



## Radiocommunication Bureau (BR)

Circular Letter  
**CR/478**

10 September 2021

**To Administrations of Member States of the ITU**

Subject: **Minutes of the 87<sup>th</sup> meeting of the Radio Regulations Board**

Pursuant to the provisions of Nos. 13.18 of the Radio Regulations and in accordance with §1.10 of Part C of the Rules of Procedure, please find attached the approved minutes of the 87<sup>th</sup> meeting of the Radio Regulations Board (5-13 July 2021).

These minutes were approved by the Members of the Radio Regulations Board by electronic means and are available on the RRB pages of the ITU web site.

Mario Maniewicz  
Director

Annex: Minutes of the 87<sup>th</sup> meeting of the Radio Regulations Board

**Distribution:**

- Administrations of Member States of ITU
- Members of the Radio Regulations Board



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**Document RRB21-2/14-E**  
**13 July 2021**  
**English**

MINUTES\*  
OF THE  
87<sup>TH</sup> MEETING OF THE RADIO REGULATIONS BOARD  
5 – 13 July 2021 – Teleconference

Present:

Members, RRB

Mr N. VARLAMOV, Chairman

Mr E. AZZOUZ, Vice-Chairman

Mr T. ALAMRI, Ms C. BEAUMIER, Mr L.F. BORJÓN FIGUEROA, Ms S. HASANOVA, Mr A.  
HASHIMOTO, Mr Y. HENRI,  
Mr D.Q. HOAN, Ms L. JEANTY, Mr S.M. MCHUNU, Mr H. TALIB

Executive

Secretary,

RRB

Mr M. MANIEWICZ, Director, BR

Précis-writers

Mr P. METHVEN, Ms C. RAMAGE

Also present:

Ms J. WILSON, Deputy Director, BR and Chief IAP

Mr A. VALLET, Chief, SSD

Mr C.C. LOO, Head, SSD/SPR

Mr M. SAKAMOTO, Head, SSD/SSC

Mr J. WANG, Head, SSD/SNP

Mr N. VASSILIEV, Chief, TSD

Mr K. BOGENS, Head, TSD/FMD

Mr B. BA, Head, TSD/TPR

Mr S. JALAYERIAN, TSD/TPR

Ms I. GHAZI, Head, TSD/BCD

Mr D. BOTHA, SGD

Ms K. GOZAL, Administrative Secretary

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\* The minutes of the meeting reflect the detailed and comprehensive consideration by the members of the Radio Regulations Board of the items that were under consideration on the agenda of the 87<sup>th</sup> meeting of the Board. The official decisions of the 87<sup>th</sup> meeting of the Radio Regulations Board can be found in Document RRB21-2/13.

Subject	Documents
1 Opening of the meeting	-
2 Adoption of the agenda and consideration of late submissions	<a href="#">RRB21-2/OJ/1(Rev.1)</a>
3 Report by the Director of BR	<a href="#">RRB21-2/3(Rev.1) + Addenda 2-6, 9 and 10, RRB21-2/DELAYED/2, RRB21-2/DELAYED/4</a>
4 Rules of Procedure	<a href="#">RRB21-2/3(Rev.1)</a> , <a href="#">RRB21-2/1</a> , <a href="#">RRB20-2/1(Rev.3)</a>
5 Requests relating to the extension of regulatory time-limits to bring into use frequency assignments to satellite networks	<a href="#">RRB21-2/2</a> , <a href="#">RRB21-2/6</a> , <a href="#">RRB21-2/8</a> , <a href="#">RRB21-2/11</a> , <a href="#">RRB21-2/5</a>
6 Submission by the Administration of the United States regarding the status of the USABSS-38 satellite network	<a href="#">RRB21-2/4</a>
7 Submission by the Administration of the United Kingdom of Great Britain and Northern Ireland requesting an appeal to the decision of the Radiocommunication Bureau concerning some frequency assignments to the O3B-D and O3B-E satellite networks in the MIFR	<a href="#">RRB21-2/7</a>
8 Status of the ARABSAT 5A and 6A, and the TURKSAT-5A satellite networks	<a href="#">RRB21-2/3(Rev.1)(Add.7+8)</a> , <a href="#">RRB21-2/9</a> , <a href="#">RRB21-2/12</a> , <a href="#">RRB21-2/DELAYED/3</a>
9 Submission by the Administration of Saudi Arabia (Kingdom of) regarding the implementation of the RRB decisions on the coordination of satellite networks at 25.5°E/26°E in the Ku-band	<a href="#">RRB21-2/10</a> , <a href="#">RRB21-2/3(Rev.1)(Add.1)</a> , <a href="#">RRB21-2/DELAYED/5</a>
10 Confirmation of the next meeting for 2021 and indicative dates for future meetings	-
11 Other business: Update of the working methods under Part C of the Rules of Procedure	-
12 Approval of the summary of decisions	<a href="#">RRB21-2/13</a>
13 Closure of the meeting	-

## 1 Opening of the meeting

1.1 The **Chairman** opened the 87<sup>th</sup> meeting of the Radio Regulations Board at 1300 hours on Monday, 5 July 2021 and welcomed the Board members. He trusted that the Board would have sufficient time to consider all items on its broad agenda and hoped that it would be possible to hold an in-person meeting before the end of the year.

1.2 The **Director**, speaking also on behalf of the Secretary-General, welcomed the members of the Board and thanked them for having agreed to hold another virtual meeting, which, while not the preferred option, enabled work to continue and the Board to fulfil its duties very well despite the pandemic. While he hoped that the next Board meeting could be held in person, that would depend on the evolution of the situation worldwide. He wished the Board a fruitful meeting.

## 2 Adoption of the agenda and consideration of late submissions (Document RRB21-2/OJ/1(Rev.1))

2.1 **Mr Botha (SGD)** drew attention to five late submissions (Documents RRB21-2/DELAYED/1–5). The Board might wish to include Documents RRB21-2/DELAYED/2–5 under the agenda items to which they related, for information. Document RRB21-2/DELAYED/1, which contained a submission by the Administration of Papua New Guinea did not relate to any item on the draft agenda.

2.2 **Ms Beaumier** said that consideration of Document RRB21-2/DELAYED/1 should be deferred to the Board's next meeting. It did not relate to any item on the agenda, and a precedent should not be set. Moreover, as it concerned a deadline for bringing back into use of April 2022, there was no urgency to consider the request at the current meeting. The additional time would also enable Papua New Guinea to provide further information demonstrating how all four conditions of *force majeure* were met and to justify the length of extension requested. **Ms Jeanty, Mr Henri, Mr Alamri, Mr Hoan, Mr Hashimoto, Ms Hasanova, Mr Mchunu, Mr Azzouz, Mr Borjón** and **Mr Talib** endorsed that view.

2.3 The Board **agreed** to adopt its agenda as follows:

“The Board adopted the draft agenda with modifications as provided in Document RRB21-2/OJ/1(Rev.1). The Board decided to include Documents RRB21-2/DELAYED/2 and RRB21-2/DELAYED/4 under agenda item 3, Document RRB21-2/DELAYED/3 under agenda item 8.2, and Document RRB21-2/DELAYED/5 under agenda item 9 for information. The Board also decided to defer to its 88<sup>th</sup> meeting the consideration of Document RRB21-2/DELAYED/1 and instructed the Bureau to add this document to the agenda for the 88<sup>th</sup> meeting, noting that this would afford the Administration of Papua New Guinea the opportunity to revise and improve its submission to the Board with more detail and justifications in support of its request.”

## 3 Report by the Director of BR (Document RRB21-2/3(Rev.1) and Addenda 2-6, 9 and 10, RRB21-2/DELAYED/2 and RRB21-2/DELAYED/4)

3.1 The **Director** introduced his customary report in Document RRB21-2/3(Rev.1). Referring to § 1 and Annex 1, he reported that the Bureau had completed all the actions arising from the decisions of the 86<sup>th</sup> Board meeting. The results of the special monitoring campaign conducted by the Bureau in order to determine the sources of harmful interference on the frequencies reported by the Administration of the United Kingdom (§ 11.2 of Annex 1) had not been available when the report was written, and were presented in Addendum 10, rather than in the report itself.

3.2 Referring to § 4.2, he drew attention to Addendum 4, which set out the results of the recent virtual multilateral frequency coordination meeting between Italy and its neighbouring countries. He also noted that the Administration of Italy had provided an updated roadmap of actions to solve cases of harmful

interference to broadcasting stations of its neighbouring countries, as requested by the Board, which was presented in Addendum 2.

3.3 Referring to § 8, he said that a three-day frequency coordination meeting between the Administrations of the Kingdom of Bahrain and the Islamic Republic of Iran had been held virtually in May 2021. The Bureau had provided the required calculations to both administrations in advance of that meeting. Limited progress had been made, and subsequent communications from the Administrations of the Islamic Republic of Iran and the Kingdom of Bahrain were set out in Documents RRB21-2/DELAYED/2 and RRB21-2/DELAYED/4 for information. Another coordination meeting was planned for Q3 2021.

3.4 Referring to § 10, he said that the work on Resolution **559 (WRC-19)** submissions continued to progress well and administrations were following the Board's recommendations. Turning to § 12, he said that the Bureau had applied § 4.1.18*bis* of Appendices **30** and **30A (Rev.WRC-19)** for the first time, and there had been no difficulties. In response to the Board's request at its previous meeting, information on the status of implementation of Resolution **35 (WRC-19)** was presented in § 13.

### **Actions arising from the last RRB meeting (§ 1 and Annex 1 of Document RRB21-2/3(Rev.1))**

3.5 The Board **noted** § 1 and Annex 1 of Document RRB21-2/3(Rev.1).

### **Processing of filings for terrestrial and space systems (§ 2 and Annexes 2 and 3 of Document RRB21-2/3(Rev.1))**

3.6 **Mr Vassiliev (Chief TSD)**, referring to Annex 2 of the Director's report on the processing of notices to terrestrial services, drew attention to the four tables contained therein.

3.7 **Mr Vallet (Chief SSD)** drew attention to the six tables in Annex 3, which contained the usual report on the processing of satellite filings. There was nothing specific to report. In response to a question from **Mr Azzouz**, he said that the seven requests submitted in 2020 by countries without a national allotment under Appendix **30B** had been processed and were now published. As Table 4 of Annex 3 indicated, treatment time had risen to 12 months in May 2021 because of those requests, but had started to decrease as the usual requests under Article 6.1 of Appendix **30B** were now being processed.

