application of AP30/30A/30B procedures.

9.7 Would our Plans be affected when we provide agreement to the new network?

When applicable coordination trigger limits are exceeded in respect of your Plan assignments or Plan allotment, as appropriate, your administration is identified as affected.

The notifying administration of an affecting network has the right to create interference to your Plan upto the levels that are defined as “permissible interference” in accordance with the relevant Plan.

Beyond that permissible interference, the notifying administration needs to seek the agreement from your administration.

In case you provide agreement to the new network, you should define what the acceptable interference is based on a link-budget calculation. The acceptable interference would still allow your administration to operate your Plan while giving agreement to the notifying administration.

9.8 What is the difference between additional use/system and non-planned approach?

Capacity of GSO orbit/spectrum of frequency bands allocated to space service Plans can be roughly divided into two parts: one part for the establishment of the Plans for the equitable access and another part for the use beyond the Plans (i.e. additional use in case of Appendices 30 and 30A and additional system in case of Appendix 30B).

The additional use/system shall protect Plans as Plans have higher priority.

Procedure applicable for additional use/system and procedure for non plans are based on the “first-come first-served” principles. For additional use, the applicable procedure is contained in Article 4 of Appendices 30 and 30A; for additional system, the applicable procedure is contained in Article 6 of Appendix 30B; for non plans, the applicable procedure is contained in Article 9 of the Radio Regulations.

9.9 Can both BSS & FSS Plans be used in Regions 1, 2, 3 at the same time?

The BSS and FSS Plans are independent and thus they can be used at the same time. However, their use shall be in accordance with the established Plans and the relevant procedures because the BSS Plan is a Regional Plan.

10. Appendixes 30/30A

10.1 Is the commenting on Regions 1 and 3 AP30/30A Part A Special Sections subject to SpaceCom in accordance with resolves 4 of Resolution 55 (Rev.WRC-19)?

No as paragraph 1.1 and the associated footnote of the Rule of Procedure on the receivability of forms of notice indicate that SpaceCom cannot be used for commenting on Special Sections related to AP30/30A in Regions 1 and 3. Instead, affected administrations are requested to send comments to the notifying administrations and copy to the Bureau by other means of communication, preferably through the E-communications portal.

10.2 Is it mandatory to submit objections through correspondence for R1/R3 AP30/30A?

Yes, because SpaceCom cannot be used (see the reply to the question above).

In order to properly protect your Plan assignments or assignments of your additional use, your administration needs to make comments within the 4-month commenting period counted from the date of publication of the relevant BR IFIC (Space services).

10.3 If the core Plan assignments are limited to national coverage, what is the purpose of regional systems on single orbital slot sharing the frequencies?

The service area of the original Plan assignments is limited to the national territory of the responsible administration.

Regional systems refer to the networks that can have wider service area than the national territory. These systems can be submitted to the Bureau through the application of Article 4 of Appendices 30 and 30A for additional use and of Article 6 of Appendix 30B for additional system.

10.4 If the core Plan assignments are limited to national territory, then why are there test points (used for the EPM/OEPM protection criteria) outside the national territory, but all within the -3dB contour?

Plans were established based on a set of standard technical parameters with a service area limited to the national territory. One of the standard technical parameters is satellite elliptical beam defined by a -3 dB relative antenna gain contour in the GIMS application.

To meet the C/N objective over the national territory, the coverage area (-3 dB) needs to include the national territory. During the establishment of the Plan, the ellipse was determined based on a set of test-points. Therefore, because of special geographical situation of certain countries, some test-points needed to put outside the national territories. It should be noted that the test points for Plan assignments are part of the characteristics of the Plans agreed by all Administrations during the corresponding WRC.

10.5 What information does SPS_ALL database contain?

SPS_ALL database is a master database of Appendices 30 and 30A. It is available in every BR IFIC (Databases\AP30-30A\SPS_ALL_IFICXXXX.mdb – where XXXX is the number of the relevant BR IFIC).