3.8 The **Chairman** thanked the Bureau for its efforts to find a solution for the countries concerned and for its work on the processing of filings.

3.9 The Board **noted** § 2 and Annexes 2 and 3 of Document RRB21-2/3(Rev.1).

### **Implementation of cost recovery for satellite network filings (late payments) (§ 3 and Annex 4 of Document RRB21-2/3(Rev.1))**

3.10 **Mr Vallet (Chief SSD)**, referring to Annex 4 to the Director's report, said that no special section had been cancelled because of non-payment since the previous Board meeting.

3.11 The Board **noted** § 3 and Annex 4 of Document RRB21-2/3(Rev.1).

### **Reports of harmful interference and/or infringements of the RR (Article 15 of the Radio Regulations) (§ 4.1 of Document RRB21-2/3(Rev.1))**

3.12 **Mr Vassiliev (Chief TSD)** and **Mr Vallet (Chief SSD)** drew attention to the tables in § 4.1 of the Director's report relating to harmful interference and infringements concerning the terrestrial and space services.

3.13 The Board **noted** § 4.1 of Document RRB21-2/3(Rev.1).

## **Reports of harmful interference to broadcasting stations in the VHF/UHF bands between Italy and its neighbouring countries (§ 4.2 and Addenda 2, 3 and 4 to Document RRB21-2/3(Rev.1))**

3.14 **Ms Ghazi (Head TSD/BCD)** drew attention to Addenda 2, 3 and 4 to the Director's report. Addendum 2 contained an updated roadmap provided by the Administration of Italy on actions to solve the harmful interference to television and sound broadcasting stations received by its neighbouring countries. With regard to TV broadcasting, she said that the Administration of Italy was committed to the process of releasing the 700 MHz band and freeing the frequencies assigned to neighbouring countries through multilateral agreements. Although the release of the frequency band would be completed by June 2022, the Administration of Italy was accelerating the release times for channels 50-53 and had outlined the switch-off status of the channels and the timeline for the shift of TV broadcasting to the frequencies assigned to Italy. In response to a request from the Administration of Croatia, it was considering other options to bring forward the deadlines, including the reallocation of channels or the use of other channels, but the possibilities were limited. With regard to DAB broadcasting - VHF Band III, work on channel allocation had continued and it was hoped that an agreement would shortly be finalized. With regard to FM broadcasting, no real change had been reported with respect to the cases included in the priority lists drawn up in 2017. Regarding the Italy-Slovenia cross border cases, the Administration of Italy had indicated that it was displacing some FM transmitters to resolve the situation. It also pointed out that Slovenian signals were often receivable with high EMF values within Italian territory, and drew attention to the ruling of the Court of Gorizia acknowledging that both broadcasters concerned had the right to transmit in their own territory and should implement technical measures aimed at ceasing the interference both in Italian and Slovenian territories.

3.15 Addendum 3 contained in annex a copy of communications received from the Administration of Slovenia after the multilateral coordination meeting in June 2021, providing additional details concerning the information submitted by the Italian Administration and the judgement of the Court of Gorizia. The Administration of Slovenia indicated that the displacement by the Italian Administration of some FM transmitters had not solved any of the interference problems because of the proximity of the transmitting locations to the border, the fact that the stations used frequencies not part of the GE84 Agreement and the fact that Slovenian frequencies received interference from two or more stations. Recalling the court judgement, it was noted that the Slovenian station concerned was recorded in the GE84 Agreement, whereas the Italian station was not.

3.16 Addendum 4 contained a report to the Board on the fourth multilateral frequency coordination meeting between Italy and its neighbouring countries held online on 14 and 15 June 2021. Information of neighbouring countries on the evolution of FM regulation had been discussed at length. All countries concerned had asked Italy to solve the situation as soon as possible and free those FM frequencies not in accordance with the Radio Regulations. Italy had proposed replanning the FM band together with the DAB plan as a package. However, that had not been supported, and Italy had been requested to free Band III from TV, plan DAB and replan FM, and free the FM band from uncoordinated stations, as previously agreed. Despite efforts from Italy to solve some individual cases of interference, the status of priority lists had not changed from 2017. Several agreements on coordination of DAB frequency blocks had been reached between Italy and neighbouring countries, and negotiations with Croatia and Slovenia were ongoing. Neighbouring countries had insisted on the need for Italy to guarantee that it would grant new licences in conformity with the Radio Regulations and bilateral/multilateral agreements. With regard to the situation concerning television broadcasting, she said that, although Italy was implementing the roadmap for clearance of the 700 MHz band, the Administration of Croatia had expressed concern about the June 2022 deadline for the switch-off of channels concerning the Adriatic region as auction procedures for granting wireless broadband communication licences in that frequency band had already begun. It had requested Italy to release the Croatian channels by July 2021, and to resolve the interference on priority channels below 694 MHz.

3.17 Turning to the conclusions and further actions set out in the document, she said that there had been lengthy discussion of Italy's statement that, when revising its Band II plan, the changed frequencies would

have to be coordinated with neighbouring countries within the equitable access principle. Objections had been raised and Italy had been requested to start resolving harmful interference cases and release uncoordinated frequencies, beginning with those affecting stations in the priority lists. To that end, it was suggested that Italy could use some of its recorded unused frequencies in the GE84 Plan and MIFR, and that incentives might be given to operators to encourage the release of 80 per cent of the uncoordinated frequencies in Band II.

3.18 The **Chairman** congratulated the Bureau for holding the multilateral coordination meeting. While the results might not have been quite as positive as had been hoped, such a protracted situation was unlikely to be resolved quickly. Italy and the affected countries should continue their efforts and Italy should not issue new licences for frequencies whose use was not in conformity with regional plans and the Radio Regulations.

3.19 **Ms Hasanova** thanked the Bureau for its efforts to organize the coordination meeting during the pandemic and sought updated information on the release of channels in the 700 MHz band.

3.20 **Ms Ghazi (Head TSD/BCD)** said that there had been no update from Italy on progress made with respect to Croatia's request for the release of certain channels in the 700 MHz band by July 2021.

3.21 **Mr Hashimoto** expressed appreciation of the Bureau's efforts to hold the multilateral coordination meeting and trusted that a solution would be found for the affected countries with the ongoing support of the Bureau.

3.22 **Mr Hoan** thanked the Bureau for its efforts to facilitate the coordination meeting. Recalling the conclusions of that meeting, he shared the concerns of participants regarding Italy's view that the changed frequencies would have to be coordinated with neighbouring countries within the equitable access principle when revising the Band II plan, which could make it more difficult to resolve the harmful interference cases. He hoped that the next multilateral meeting would yield further results.

3.23 **Mr Alamri**, having thanked the Bureau for organizing the multilateral meeting, said that continued support from the Bureau would be necessary to resolve the longstanding cases of harmful interference between Italy and its neighbouring countries.

3.24 **Mr Azzouz** thanked the Bureau for its work to resolve cases of harmful interference in the terrestrial services.

3.25 **Mr Vassiliev (Chief TSD)** said that two proposals had been made at the meeting to resolve the problem of FM interference, namely: (1) to deal with the issue in the same way as TV interference, which included changes in the relevant telecommunication regulations of Italy and financial compensation to its TV operators allowing to free the frequencies presenting interference problems; and (2) to rearrange the FM plan. All neighbouring countries had expressed a preference for the former, but that would require significant financial investment and a high level of political decision-making not possible at a meeting of technical experts. The Italian Administration's proposal to rearrange the FM plan was completely unacceptable for all neighbouring countries as the frequency band was already regulated under the GE84 Agreement. A pragmatic solution would be to encourage Italy to deal with the most severe interference cases on the priority lists.

3.26 **Mr Talib** expressed appreciation to the Bureau for convening the multilateral meeting and called on the Bureau to continue to provide assistance.

3.27 **Mr Borjón** praised the commitment of the Bureau towards encouraging an agreement and hoped that discussions would continue.

3.28 The **Chairman** proposed that the Board conclude on § 4.2 of Document RRB21-2/3(Rev.1) as follows:

"In considering § 4.2 of Document RRB21-2/3(Rev.1) and its Addenda 2, 3 and 4 on the harmful interference to broadcasting stations in the VHF/UHF bands between Italy and its neighbouring countries, the Board thanked the Bureau for its efforts in organizing the multilateral coordination meeting between Italy and its

neighbouring countries and for the report on the outcome of this meeting. The Board noted once more with concern the continued lack of progress in resolving cases of harmful interference to the FM sound broadcasting stations of the neighbouring countries of Italy. The Board encouraged the Administration of Italy to:

- take all possible measures to eliminate harmful interference to the FM sound broadcasting stations of its neighbouring countries;
- concentrate on the priority list of FM sound broadcasting stations in order to resolve these instances of harmful interference on a case-by-case basis.

The Board instructed the Bureau to:

- continue providing support to the administrations concerned;
- undertake preparations for convening the next multilateral coordination meeting planned for May/June 2022;
- continue reporting on any progress on this matter as well as on the outcome of the planned multilateral coordination meeting.”

3.29 It was so **agreed**.

### **Harmful interference to analogue broadcasting stations of the Democratic People’s Republic of Korea (§ 4.3 of Document RRB21-2/3(Rev.1))**

3.30 **Mr Ba (Head TSD/TPR)** said that the Bureau had sent the conclusions of the Board’s 86<sup>th</sup> meeting to the Administration of the Republic of Korea, along with the results of the technical and regulatory analysis of the harmful interference and a request for the provision of comments before 14 June – the deadline for receipt of submissions for the current Board meeting. The Director had also sent a *Note Verbale* to the Minister of Science and ICT of the Republic of Korea. Despite the reminder sent on 8 June, the Bureau had received no response at all to its communications from the Administration of the Republic of Korea.

3.31 **Mr Hashimoto** said that, by continuing to fail to respond, the Administration of the Republic of Korea was ignoring the Bureau’s efforts in respect of the technical and regulatory analysis, which was regrettable. Noting the politically sensitive situation of the two countries, he said that the Board should endeavour to learn the observations of both sides before developing an appropriate recommendation.

3.32 **Ms Jeanty** said that the failure of an administration to respond to the Board was very unpleasant. The Board should issue a firm response and indicate which provisions of the Radio Regulations and other instruments were not being followed.

3.33 The **Chairman** said that the failure of an ITU Member State to comply fully with the Constitution and Convention was concerning, and agreed that the Board needed to send a strong message to the Administration of the Republic of Korea. **Mr Azzouz** agreed.

3.34 **Mr Hoan**, recalling the discussion and conclusions on the matter at the Board’s 86<sup>th</sup> meeting, thanked the Bureau for conveying the results of the technical and regulatory analysis to the Administration of the Republic of Korea. The Board should instruct the Bureau to continue its efforts to obtain a response from that administration, which should take all measures to resolve the harmful interference.

3.35 **Mr Mchunu** thanked the Bureau for implementing the Board’s instructions; the lack of response from the Administration of the Republic of Korea was a concern.

3.36 The **Director** said that, where interference occurs between countries involved in an extraordinary geopolitical situation, it was often very difficult to prompt a resolution. However, in such cases, the country at the origin usually acknowledged the Bureau’s communications and provided some form of response. Given the lack of response from the Administration of the Republic of Korea to previous communications from the



Bureau, the Board may wish to instruct the Bureau to send a second *Note Verbale* to the Permanent Mission of the Republic of Korea conveying its concerns.

3.37 **Ms Hasanova** endorsed the views of the Director, as did **Ms Beaumier**, who added that the conclusion should be worded to convey the Board's heightened concern about the failure of the Administration of the Republic of Korea to respond.

3.38 The **Chairman** proposed that the Board conclude on the matter as follows:

"In considering § 4.3 of Document RRB21-2/3(Rev.1) on harmful interference to analogue broadcasting stations of the Democratic People's Republic of Korea, the Board noted with gratitude that the Bureau had carried out the instructions of the Board issued at its 86<sup>th</sup> meeting. The Board expressed its grave concern that the Republic of Korea did not respond to the *Note Verbale* that had been sent to the Permanent Mission of the Republic of Korea, forwarding a letter addressed to the Minister of Science and ICT of the Republic of Korea on this matter, and that this once again confirmed the continued lack of response from the Administration of the Republic of Korea. The Board noted that this lack of response and absence of action from the Administration of the Republic of Korea have led to the assumption that this administration was in direct contravention of RR Nos. **15.2** and **23.3** and No. **197** (Article **45**) of the ITU Constitution.

Consequently, the Board decided to instruct the Bureau to send a second *Note Verbale* to the Permanent Mission of the Republic of Korea, to forward a letter addressed to the Minister of Science and ICT of the Republic of Korea conveying the Board's grave concerns regarding the continued lack of response from the Administration of the Republic of Korea and requesting the Administration of the Republic of Korea to provide its observations and to indicate that the response to this communication is strongly solicited.

The Board continued to strongly encourage the Administration of the Republic of Korea to implement adequate measures to eliminate harmful interference to the television broadcasting stations of the Democratic People's Republic of Korea.

Furthermore, the Board continued to encourage both administrations to cooperate to find a solution to this situation."

3.39 It was so **agreed**.

### **Implementation of Nos. 11.44.1, 11.47, 11.48, 11.49 and 9.38.1, Resolution 49 (Rev.WRC-19) and No. 13.6 of the Radio Regulations (§ 5 of Document RRB21-2/3(Rev.1))**

3.40 The Board **noted** § 5 of Document RRB21-2/3(Rev.1).

### **Council work on cost recovery for satellite filings (§ 6 of Document RRB21-2/3(Rev.1))**

3.41 **Mr Vallet (Chief SSD)** said that the implementation of Decision 482 (Modified 2020) was working well; no specific difficulties had been encountered and more than 99.6 per cent of invoices were paid on time.

3.42 In considering § 6 of Document RRB21-2/3(Rev.1) on cost recovery for satellite filings, the Board **noted** that the Virtual Consultation of Councillors 2020 and 2021 decided to submit the reports on the implementation of Decision 482 for the years 2020 and 2021 for the approval of councillors by correspondence.

### **Review of findings for frequency assignments to non-GSO FSS satellite systems under Resolution 85 (WRC-03) (§ 7 of Document RRB21-2/3(Rev.1))**

3.43 **Mr Vallet (Chief SSD)** said that § 7 of the Director's report presented the Bureau's usual report on the review in question and the work carried out since the Board's 86<sup>th</sup> meeting.

3.44 The Board **noted** § 7 of Document RRB21-2/3(Rev.1) on the review of findings to frequency assignments to non-GSO FSS satellite systems under Resolution **85 (WRC-03)** and expressed its satisfaction on the progress on the implementation of the examination processes and related actions.

**Coordination meeting between the Administrations of the Kingdom of Bahrain and the Islamic Republic of Iran (§ 8 of Document RRB21-2/3(Rev.1); RRB21-2/DELAYED/2 and DELAYED/4)**

3.45 **Mr Vassiliev (Chief TSD)** drew attention to § 8 of the Director's report, which reported on the recent coordination meeting between the Administrations of the Kingdom of Bahrain and the Islamic Republic of Iran. The meeting had concluded without the successful coordination of any of the 16 FM stations of the Kingdom of Bahrain, owing to a difference of opinion on the criteria and methodology to be used for coordination, including as to whether interference calculations should be based on the reference usable field strength (EU Ref) or current usable field strength (EU Current).

3.46 The Islamic Republic of Iran had since submitted its proposed methodology, as contained in Document RRB21-2/DELAYED/2: namely, the 0.5 dB interference increase criterion should be calculated based on EU Ref, excluding Iranian interference contributors and not taking polarization discrimination into account. Furthermore, it requested the application of a field strength threshold at the border of the area, according to the mechanism provided for in the subregional agreement of 2015, in order to take into account future service development. It also requested that successfully coordinated assignments of the Kingdom of Bahrain should not claim protection from recorded Iranian assignments. The Islamic Republic of Iran might, however, relax those criteria if a multilateral coordination meeting of Gulf countries could be organized.

3.47 The Kingdom of Bahrain had submitted its response to those proposals in Document RRB21-2/DELAYED/4. It considered that EU Current should be used as the basis for calculating the interference increase and that polarization discrimination and the interference impact of Iranian stations should be considered to ensure the most accurate calculation of the interference caused by its assignments to those of the Islamic Republic of Iran. The 2015 subregional mechanism should not be applied as the agreement had not been fully implemented by the contracting parties.

3.48 Both administrations had expressed their readiness to continue bilateral discussions and neither had asked the Board to take any action at that time, though the Kingdom of Bahrain might resubmit the case for the Board's consideration if no progress was achieved at the subsequent coordination meeting, which was scheduled for Q3 2021.

3.49 Responding to a question from the **Chairman, Mr Vassiliev (Chief TSD)** said that the methodology for the identification of affected administrations and the estimation of interference implied that all contributing stations recorded in the Plan should be taken into account. Stations were never excluded from the calculation of interference impact on recorded stations and doing so would contradict § 4.3.7.1 of the Agreement and threaten the integrity of the Plan.

3.50 In addition, it was important to draw the attention of both administrations to the fact that, under § 4.6.2 of the GE84 Regional Agreement, all assignments recorded in the plan had equal status and full rights to claim protection from harmful interference. Therefore, the condition proposed by the Islamic Republic of Iran that the Bahraini assignments, once recorded, could not claim protection from Iranian recorded assignments ran counter to that principle. Of course, the administrations could bilaterally agree to that condition, but there was no way to record that condition in the Plan and the Bureau would not take it into account if there was a report of interference.

3.51 The **Chairman** expressed appreciation for the Bureau's efforts in facilitating the coordination meeting between the two administrations, even though the desired outcomes had not been achieved. He noted that the process remained ongoing and a further coordination meeting had been planned for Q3 2021. He also noted that the Islamic Republic of Iran had mentioned the possibility of relaxing its coordination

criteria if a multilateral meeting of Gulf countries could be organized, which might be helpful given the proximity of assignments in the region, as a bilateral solution between the Kingdom of Bahrain and the Islamic Republic of Iran might ultimately affect other parties.

3.52 **Mr Alamri** recalled that, at its 84th meeting, the Board had stressed the importance of applying technical solutions to resolve the case on a technical level, yet the Islamic Republic of Iran in its proposed methodology requesting to exclude Iranian interference contributors and not taking polarization discrimination into account during the compatibility analysis seemed to be removing technical mitigation measures from the calculation of the interference impact of the 16 FM stations of the Kingdom of Bahrain. Those mitigation measures should be applied, and the Iranian interference contributors should be involved to reflect the real situation during the interference analysis.

3.53 In reality, the filings of the Administration of the Kingdom of Bahrain for the 16 FM stations fulfilled all regulatory requirements to be recorded in the GE84 Plan according to the GE84 Plan modification procedure. He suggested that the Board might reconsider the case in the absence of any technical-based solutions by instructing the Bureau to apply the provisions concerning modifications to the Plan, as contained in the GE84 Regional Agreement.

3.54 A multilateral coordination meeting would not be helpful in resolving the matter at hand. The summary record of the recent coordination meeting showed that each party continued to raise additional assignments for coordination that would inevitably require subsequent coordination with other administrations, which might then raise their own assignments for coordination. Both administrations should focus on resolving the core issue submitted to the Board for a decision, namely the coordination of the 16 FM stations of the Kingdom of Bahrain, based on the application of technical measures.

3.55 Lastly, he asked the Bureau to present the outcomes of its technical analysis to the Board to show the interference impact of the 16 FM stations on the assignments of the Iranian Administration.

3.56 **Mr Vassiliev (Chief TSD)** said that the Islamic Republic of Iran was seeking a multilateral coordination meeting as it had new assignments that it would like to bring into use. This Administration had mentioned the possibility of relaxing its coordination criteria vis-à-vis the Bahraini assignments, but the usual practice of any coordination meeting was that an administration would agree to something on the basis it received something in return. The Islamic Republic of Iran was seeking the coordination of its other assignments, but that would inevitably require the agreement of administrations of other Arab countries of this sub-region. While recognizing the arguments raised by Mr Alamri, he explained that a multilateral meeting might be a good way of breaking the impasse in the case of the 16 FM stations of the Kingdom of Bahrain.