SPS_ALL database is in MsAccess format and contains the following information:

- Detailed characteristics of BSS and the associated BSS Plan assignments;
- Detailed characteristics of assignments in the List of additional use;
- Detailed characteristics of requests for additional use in Regions 1 and 3 or for Plan in Region 2;
- Reference situation (EPM or OEPM) of all frequency assignments;
- Detailed characteristics of assignments in the Master Register;
- Detailed characteristics of requests for coordination of assignments for Space Operation Functions (Article 2A);
- Associated information relating to Resolution 49;
- Identification of affected administrations as well as affected satellite networks;
- Other information including the one relating to the management of the Bureau.

10.6 Why does the Region 2 have different frequency allocation for BSS and feeder link than Regions 1 and 3?

Because BSS Plan for Region 2 and for Regions 1 and 3 were established by different WARC (WRC). For Region 2, it was developed by 1983 Conference (RARC Sat-R2) and subsequently incorporated into the Radio Regulations by WARC Orb-85 (first session). For Regions 1 and 3, the BSS and the associated BSS Feeder-link Plans were established by WARC-77 and WRC Orb-88 (Second session), respectively. Different Conferences have different motivation and objectives. It should be noted that procedures applicable to Region 2 and those to Regions 1 and 3 are also different.

10.7 Please describe more about BEAMLET and its concept.

The beamlet is a parameter directly related to the roll-off of the antenna. The smaller the value of the beamlet, the greater the value of the roll-off and therefore better performance. It can be found in 3.13.3 of Annex 5 to Appendix 30 for minimum values of the beamlet in Regions 1 and 3 and in Region 2.

10.8 Concerning AP30/AP30A satellite networks, what is their validity period and the procedures to renew its usage for another period of time?

With respect to assignments in the Plan, there is no period of validity. With respect to an assignment in the List of additional uses, once it has been notified, recorded in the Master Register and brought into use, the period of operation is limited to a maximum of 15 years counted from the date of bringing into use or 2 June 2000, whichever is later. However, the period of operation can be extended by another 15 years if:

- the responsible administration sent a request to the Bureau at least 3 years before the expiry of the first 15 year period;
- and confirm that all the characteristics of the assignment remain unchanged.

10.9 After the publication of the fillings under Res. 559 (WRC-19), how can we know the list of the affected Administrations related to the satellite network submitted under Res. 559 (WRC-19), so that we can initiate the coordination requests?

It can be found in the Special Sections AP30/E and AP30A/E published in BR IFIC 2932 of 27 October 2020. At

the end of each Special Section, the list of the Administrations/networks identified as potentially affected under 4.1.1 of Appendices 30 and 30A can be found.

The Notice_IDs of Res.559 submissions are in the range 120552008 to 120552052 for Appendix 30 and 120554008 to 120554052 for Appendix 30A. Any affected network with the Notice_ID in the above-mentioned range belongs to a filing submitted under Resolution 559 (WRC-19).

10.10 What is the difference between the Plan and the List?

Plans were established by a Conference (WARC/WRC) in order to ensure the equitable access to the GSO orbit/spectrum among all the ITU Member States. Plans are stipulated in Volume 2 of the Radio Regulations (Appendices 30 and 30A) and permanent.

List of additional uses was established by WRC-2000 for additional uses in Regions 1 and 3. To include an assignment in the List, a notifying administration has to apply the 4.1 procedure of Article 4 of Appendices 30 and 30A. Assignments in the List have a limited time of operation(15 + 15 years) in accordance with § 4.1.24 of Article 4.

10.11 How does SpaceQry identify the EPM that it can be accepted?

SpaceQry helps identify EPM value, but it cannot give information to Administration whether or not the value is accepted. A link budget calculation should be performed during a frequency coordination for making a decision.

10.12 Is possible for an AP30/30A List of Regions 1&3 to enter conditionally to MIFR although there are some disagreements from affected Plan satellite networks. If not, so why there were some issues under Agenda Item 7 of WRC-19 about updating or not updating reference situation in the cases of entering conditionally to the List.

If any assignment in the Plan or Region 2 Article 4 is still affected by an incoming Part B, that incoming Part B will not be allowed to enter in the AP30/30A List. Therefore, there is no such disagreement for an assignment in the List.