3.57 With respect to the Bureau's technical analysis, he drew attention to the embedded Excel file in Document RRB21-2/DELAYED/2 containing the Bureau's calculations, including calculation results based on Recommendation ITU\_R P.1812 (that considered data, as mentioned in Section 2.1.3.4 of Chapter 2 of Annex 2 to the Agreement) and went on to describe the outcomes of the compatibility analysis using the station Fasht Al Jarim as an example. The results of the EU Increase calculations were given using the two different methodologies: one where EU Ref had been subtracted from EU Proposed; and the other where EU Current had been subtracted. The EU Ref value represented the usable field strength calculated by the Bureau when assignments entered the Plan in order to define the coverage area. The value was not modified over time and did not, therefore, take into account the interference impact of assignments which had since entered the Plan; thus, using EU Ref to calculate the interference impact of new assignments tended to give a distorted picture of the impact of newly notified stations. EU Current, however, represented the current usable field strength of the assignment and took into account the contribution of more recent assignments and therefore gave a more accurate picture of a notified assignment's interference impact.

3.58 The file also contained calculations produced using terrain elevation data, which had shown that terrain considerably reduced real interference impact in over 70 per cent of cases. The results of those calculations had been presented to both administrations but had not been accepted by the Administration

of the Islamic Republic of Iran, which preferred to focus on what methodology and criteria should be used to calculate the 0.5 dB interference increase criterion.

3.59 Following the request of Board members, **Ms Ghazi (Head TSD/BCD)** presented a document describing the calculations performed using the Bureau's GE84 compatibility analysis software to determine the potentially affected assignments. The Bureau had drafted the document during the bilateral meeting between the two countries after the Islamic Republic of Iran had asked for clarification of the calculation methodologies and the term "Current usable field strength." The definitions used in the document had been taken from the GE84 Regional Agreement. The examination calculations according to § 4.3.7.1 of GE84 Agreement were based on the EU Ref value to determine the 0.5 dB EU increase, while the relaxed examination calculations proposed by the Bureau, implemented in the GE84 software and used since the 1990s to assist administrations in the coordination process, produced calculations based on the EU Current value and, 10 dB polarization discrimination was taken into account.

3.60 **Mr Alamri** said that using EU Current in the calculations was more practical and reflected the real situation for the purposes of a compatibility analysis, and asked the Bureau how many of the Bahraini assignments fell under the 0.5 dB increase using that methodology.

3.61 **Mr Vassiliev (Chief TSD)** said that 15 of the 16 stations would meet the 0.5 dB increase criterion if EU Current was used to calculate EU Increase. If EU Ref was used, none of the assignments would fall under the threshold.

3.62 Responding to a question from the **Chairman, Ms Ghazi (Head TSD/BCD)** said that EU Current had been used in calculations for a number of years in the compatibility analysis software to assist administrations during the coordination process. The principle had been used very successfully as part of the GE84 Plan optimization efforts in Africa, with neighbouring countries, including in Europe and the Arab States region, having consented to its use as part of that process.

3.63 The **Chairman** suggested that the Board call on the administrations to continue the coordination process and, by their next meeting, to agree on the technical criteria to be used to determine affected assignments, with the assistance of the Bureau.

3.64 **Ms Hasanova** asked if it was possible to instruct the Bureau to record the Bahraini assignments in the MIFR under No. **11.31.1**.

3.65 **Ms Ghazi (Head TSD/BCD)** said that an assignment could be recorded under No. **11.31.1** only if the frequency band was subject to the No. **9.21** seeking agreement procedure. The assignments of the Kingdom of Bahrain would have to satisfy other provisions, in particular No. **11.34**. Furthermore, if they were ultimately recorded in the MIFR under that provision, it would be for information only and they could not therefore claim protection from recorded assignments or cause any harmful interference thereto.

3.66 The **Chairman** noted that the Board could make such an instruction to the Bureau, but, for the assignments to be recorded in the MIFR, they needed to be in compliance with the GE84 Regional Agreement, which clearly stated that EU Ref should be used to calculate EU Increase.

3.67 **Ms Beaumier** asked why the GE84 Regional Agreement had not envisaged the updating of EU Ref calculations as further assignments were added to the Plan.

3.68 The **Chairman** suggested that the EU Ref values were not updated in order to guarantee a specific service area for recorded assignments.

3.69 **Ms Ghazi (Head TSD/BCD)** said that there might be many reasons, including insufficient technology during the 1980s to anticipate calculation and recalculation after the release of every special section. Nevertheless, while the procedure for assignments to enter in the plan was established based on the EU Ref value, which remained fixed, the agreement provided for flexibility and recommended the use of other means, such as bilateral discussions and use of terrain elevation.

3.70 **Ms Jeanty** suggested that in its conclusion the Board highlight the calculation method recommended by the Bureau and express its view on it.

3.71 The **Chairman** suggested that the Board note the successful use of the method in other regions and recommend that the administrations arrive at an agreement as soon as possible on the technical criteria and methodologies. While it would be difficult to prescribe a methodology for the calculation of the proposed useable field strength, he suggested that the Board instead call on the administrations to use the most modern, up-to-date methodologies to ensure optimal compatibility and recommend certain technical methodologies based on its own experience. He asked the Bureau to make recommendations in that regard.

3.72 **Mr Vassiliev (Chief TSD)** said that, while the coordination criteria and methodology were a bilateral issue for the two administrations, the Board might offer guidance or recommendations in order to bring the two countries' positions closer together, in particular for the consideration of polarization discrimination. The notified and recorded stations used different polarizations and the Bureau was of the view that that should be taken into account.

3.73 **Ms Jeanty** noted that, according to the GE84 calculation document, polarization discrimination was not taken into account in official examination calculations, but that it could be in specific cases with the agreement of affected administrations. Consequently, she asked if and how the consideration of polarization discrimination had evolved since the establishment of the Agreement.

3.74 **Ms Ghazi (Head TSD/BCD)** said that polarization discrimination was taken into account during coordination when administrations agreed, as interference was less when a recorded station had, for example, a horizontal polarization and the notified station a vertical one. In such cases, the Bureau applied a reduction of 10 dB when calculating interference. While not a requirement, the GE84 Agreement did advise administrations to take polarization discrimination and terrain elevation data into account during the coordination process when possible. Consequently, the GE84 compatibility analysis software allowed for it but did not automatically take it into account.

3.75 The **Chairman** considered that taking polarization discrimination into account gave administrations a clearer picture of the interference impact of the notified assignments and suggested that the Board recommend to the administrations to consider it in their coordination process.

3.76 **Mr Vassiliev (Chief TSD)** said that the Bureau, on further study, did not advise recommending the consideration of polarization discrimination in the case of the Bahraini FM stations. The planning process for the GE84 Regional Agreement had been mainly based on antennas installed on rooftops with a clear vertical or horizontal polarization, but even by the end of that process transistor-based receivers, without a clear vertical or horizontal polarization, had started to appear. Nowadays, many transceivers were installed in cars or mobile devices and similarly had no clear vertical or horizontal polarization. Thus, the Bureau preferred not to recommend the consideration of polarization discrimination, even though the notified stations of the Kingdom of Bahrain and the recorded assignments of the Islamic Republic of Iran used orthogonal vertical and horizontal polarization.

3.77 **Ms Beaumier** suggested that the Board recommend that the administrations take polarization discrimination into account "as appropriate" if there were instances where it would still be relevant, depending on the type of station and transceiver being used.

3.78 **Mr Vassiliev (Chief TSD)** said that the administrations could take it into account, as provided for in the GE84 Regional Agreement, but that it was ultimately a bilateral issue. If the Bureau was informed of an agreement to take it into consideration, it would also do so in its calculations. It had also been used in the GE84 Plan optimization efforts in Africa, based on the agreement of participating and neighbouring countries. In the case of the Kingdom of Bahrain and the Islamic Republic of Iran, however, current transceivers did not necessarily have clear vertical or horizontal polarization and the Bureau preferred recommendations adapted to the reality of the situation affecting the interference impact of the notified assignments. Taking terrain

elevation data into account, for example, should be recommended, given the outcomes of the Bureau's calculations.

3.79 Responding to a question from **Mr Alamri, Mr Vassiliev (Chief TSD)** said that 15 of the 16 notified assignments of the Kingdom of Bahrain would fall under the 0.5 dB increase criterion if terrain elevation data were taken into account and polarization was not. The station ISA TOWN 96.5 MHz slightly exceeded the threshold with a proposed increase of 0.63 dB.

3.80 The **Chairman** proposed that the Board conclude on § 8 of Document RRB21-2/3(Rev.1) and Documents RRB21-2/DELAYED/2 and RRB21-2/DELAYED/4 as follows:

"The Board considered in detail § 8 of Document RRB21-2/3(Rev.1), and considered Documents RRB21-2/DELAYED/2 and RRB21-2/DELAYED/4 for information, concerning the bilateral meeting for the coordination of 16 FM sound broadcasting frequency assignments of the Administration of the Kingdom of Bahrain with the Administration of the Islamic Republic of Iran under the GE84 Plan modification procedure. The Board thanked the Bureau for reporting on and organizing the bilateral coordination meeting between the two administrations. While recognizing the right of the administrations to agree on coordination methods and parameters, the Board highlighted the following aspects:

- The proposed exclusion of frequency assignments from the Administration of the Islamic Republic of Iran from the calculations of the reference usable field strength was not in conformity with § 4.3.7.1 of the GE84 Agreement. The general application of such an approach would negatively impact the integrity of the GE84 Plan;
- In accordance with § 4.6.2, all assignments recorded in the GE84 Plan had equal status. The conditions mutually agreed between the administrations, such as not to claim protection from the recorded frequency assignments of the Islamic Republic of Iran, could not be taken into account in the application of RR Article 15 in the case of harmful interference. The Board further noted that the conditions of the bilateral agreement were not considered in the application of the procedures of the Radio Regulations.

The Board also encouraged both administrations to take into consideration terrain elevation data in the calculation of predicted field strengths, as mentioned in § 4.3.7.1 of Article 4, as well as in § 2.1.3.4 of Chapter 2 of the GE84 Agreement, and which was in line with the WRC-19 decision on this matter. The Board also noted that many bilateral and multilateral coordination discussions were based on this principle. The Board instructed the Bureau to continue to provide assistance to the administrations in their coordination efforts, to organize the next bilateral coordination meeting and to report any progress on this matter to future meetings of the Board."

3.81 It was so **agreed**.

### **Possible updates to the Rules of Procedure (§ 9 of Document RRB21-2/3(Rev.1))**

3.82 **Mr Vallet (Chief SSD)** said that § 9.1 of the Director's report set out possible updates to the Rules of Procedure concerning Nos. **5.418C, 5.485, 11.31**, Table 9.11A-1, Annex 2 to Appendix 4 and Resolution **49 (Rev.WRC-19)** in the light of decisions by WRC-19. The corresponding draft rules of procedure had already been discussed and agreed by correspondence after the last Board meeting and would be circulated in a CCRR to be issued after the current meeting. § 9.2 presented an editorial correction to § 2.3 of the Rules of Procedure on No. **11.32**, which referred to a provision numbered according to the Final Acts of WRC-97 instead of the official edition of the Radio Regulations. If the Board agreed, it would be included in a CR containing approved modified Rules of Procedure. § 9.3 considered a possible new rule of procedure on the simultaneous bringing into use of multiple GSO satellite networks with a single satellite. The Bureau had reported the practice it followed to WRC-15 in the Director's report to the conference, in § 3.2.4.1 of the Director's report to WRC-15 (Document 4(Add.2)(Rev.1)) but the conference had not reached any conclusion on that section of the Director's report, and it had simply been noted. The Bureau had not encountered any

difficulties in continuing to apply the procedure, from which it could not deviate without strong justification. However, as the procedure was only set out in the Director's report to WRC-15 and not in any other documents, it was difficult for administrations to locate and consult, and the Bureau regularly received questions about the conditions to simultaneously bring into use multiple GSO satellite networks with a single satellite. Indeed, the Board had considered the issue during its 85<sup>th</sup> meeting in conjunction with a submission by the Administration of the United Arab Emirates. Noting No. **13.12Ab**) and the fact that the procedure had a potentially huge impact on the compliance of administrations with bringing-into-use provisions, he said that the Board might wish to consider including the practice in a rule of procedure.

3.83 **Mr Henri**, thanking the Bureau for raising the issues in § 9 of the Director's report, said that the editorial correction in § 9.2 would not present any difficulty. Referring to § 9.3, he said that when the Board had discussed the submission from the United Arab Emirates at its 85<sup>th</sup> meeting (Document RRB20-3/10), there had been a general understanding that consideration might have to be given to devoting a rule of procedure on the practice followed by the Bureau with respect to the simultaneous bringing into use of multiple GSO satellite networks with a single satellite. He would be favourable towards such an approach and suggested that the matter be considered in the Working Group on the Rules of Procedure.

3.84 **Ms Beaumier** thanked the Bureau for raising the issues in § 9.2 and § 9.3 and endorsed the views of Mr Henri. Recalling the Board's discussions at its 85<sup>th</sup> meeting and its conclusion that it would be premature to develop a draft rule of procedure to reflect the Bureau's internal practice, she said that, although the Board had been mindful of No. **13.12Ab**), it had observed that WRC-15 had only taken note of § 3.2.4.1 of the Director's report to WRC-15 (Document 4(Add.2)(Rev.1)) and had not given any specific instructions in respect of the practice to the Bureau or Board. In the light of Mr Vallet's explanations, however, she would support considering the development of a draft rule of procedure.

3.85 **Mr Hashimoto** said that he had no difficulty with the issues in § 9.1 and § 9.2. He agreed that consideration should be given to including the practice concerning station keeping of space stations in the Rules of Procedure and suggested that the matter should be discussed in the working group. **Mr Hoan** shared those views.

3.86 **Mr Alamri, Ms Hasanova, Ms Jeanty, Mr Talib, Mr Mchunu and Mr Azzouz** agreed that consideration should be given to incorporating the Bureau's practice set out in § 9.3 in a new rule of procedure.

3.87 In reply to a question from **the Chairman, Mr Vallet (Chief SSD)** said that it would not be possible for three different administrations to bring into use three different satellite networks within 0.5° of a particular orbital position because they usually had to be separated by 0.2°. A tolerance of ±0.5° would, though, yield an orbital arc around a notified position of 1° and three administrations could therefore organize themselves around one position. However, limitations existed, and the Board's decision at its 85<sup>th</sup> meeting had not precluded it from considering exceptions on a case-by-case basis. Inclusion of the Bureau's practice in a rule of procedure would facilitate the Board's decision-making.

3.88 The **Chairman** proposed that the Board conclude on the matter as follows:

"In considering § 9 of Document RRB21-2/3(Rev.1) on possible updates to the Rules of Procedure, the Board thanked the Bureau for bringing these cases to the attention of the Board. The Board decided that draft rules of procedure and editorial revisions of rules of procedure would be required as proposed by the Bureau as a result of decisions of WRC-19 or based on the general practice of the Bureau. Consequently, the Board instructed the Bureau to prepare the draft rules of procedure and to circulate them to the administrations for comments".

3.89 It was so **agreed**.

### **Progress of the work on Resolution 559 (WRC-19) submissions (§ 10 of Document RRB21-2/3(Rev.1))**

3.90 **Mr Vallet (Chief SSD)** introduced § 10 of the Director's report on the progress of work on the implementation of Resolution **559 (WRC-19)**. After the publication of the Resolution 559 submissions, notifying administrations had started sending coordination proposals to affected administrations and the Bureau had begun receiving copies of agreements in response. The Bureau had identified four Part B submissions received after 21 January 2020 and associated with Part A submissions received before 22 May 2020 that might affect the equivalent downlink protection margin (EPM). Its preliminary analysis showed that three of the submissions would not degrade the EPM of any Resolution 559 submission, therefore the Bureau had taken no further action. A detailed analysis of the NEW DAWN BSS-5 Part B submission indicated that it would degrade the EPM of one Resolution 559 submission. Consequently, the Bureau had proposed measures to reduce that degradation to the Administration of Papua New Guinea and had already received a positive reply to eliminate that impact. In addition, Part A submissions for six satellite networks had been cancelled because they had not been converted into Part B submissions. Overall, the implementation of Resolution 559 had been very positive and administrations were cooperating well.

3.91 The **Chairman** said that it was positive that administrations were cooperating and reaching compromises to facilitate the implementation of Resolution **559 (WRC-19)** and thanked the Bureau for its efforts in that regard.

3.92 **Mr Hoan, Mr Mchunu, Mr Hashimoto, Mr Alamri, Mr Azzouz, Ms Beaumier, Mr Borjón and Ms Hasanova** expressed appreciation for the efforts of the Bureau and administrations in the implementation of Resolution **559 (WRC-19)** and noted the positive report.

3.93 **Ms Beaumier** added that it was encouraging to see the risk of EPM degradation caused by Part B submissions being further reduced as a result of cancelled filings or mitigation measures taken by administrations.

3.94 The **Chairman** proposed that the Board conclude on § 10 of Document RRB21-2/3(Rev.1) as follows:

"In considering § 10 of Document RRB21-2/3(Rev.1) on the progress of the work on Resolution **559 (WRC-19)** submissions, the Board noted with satisfaction the goodwill that administrations had exercised in protecting the submissions under Resolution **559 (WRC-19)** and thanked the Bureau for the actions taken in implementing the decisions of the Board. The Board instructed the Bureau to continue to assist administrations in mitigating interference that would degrade the EPM values of the submissions under Resolution **559 (WRC-19)**."

3.95 It was so **agreed**.

### **Request for the extension of the period of operation of the DBL-G3-19.2E satellite network (§ 11 of Document RRB21-2/3(Rev.1))**

3.96 **Mr Vallet (Chief SSD)** introduced § 11 of the Director's report on the request by the Administration of Luxembourg for the extension of the period of operation of the DBL-G3-19.2E satellite network, which had been received on 23 March 2021, after the regulatory deadline of 10 January 2021. Following the practice established at the 78<sup>th</sup> meeting of the Board for requests to extend the period of operation of satellite networks received after the deadline indicated in § 4.1.24 of Appendices **30** and **30A**, the Bureau had accepted the late request for extension.

3.97 The **Chairman, Ms Beaumier, Mr Borjón, Mr Azzouz and Mr Hashimoto** considered that the Bureau had acted appropriately in granting the extension, noting past practice and the relatively short delay in the submission of the request.

3.98 The **Chairman** proposed that the Board conclude on § 11 of Document RRB21-2/3(Rev.1) as follows:



“The Board considered § 11 of Document RRB21-2/3(Rev.1) on the request for the extension of the period of operation of the DBL-G3-19.2E satellite network from the Administration of Luxembourg. The Board noted that the Bureau had acted correctly. The Board further noted the short delay by the administration in submitting the requested information and the continued operation of the satellite network with the same characteristics.”

3.99 It was so **agreed**.

### **Request for definitive recording of frequency assignments of the ALGBSAT-24.8W satellite network in the Regions 1 and 3 List of Appendices 30 and 30A (§ 12 of Document RRB21-2/3(Rev.1))**

3.100 **Mr Vallet (Chief SSD)** introduced § 12 of the Director’s report on a request from the Administration of Algeria to change the recording status of the frequency assignments to the ALGBSAT-24.8W satellite network from provisional to definitive since the assignments had been in use, together with the assignments which had been the basis for the disagreement, for at least four months without any complaint of harmful interference in accordance with § 4.1.18 of Appendices **30** and **30A (Rev.WRC-19)**.

3.101 Based on technical reasons provided by the administrations concerned during consultations with the Bureau in accordance with § 4.1.18*bis* of Appendices **30** and **30A**, the Bureau had decided not to update the equivalent protection margin of the frequency assignments which had been the basis for the disagreement but to change the recording status from provisional to definitive.

3.102 The case was reported to the Board for information since it was the first occurrence of the application of § 4.1.18*bis*, which had been the subject of much and lengthy debate during WRC-19 but its first application had been smooth and straightforward.

3.103 **Ms Beaumier, Mr Azzouz and Mr Hashimoto** welcomed the report on the application of § 4.1.18*bis*, particularly given the delicacy of the solution arrived at after so much discussion at WRC-19, and approved of the measures taken by the Bureau in that regard.

3.104 The Chairman proposed that the Board conclude on § 12 of Document RRB21-2/3(Rev.1) as follows:

“In considering § 12 of Document RRB21-2/3(Rev.1) on a request for the definitive recording of frequency assignments of the ALGBSAT-24.8W satellite network in the Regions 1 and 3 List of Appendices **30** and **30A**, the Board noted that the Bureau had acted correctly and further noted with satisfaction that the modification of § 4.1.18*bis* of Appendices **30** and **30A** decided by WRC-19, was not raising difficulties in its implementation. The Board thanked the Bureau for bringing this case to its attention.”