An assignment still can be entered in the List with some disagreements from other assignments in the List or Regions 1 and 3 Article 4 networks. By updating the reference situation when there is such a disagreement, the reference situation of the assignment which was the basis of the disagreement would be degraded. That is the subject of the discussions you referred to under Agenda Item 7 of WRC-19.

10.13 Where can be found the additional countries that are included in the Europe for exclusion the BSS feeder-link in the 14.5-14.8 GHz band?

The Bureau applies decision of RRB in this regard. Several years ago, there were additional countries jointed Europe in application of footnote 5.510. These three countries are GEO, ARM and AZE.

Indication of the request for exclusion when sending the filing submission to BR, this allows BR to exclude Europe from the service area of BSS Feeder-link in 14.5 - 14.8 GHz.

10.14 Does an Article 2A of AP30/30A R1&3 have any effect on the Plan assignment of the same region? If yes, why we do not run MSPACE and do not update EPM.

Yes, there are certain Article 2A of AP30/30A R1&3 that affect assignments in the Plan.

The compatibility between Article 2A networks and Plan assignments is determined by using GIBC/PFD and GIBC/Appendix 8 based on the pfd and Delta T/T criteria.

Meanwhile, Mspace and EPM are used for the compatibility among assignments belonging to the same Plan (e.g. among assignments of Regions 1 and 3 Plans).

In accordance with Appendices 30 and 30A, there are various criteria used for different sharing situations.

10.15 If Article 2A AP30 causes a degradation in the reference situation (EPM) of a Plan, Why do not we need to account this effect in the EPM calculation and to update that?

EPM is used for the compatibility among assignments in the same Plan and not between Article 2A and Plan assignments (see the answer on the just above question).

Therefore, even an Article 2A network can affect an assignment in the Plan, its effect is reflect based on the pfd mask in the downlink and Delta T/T in the feeder-link and not in the EPM.

10.16 If a filing of AP30/30A does not comply with hard limits, does the Bureau return it to the notifying Administration? or will it be published so that the Administration has a chance to correct it in the next stage?

In such a case, the notifying administration is given 30 days to modify the technical parameters so that the hard limits are complied.

If some assignments exceed the hard limits, they will be removed by the Bureau before further processing of the remaining assignments. Thus, there would be no publication from the Bureau to indicate an assignment that exceeds the hard limits.

10.17 Regarding that decision of WRC-19 that asked BR to do the second examination to consider the final characteristics of affected assignment, is it the same provision for AP30/30A? If not, it means that there is not such a benefit in the second examination there?

Yes, please read footnotes 7bis of 4.1.12 of Appendix 30 and 9bis of 4.1.12 of Appendix 30A.

10.18 Considering the AP30/30A BSS Plan procedure, why cannot the ITU introduce harmonized Plan for all three Region?

Because BSS Plan for Region 2 and for Regions 1 and 3 were established by different WARC (WRC). For Region 2, it was developed by 1983 Conference (RARC Sat-R2) and subsequently incorporated into the Radio Regulations by WARC Orb-85 (first session). For Regions 1 and 3, the BSS and the associated BSS Feeder-link Plans were established by WARC-77 and WRC Orb-88 (Second session), respectively. Different Conferences have different motivation and objectives. It should be noted that procedures applicable to Region 2 and those to Regions 1 and 3 are also different.

11. Appendix 30B

11.1 Can administrations send comments (such as under AP30B 6.10 and 6.11) through e-Submission system?

Comments under Appendix 30B are not SpaceCom comments, so please communicate via e-Communications or email.

11.2 Regarding AP30B if you receive a notice to comment on inclusion under 6.6 from the Bureau and you reply to disagree for 6.5 and 6.6. Why does Bureau say we only consider 6.6 as per the notice yet you can ask for exclusion even if you are not identified?

You can only make a comment for the provisions under which you are identified.