3.105 It was so **agreed**.

### **Implementation of Resolution 35 (WRC-19) (§ 13 of Document RRB21-2/3(Rev.1))**

3.106 **Mr Vallet (Chief SSD)** introduced § 13 of the Director’s report, which gave an overview of the implementation of Resolution **35 (WRC-19)**. It detailed the Bureau’s development of software and databases and creation of a dedicated special section and provided information on the first filings that had successfully implemented the provisions of Resolution **35 (WRC-19)**, which had been adopted to establish a milestone-based approach for the implementation of frequency assignments to space stations in a non-GSO satellite system in specific frequency bands and services.

3.107 A new online application had been released on 18 January 2021 allowing the information listed in Annex 1 of Resolution **35 (WRC-19)** to be captured and submitted as part of the e-Submission of Satellite Network Filings system either online or via an XML upload. A screenshot of the capture window was given under § 13.1.1. In line with the resolution, the Bureau then published that information as received on the dedicated webpage. A screenshot showing how that information was displayed was given under § 13.1.2. In addition, in the BR IFIC, the Bureau distributed a modified SRS database indicating whether notified

assignments were subject to Resolution **35 (WRC-19)**, along with their milestone status, and a Resolution **35** database containing all satellite launch and deployment information. Moreover, a dedicated special section would be published in the BR IFIC and on the Bureau's website, therefore also easily accessible to administrations without direct access to the BR IFIC. A screenshot under § 13.2 showed the information contained in the special section.

3.108 At the time of the writing of the report, the Bureau had published six submissions under Resolution **35 (WRC-19)**, as shown under § 13.3. Three of the systems had completed their deployment and therefore application of Resolution **35 (WRC-19)**, as shown by their completion of Milestone 3. The three other filings published were for systems which had begun deployment. It also listed the filings received but not yet processed. Just prior to the meeting, the Bureau had been notified that a further system had completed its first milestone.

3.109 Overall, the Bureau had not experienced difficulties in the application of Resolution **35 (WRC-19)** but would inform the Board should any arise in the future.

3.110 **Ms Jeanty, Ms Hasanova, Mr Azzouz, Mr Alamri, Mr Borjón, Mr Talib, Ms Beaumier, Mr Hoan, Mr Mchunu and Mr Hashimoto** thanked the Bureau for the informative report and its activities in the application of the resolution.

3.111 The **Chairman** proposed that the Board conclude on § 13 of Document RRB21-2/3(Rev.1) as follows:

"The Board considered in detail § 13 of Document RRB21-2/3(Rev.1) on the implementation of Resolution **35 (WRC-19)** and expressed its satisfaction with the information provided and with the actions taken by the Bureau, which included the establishment of the online capture and submission functionality, the development of software and a new special section, and also the modification of the SRS database."

3.112 It was so **agreed**.

### **Activities between the Administrations of France and Greece (Addendum 5 to Document RRB21-2/3(Rev.1))**

3.113 **Mr Vallet (Chief SSD)** introduced Addendum 5 to the Director's report on coordination activities between the Administrations of France and Greece with respect to the ATHENA-FIDUS-38E satellite network at 38°E and HELLAS-SAT-2G satellite network at 39°E. At their most recent meeting of 22–24 June 2021, the parties had further elaborated on their coordination proposals and continued their discussions, completing consideration of a number of items and converging on power level values for a number of other items. For some items, the power level values had been agreed but the spectrum requirements still needed to be discussed. Other items remained more open. In view of the progress, both parties had agreed to continue their internal assessments of the other party's proposals and technical conditions, to hold a further coordination meeting, with the participation of the Bureau, and to provide comments by correspondence on the revised technical conditions at least two weeks prior to the next meeting. That the parties could not provide a date for the next meeting was not due to a lack of goodwill, rather a reflection of their preference for a physical meeting during uncertain times. They would continue to monitor the COVID-19 situation and ideally find a convenient time to meet in person. If the situation did not allow, the meeting would be held by videoconference. Both administrations wanted to achieve a mutually acceptable outcome and a spirit of cooperation reigned, but the technical matters were quite complex and would be most easily resolved at an in-person meeting.

3.114 **Mr Hashimoto, Ms Jeanty, Mr Mchunu, Mr Henri, Mr Alamri, Mr Hoan, Ms Hasanova, Mr Azzouz and Mr Talib** thanked the Bureau for its report and efforts during the process and the two administrations for their cooperation and goodwill in seeking the successful coordination of the satellite networks.

3.115 The **Chairman** proposed that the Board conclude on Addendum 5 to Document RRB20-2/3(Rev.1) as follows:

“In considering Addendum 5 of Document RRB21-2/3(Rev.1) on the report on the coordination activities between the Administrations of France and Greece concerning the ATHENA-FIDUS-38E satellite network at 38°E and the HELLAS-SAT-2G satellite network at 39°E, the Board noted with satisfaction the positive progress achieved thus far. The Board thanked the Bureau for the report and for its actions in assisting the two administrations. The Board encouraged the Administrations of France and Greece to continue their coordination efforts in goodwill to reach a successful outcome and instructed the Bureau to continue to assist the two administrations in these efforts and to report on any progress to the Board.”

3.116 It was so **agreed**.

### **Statistics on Resolution 40 (Rev.WRC-19) (Addendum 6 to Document RRB21-2/3(Rev.1))**

3.117 **Mr Vallet (Chief SSD)** introduced Addendum 6 to the Director’s report, informing the Board that the Director had submitted to the July 2021 meeting of ITU-R Working Party 4A statistics contained in Document 4A/281, which the Bureau had derived from the submissions of Resolution **40 (Rev.WRC-19)** information. Document 4A/281 was attached to Addendum 6 for the Board’s information.

3.118 Resolution **40 (Rev.WRC-19)** had been adopted to prevent the practice of “satellite hopping,” whereby a single space station was used to bring more than one frequency assignment to GSO satellite networks into use at different orbital locations within a three-year period. The statistics showed that, of the 634 submissions received under Resolution **40 (Rev.WRC-19)** between its entry into force on 28 November 2015 and 9 June 2021, 450 submissions (70.98 per cent) had been brought into or back into use by a satellite not previously used for that purpose at a different orbital position within the preceding three years. A further 109 submissions (17.19 per cent) had been brought into or back into use by a satellite used only once during that time. Therefore, the statistics showed that Resolution **40 (Rev.WRC-19)** was having the desired effect and that instances of satellite hopping were rare. There were, nevertheless, isolated cases of extreme satellite hopping where a single satellite was used to bring into or back into use assignments at seven, eight and nine different orbital positions.

3.119 The Bureau had also informed Working Party 4A of a recent case of “satellite hopping without moving,” whereby a single satellite located at orbital position “A” had been used to bring into use assignments to satellite networks notified at orbital position “B” less than 0.5° away from position “A.” Those networks had been suspended after several years of operation and the satellite, still physically located at position “A,” had then been used to bring into use frequency assignments to satellite networks at orbital position “C,” still less than 0.5° away from the satellite’s physical position. Given that the satellite networks at position “B” had been suspended, the case complied with the practice described under § 3.2.4.1 of the Director’s report to WRC-15 (Document 4(Add.2)(Rev.1)), provisions of the Radio Regulations and the Rules of Procedure, and the bringing into use of the frequency assignments at orbital position “C” had consequently been accepted. The case showed, however, that notifying administrations could keep networks at two positions with a single physical satellite at a third position by suspending the networks in sequence every three years and, therefore, it possibly invalidated the cost-related assumption that had led to the adoption of Resolution **40 (Rev.WRC-19)**.

3.120 **Ms Beaumier** and **Mr Hashimoto** thanked the Bureau for the report and the statistics on the implementation of Resolution **40 (Rev.WRC-19)**.

3.121 Regarding the case of “satellite hopping without moving,” **Ms Beaumier** said that the practice clearly ran contrary to the principles of the Union’s instruments in relation to the rational, efficient and economical use of, and equitable access to, frequency and orbital resources. The case would merit inclusion in the report on the implementation of Resolution **80 (Rev.WRC-07)** to WRC-23. She suggested that the Board discuss the matter further at a later date, after Working Party 4A had met to discuss the report.

3.122 The **Chairman** proposed that the Board conclude on Addendum 6 to Document RRB20-2/3(Rev.1) as follows:

“The Board considered Addendum 6 of Document RRB21-2/3(Rev.1) on the statistics regarding the data submitted under Resolution **40 (Rev.WRC-19)** to ITU-R Working Party 4A. The Board thanked the Bureau for the information provided and decided to include this issue in its Report on Resolution **80 (Rev.WRC-07)** to WRC-23.”

3.123 It was so **agreed**.

### **Report from the Bureau on processing, notification and bringing into use of non-geostationary satellite systems (Addendum 9 to Document RRB21-2/3(Rev.1))**

3.124 **Mr Vallet (Chief SSD)** introduced Addendum 9 to Document RRB21-2/3(Rev.1), which reported on various issues relating to the processing, notification and bringing into use of non-GSO satellite systems. Many issues, although not new, were gaining importance as the seven-year regulatory deadline of a number of non-GSO satellite systems was approaching.

### **Processing of modifications to existing coordination requests (§ 1 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.125 **Mr Vallet (Chief SSD)** presented § 1 of Addendum 9 to the Director’s report, which concerned the processing of modifications to existing coordination requests. He noted that the Bureau had recently received a number of modifications to existing coordination requests, which were limited to the addition of one satellite in one orbital plane. In the absence of agreed orbital tolerances, which were currently being studied by Working Party 4A, administrations were being more cautious and adding the exact orbital parameters of the spacecraft to be used for bringing into use the non-GSO satellite system. However, the modifications sometimes introduced a new orbital plane with a new satellite with characteristics that might differ significantly from the rest of the non-GSO system under coordination. Some of the modifications did not create specific difficulties as they contained a request to maintain the date of protection of the original coordination request, provided the necessary information to apply the Rules of Procedure on No. **9.27**, and appeared to be fully in line with the provisions of Article **9** and the associated Rules of Procedure. Others, however, did not contain a request to maintain the date of protection. The notifying administration was aware that a new date of protection would be given to the frequency groups associated with the new orbital plane, and that the date of protection for existing frequency groups associated with previously submitted orbital planes would remain unchanged. As the main intent of the addition was compliance with Nos **11.44C** or **11.44D**, the long-term operation of the non-GSO satellite system would rely on the previously submitted frequency assignments with an early date of protection but the bringing into use of the filing would be based on the orbital characteristics with the late date of protection. Although that practice did not affect the regulatory status of the main set of frequency assignments of the system, it did raise the question of the integrity of the non-GSO satellite system in terms of interference potential or sensitivity with respect to other satellite networks and systems, particularly where the satellite system was subject to epfd limits contained in Article **22**. That question might also arise in connection with coordination under No. **9.7B** triggered by the epfd threshold, since it was not clear whether the increased coordination requirements should be applicable to the new frequency assignments only or to the entire system. It also raised the question of whether a spacecraft with the capability of transmitting or receiving the frequency assignments described in the modification was complying with the requirements of Nos. **11.44C** and **11.44D** for the other groups of frequency assignments, and was directly related to the efficient use of the orbit and spectrum resources. The Bureau would appreciate the guidance of the Board on the practice.

3.126 **Mr Henri** asked the Bureau to confirm his understanding that, when administrations submitted modifications to existing coordination requests in the manner outlined in § 1 of Addendum 9 they were not contravening the Radio Regulations. There might be specific cases where the Bureau considered that the practice was being abused, and he asked if the possibility of bringing into use any non-GSO satellite system with any kind of non-GSO satellite, as mentioned at the end of § 1 of Addendum 9, had already occurred.

3.127 **Mr Vallet (Chief SSD)** said that conformity with the Radio Regulations depended on the additional requests from administrations. For example, if an administration requested the Bureau to examine the addition separately with regard to compliance with Article **22**, it would not be in conformity with the Radio Regulations because the epfd limits set out in that article were per system. Each time an addition to a non-GSO system was made, therefore, the epfd limits for the entire system, i.e. the initial submission and modification, would have to be checked. The situation was slightly less clear with respect to No. **9.7B**. Under that provision, epfd limits for the entire system should also be examined, but the concept of the date of protection of various groups could make that difficult. Furthermore, some of the modifications were actually adding a sub-constellation into the system, meaning that two constellations or systems were co-existing in one filing. While that was not forbidden, it did raise questions in terms of compliance with the requirements of Nos. **11.44C** and **11.44D**. The Bureau had already received cases where the modification had been very similar to the initial filing and intended to avoid any dispute about tolerances, and they had not caused concern. It had also received some modifications where the addition for the plane was substantially different to the original submission, and others where the orbital altitude would exceed the tolerances discussed in Working Party 4A. One example was a low-Earth orbit satellite being used to bring into use a highly-elliptic orbit system (HEO).

3.128 **Ms Beaumier** asked if the practice was more common in some space services than others. Although the potential for abuse did exist, it might be understandable in certain cases for administrations to submit such modifications to avoid any challenge on tolerances. She asked whether the Bureau expected the issue to be discussed further in Working Party 4A, addressed in a draft new rule of procedure, included in the Board's report on Resolution **80 (Rev.WRC-07)** to WRC-23 or discussed by the conference under agenda item 7.

3.129 The **Chairman** said that the Board's report on Resolution **80 (Rev.WRC-07)** to WRC-23 should note that the practice of introducing a completely different orbital plane raised the issue of spectrum and orbit reservation and the efficient use of frequencies and the non-geostationary orbit.

3.130 **Mr Vallet (Chief SSD)** said that the practice was more common in the fixed-satellite service, for the cases where there was a coordination process in place under Section II of Article **9** and dates of protection between the various coordination requests. It might, however, sometimes also occur in the mobile-satellite service. The Bureau had been clear that it would reject requests for a separate epfd compliance examination for a single addition and would continue to check epfd limits for the entire system, in accordance with Article **22**. That might be more challenging in connection with No. **9.7B**, and consideration might be given in the future to developing a new rule of procedure in that regard. The issue of which frequency assignments would be brought into use by the additional satellite would depend on how the addition was made, i.e. as a new orbital plane or as second system added to the first system. The Bureau intended to address that matter on a case-by-case basis. In the event of doubt, the Bureau would first ask the administration concerned for clarification but might have to bring particular cases to the Board for decision.

3.131 **Mr Henri** said that he agreed with the Bureau's practice of verifying epfd limits for the entire system, which was consistent with the concept of the epfd approach for the protection of GSO FSS and BSS networks from non-GSO FSS systems and also Resolution **76 (Rev.WRC-15)**. The issue of bringing into use might require further discussion if a case beyond No. **11.44C** was to be brought to the attention of the Board. In his view, in the light of discussions at WRC-19, bringing into use a non-GSO system implied one satellite deployed in one notified plane for at least 90 days with the capability to transmit and receive all the frequencies notified and recorded. The practice evoked by the Bureau would relate to certain frequency bands and services under Resolution **35 (WRC-19)** and, while he shared some of the concerns raised, for example, regarding the possibility of a low-Earth orbit satellite bringing into use a HEO system, he said that information on the other satellites of the systems to be launched would be available very early on in the process with the application of Resolution **35 (WRC-19)**. Further discussion might indeed be warranted on whether the practice made efficient use of the spectrum and orbits, particularly in terms of date of protection and coordination procedures.

3.132 **Mr Vallet** said that concerns would arise about the efficient use of the orbit and spectrum resources when the modifications were outside the tolerances accepted by Working Party 4A. He agreed that most cases would probably be confirmed by Resolution **35 (WRC-19)** and noted the Bureau would report any cases not covered by the milestone-based approach outlined in that resolution, should they arise.

3.133 The **Chairman** endorsed the Bureau's approach of verifying efd limits for the entire system. He agreed that the issue of bringing into use should be considered on a case-by-case basis and that the Board should be informed of cases where the Bureau had doubt.

### **Receivability of notification notices submitted in accordance with Resolution 32 (WRC-19) (§ 2.1 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.134 **Mr Vallet (Chief SSD)**, introducing § 2.1 of Addendum 9 to the Director's report, said that the Administration of India had submitted four notifications of non-GSO satellite systems for short-duration missions on 27 April 2021. Recalling that the advance publication information (API) for the four networks had been received on 15 January 2021 and published on 23 March 2021, and that the date of bringing into use was 28 February 2021, he said that the requirements for the communication of notification information to the Bureau set out in §§ 3 and 4 of the Annex to Resolution **32 (WRC-19)** had been met. However, in accordance with No **9.1**, the date of receipt of notification information could not be earlier than four months after the API publication date. Accordingly, the Bureau was planning to publish the four notifications with the date of receipt of 23 July 2021 in accordance with No. **9.1** together with a note indicating that the information had been communicated to the Bureau on 27 April 2021 so that administrations were aware that the notifications complied with §§ 3 and 4 of the Annex to Resolution **32 (WRC-19)**. As that was the first such case the Bureau had received, it sought the Board's endorsement of its approach.

3.135 **Mr Henri** noted that the approach taken by the Bureau was in conformity with the Radio Regulations, and had no issue with the way the Bureau had handled the case.

3.136 The **Chairman** thanked the Bureau for bringing the case to the Board's attention.

3.137 **Ms Beaumier** said that the Bureau's proposed application of the Radio Regulations was judicious. Its actions respected the decision of WRC-19 in adopting Resolution **32 (WRC-19)** and the intent of that resolution to accelerate the regulatory process for short-duration missions without negatively impacting the recording of assignments in the MIFR to networks or systems that were not considered short-duration missions. Should the situation prompt further questions, it might be necessary to develop a new rule of procedure for the sake of clarity.

3.138 **Mr Azzouz** said that the Bureau had acted correctly and should draw the attention of the Administration of India to the application of No. **9.1**.

### **Applicability of Nos. 22.5L and 22.5M to non-geostationary satellite systems notified before the end of WRC-19 (§ 2.2 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.139 **Mr Vallet (Chief SSD)** presented § 2.2 of Addendum 9 to the Director's report, which addressed the applicability of Nos. **22.5L** and **22.5M** to non-GSO satellite systems notified before the end of WRC-19 in the bands 37.5-42.5 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz.

3.140 As WRC-19 had not adopted any provision exempting non-GSO satellite systems in those frequency bands which had been completely notified before the end of WRC-19 from the application of Nos. **22.5L** and **22.5M**, the Bureau was required to review the findings of such systems to check compliance with No. **22.5L** in accordance with No. **11.50**, while No. **22.5M** would be dealt with between administrations. Similarly, WRC-19 had not adopted any provision relating to the application of Section II of Article **9** to the same systems; therefore, there was no coordination procedure between those systems under No. **9.12**. However,

coordination under No. **9.12** had to be conducted for coordination requests received after WRC-19 with respect to assignments notified in these frequency bands prior to the end of WRC-19.

3.141 The Bureau proposed to review the findings with respect to No. **22.5L** only upon being informed by administrations that the assignments had been brought into use. Doing so would allow the Bureau to manage its resources more efficiently, as assignments not brought into use by the deadline described in Resolution **771 (WRC-19)** could easily be cancelled without the need to review their findings. When informed of the bringing into use, the Bureau would request the submission of Appendix 4 data relevant to the examination of No. **22.5L**. Upon receipt of that information, the Bureau would issue a qualified favourable finding until such time as the examination software for No. **22.5L** was available and could review all qualified favourable findings, which was highly unlikely to be before WRC-23. The Bureau sought the approval of the Board for such an approach, which was in compliance with No. **11.50**, Resolutions **770 (WRC-19)** and **771 (WRC-19)** and meant that by WRC-23 all such assignments, whether notified before or after WRC-19, would have the same examination status.

3.142 The **Chairman** supported the idea of issuing qualified favourable findings for such submissions until the No. **22.5L** examination software became available.

3.143 **Ms Beaumier** was satisfied that the Bureau's proposed application of the Radio Regulations was consistent with the intent of WRC-19 in adopting Resolutions **770 (WRC-19)** and **771 (WRC-19)**, as well as Resolution **769 (WRC-19)**. Non-GSO systems notified before the end of WRC-19 were exempted from coordination under No. **9.12** but were certainly still subject to limits and provisions to protect GSO systems, such as the single-entry and aggregate limits described in Nos. **22.5L** and **22.5M**, which was why all operating and planned systems had to go through the consultation process referred to in Resolution **769 (WRC-19)**. In her view, the proposed approach was practical and should be endorsed by the Board.