The provision 6.6 of Appendix 30B is a special case and there would be no interference if an administration does not reply to 6.6 of appendix 30B. The only consequence is that its territory will not be included in the service area of the incoming notice. Even if the administration accepts to be included in the service area under 6.6 of Appendix 30B, it may request to be excluded later, under 6.16 of Appendix 30B. Provision 6.5 of Appendix 30B means that there is a potential interference. You can comment (agreement/disagreement) when you are identified as affected (by correspondence, not SpaceCom).

11.3 §6.16 allows administrations to be excluded from the service area of a satellite network. Is there a provision that allows administrations to be excluded from the coverage area?

No, such provision doesn't exist under Appendix 30B. Unless your assignments are identified as affected under §6.5 of AP30B, you cannot ask to reduce the emission on your territory.

11.4 How to be sure that a coverage is realistic?

It is advisable to ask the assistance of a satellite antenna manufacturer when creating a satellite antenna gain diagram. Otherwise, there are available software for the generation of satellite antenna gain diagrams where you can insert your constraints (example: exclusion area) and obtain the best you can achieve with the available technology.

11.5 Are there any plans to have the Ka band as a planned band as C and Ku, taking in the account that C band is more difficult to use because of 5G?

Currently there are no such plans.

11.6 What is the objective of the conversion from allotment into assignment if there will not need any coordination in the case of no modification? Which data base should be exchanged and what is the objective of this changing?

In principle, if you wish to bring into use your allotment in the Plan, you have to convert it into an assignment even if you do not modify the characteristics during the process of conversion. The procedure for conversion is contained in Article 6 of Appendix 30B.

Doing conversion, you may wish to change some technical parameters of your Plan's allotment (power density, Earth stations diameter, test-point location, service area beyond your national territory and so on). These modifications shall not be brought into use immediately, you may wish to keep them as allotment for further usage. However, it needs to be mentioned that some of these modifications may require additional coordination. AP30B database shall be used for this purpose.

11.7 For conversion of an AP30B allotment into assignment without any modification, is there any coordination requirements?

No coordination requirements are applicable to the conversion without modification or within the envelope of the original allotment.

11.8 What is the difference between Part B and notification?

Part B contains an envelope of characteristics. Notification contains a real usage (set of different ESs, specific frequency (transponder) plan and so on).

12. General

12.1 What is AP4?

AP4 = Appendix 4 (Annex 2) of the Radio Regulations contains all data which shall be submitted in the relevant notices (subject of coordination, notification or Plans' submissions).

12.2 What is Special Section?

A Special Section is an official publication of notices received by the Bureau and published in accordance with provisions in the Radio Regulations. They are published every two weeks in the BR IFIC for Space Services. Examples are API/A, API/B, API/C, CR/C, CR/D, CR/E etc. Please see the Preface for more information:https://www.itu.int/en/ITU-R/space/Preface/preface_e.pdf

12.3 Would there be an indication/notes on the modification made to the notice by an administration? Or we need to manually compare with the previous notice submitted?

There are usually no notes provided by the administration on what is being modified, but you can make use of the action codes of the beams and groups to see what is being modified.

12.4 How does BR define the efficiency of use of space spectrum/orbit? Is there any report about GSO/NGSO?

The ITU BR Annual Space Report to the Scientific and Technical Subcommittee (STS) of the COPUOS on the use of the geostationary-satellite orbit (GSO) and other orbits is available for download. Please check the information on the following webpage: <https://www.itu.int/en/ITU-R/space/snl/Pages/reportSTS.aspx>

12.5 The objective function of BR to manage space frequency orbit resources is to maximize the number of satellites operating under the condition of interference allowed. Or to maximize the total transmission rate?

The answer is both: To use the orbit-spectrum resource in an efficient, rational, and equitable manner by the Member States and to operate free of harmful interference. (Art 44 and 45 of ITU Constitution) That's why we have 2 approaches Planned Bands for FSS and BSS in Ap30/30A and 30B which ensure access to all countries, and Unplanned Bands with Art 9 and Art 11 of RR which is a competitive process ensuring efficiency.

12.6 Given that the longitude of ascending node can be a required item after WRC-19 but the reference time associated with it is optional, if it's left blank what reference time is assumed?

Time=0. LAN=0 and Phase=0 would correspond to sub-satellite point at lon=0, lat=0.