3.144 **Mr Henri** noted that the approach was in line with § 6 of the Rule of Procedure on No. **11.50**, which applied when a world radiocommunication conference adopted a decision without making specific provisions regarding the retroactive application of that decision. He sought, however, further clarification regarding the reference to the meaning of "complete notification information" in Resolution **771 (WRC-19)** and whether that affected the ability to modify after WRC-19 the notification information of systems notified before the end of WRC-19 taking account of the rules of procedure and No. **7.4A**. Such considerations were also of relevance to § 3.2 of Addendum 9 to the Director's report on the implementation of Resolution **771 (WRC-19)**. He did not see any problem regarding the non-adoption at WRC-19 of any specific provision related to the application of Section II of Article 9 to such systems, as it was also covered by No. **7.4A**.

3.145 **Mr Vallet (Chief SSD)** said that the reference to "complete notification information" in Resolution **771 (WRC-19)** meant notification information that had been found receivable by the Bureau in accordance with the Rules of Procedure relating to the Receivability of the Forms of Notice. Any frequency assignment for which notification information had been found unreceivable would not qualify for *resolves 1* of Resolution **771 (WRC-19)**. In his view, the Bureau's asking for further information to carry out its responsibilities under No. **11.50** did not contradict *resolves 1* of the resolution. The resolution did, however, raise a number of questions, in particular in relation to § 3.2 of Addendum 9. Such questions, however, could be discussed by the Board as and when any difficulties arose during the application of the proposed approach, given that all assignments had to be brought into use by November 2022.

3.146 Responding to a question from **Mr Henri**, **Mr Vallet (Chief SSD)** said that the Bureau had so far received one notification for the bringing into use of a non-GSO system notified before the end of WRC-19 in the bands concerned.

3.147 **Mr Henri** noted that "complete" in that regard was intended as a reference to the receivability of the notification information but said that the notification information might still be able to be modified, which would have implications for the application of the rules of procedure and the Radio Regulations. Consequently, he suggested the possibility of developing a rule of procedure to capture the proposed approach accurately.

3.148 **Mr Vallet (Chief SSD)** suggested that developing a dedicated rule of procedure would not be worthwhile, as it would only apply until the deadline for the bringing into use of the assignments, which was 23 November 2022 at the latest.

3.149 The **Chairman, Ms Beaumier and Mr Henri**, given the temporary nature of the situation, agreed that developing a dedicated rule of procedure was not worthwhile.

3.150 The **Chairman** therefore suggested that the Board should endorse the approach proposed by the Bureau on a provisional basis and ask the Bureau to raise any difficulties encountered in its application so that the Board could approve any necessary changes.

### **Notification of a configuration for which the associated coordination request is submitted but not yet published (§ 2.3 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.151 **Mr Vallet (Chief SSD)** introduced § 2.3 of Addendum 9, which contained the approach proposed by the Bureau for the notification of configurations for which the associated coordination had been submitted but not yet published.

3.152 The approach was intended to alleviate uncertainty for administrations when sending modifications to coordination requests, submitted as additions of a mutually exclusive configuration to the existing request, towards the end of the seven-year regulatory period, while ensuring full transparency for other administrations and maintaining the requirement to notify before the end of the seven years. Difficulties were encountered in particular when administrations notified the latest modification prior to the publication of the CR/C and the CR/C then received an unfavourable finding after the end of the regulatory period.

3.153 The Bureau therefore proposed that administrations submit two mutually exclusive configurations in the notification files, with one identified as the preferred configuration and associated with the technical parameters contained in the latest modified coordination request not yet published and the other as a fall-back configuration associated with one of the mutually exclusive configurations already published, to ensure full visibility for administrations regarding the Bureau's findings. The Bureau would then post the notification submissions on its website as received and subsequently publish and examine the latest modified coordination request. If the modified coordination request received only favourable findings, the Bureau would process the preferred configuration contained in the notification. If there were any unfavourable findings or the date of protection was not maintained as in the original coordination request, the Bureau would ask the notifying administration which of the two configurations it wished to notify. The Bureau would then publish the Part I-S of the notification submission with only one configuration and begin the examination procedure leading to the publication of Parts II-S/III-S, as appropriate. The Bureau sought the Board's approval of the approach.

3.154 The **Chairman** said that preparing for the bringing into use of assignments under such an approach would be challenging as the configuration might change at the very last minute, after preparations for the launch had been made.

3.155 **Mr Henri** said that, while he liked the pragmatic approach proposed by the Bureau, the concern raised with regard to the bringing into use was a valid one, as at the end of the No. **11.44** seven-year period it was critical to ensure that the bringing into use was performed in accordance with the recorded configuration. He therefore requested further clarification on how the proposed dual-configuration approach affected the bringing into use. He also asked when the Bureau would inform administrations of the options for the notification filing approach and raised the possibility of doing so when the Bureau received a modified coordination request for which the CR/C could not be published before the end of the regulatory period. In addition, he suggested that thought be given to the overall visibility of the issue so that administrations were better informed of the risks of submitting a modified coordination request to the Bureau towards the end of the seven-year period. Lastly, he asked to what extent would submitting the two mutually exclusive configurations at the notification stage have an impact on cost recovery.



3.156 **Mr Vallet (Chief SSD)** said that the validity of the bringing into use would be verified against the notified parameters in parallel with the Part I-S publication, namely after being informed by the administration of which configuration it wished to notify and bring into use. Ultimately, it was important for administrations to choose two configurations which could be brought into use in accordance with the filings. The Bureau had anticipated informing administrations of the approach when fielding questions as to the process for the submission of modified coordination requests prior to the end of the seven-year period. If the Board wished, it could be announced more publicly through a rule of procedure or circular letter. Another option was to do so in response to late CR/Cs, though that might be considered less efficient. The cost-recovery process only began at the time of the Part I-S publication, after administrations had chosen which configuration to notify, therefore the second mutually exclusive configuration had no impact.

3.157 Responding to a question from the **Chairman, Mr Vallet (Chief SSD)** said that the phrase “mutually exclusive configurations” meant two separate configurations of which only one could ultimately be notified and brought into use. The orbital characteristics of each configuration did not have to be different. Some configurations, for example, might differ in their radio parameters but overlap in orbital ones. However, as only one configuration was notified at the end of the process, it was for administrations to choose a back-up configuration that they were sure could be brought into use, in accordance with the relevant provisions of the Radio Regulations, in the event that their preferred configuration received an unfavourable finding; otherwise, they risked invalidating the bringing into use and missing the appropriate deadline, which would lead to the cancellation of the filing.

3.158 **Mr Henri** suggested that administrations be alerted to that risk, including in a rule of procedure, and that the Board note it in its conclusion.

3.159 The **Chairman** suggested that the Board instruct the Bureau to develop a draft rule of procedure to reflect its proposed approach.

3.160 **Mr Vallet (Chief SSD)** said that, in that case, it was important for the Board also to instruct the Bureau to apply its approach provisionally until a formal decision on a rule of procedure was taken; otherwise, the Bureau would be obliged to reject related cases in the interim.

3.161 The **Chairman** said that adopting the approach on a provisional basis until a rule of procedure came into effect would be appropriate, and the Board’s taking a decision to that effect would serve to inform administrations of the approach in a transparent manner.

### **Simultaneous bringing into use of multiple non-geostationary satellite systems with a single satellite (§ 3.1 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.162 **Mr Vallet (Chief SSD)** introduced § 3.1 of Addendum 9 to the report, which dealt with the simultaneous bringing into use of multiple non-GSO satellite systems with a single non-GSO satellite.

3.163 The Bureau had recently received cases where a single non-GSO satellite had been used to simultaneously bring into use multiple non-GSO satellite systems, a practice which raised concerns of orbit and spectrum warehousing and therefore needed to be regulated. Consequently, it had developed an approach analogous to the one adopted for the simultaneous bringing into use of multiple GSO networks, the idea of which was that a single physical object in space could bring into use several regulatory filings provided that they corresponded to a single position.

3.164 The equivalent approach for non-GSO systems would be that a single satellite could bring into use multiple systems, or filings, provided that they had the exact same orbital parameters and therefore ultimately reflected a single physical system overall. One issue, though, was that filings’ orbital parameters might be more or less detailed depending on the regulatory provisions that applied. In such cases, the Bureau would consider the orbital parameters of multiple filings identical provided that the common characteristics notified for all filings were the same. The Bureau sought the Board’s approval of the approach.

3.165 The **Chairman** concurred that non-GSO systems might have a basic constellation but multiple filings that shared a common plane where one satellite could be launched and bring into use all the filings. It was important to consider the issue of spectrum warehousing and avoid approaches that might give rise to it.

3.166 **Mr Henri**, while noting the merits of the proposed approach, expressed some concern as to the analogy made with the simultaneous bringing into use of GSO network filings, as the regulatory and technical characteristic conditions were different for non-GSO systems. Indeed, the examination of GSO networks were carried out using single-entry limits for each satellite network filing, when in respect to non-GSO systems, the examination would also be considering aggregate power limits for all satellites of the non-GSO system and aggregate limits for multiple non-GSO system filings. Consequently, he asked the Bureau how its approach for the protection of GSO FSS and BSS networks would be applied in accordance with Resolution **76 (Rev.WRC-15)**, from, in particular, the aggregate efd produced by those multiple filings, which served as a single physical system for the purposes of GSO protection, but as different systems from the point of view of other provisions of the Radio Regulations.

3.167 **Ms Beaumier** said that she also supported having some parallel in the practices used by the Bureau in addressing the simultaneous bringing into use of GSO and non-GSO systems, but noted the concerns raised by Mr Henri. The issue of spectrum reservation was, however, real and should be addressed through specific measures. If a rule of procedure was to be developed for the simultaneous bringing into use of GSO systems, it would be appropriate to do the same for non-GSO systems.

3.168 The **Chairman** said that the issue of spectrum reservation was a serious one and worth bearing in mind for the preparation of the report on Resolution **80 (Rev.WRC-07)** to WRC-23. Having previously studied the number of satellites notified to the Bureau and their orbits, he had found that in low Earth orbits the separation between apogees was 1-20 km, making the introduction of new systems almost impossible. It was not just frequencies being occupied but also physical orbits.

3.169 **Mr Vallet (Chief SSD)** said that the proposed approach would also apply if administrations were seeking to simultaneously bring into use multiple non-GSO systems with no frequency overlap: all filings had to have the same orbital characteristics and therefore represent a single physical system. In terms of interference, the absence of overlapping frequencies meant that there would be no aggregation; when there was overlap, however, aggregate interference should be considered and Resolution **76 (Rev.WRC-15)** applied in that regard. The Bureau had already received several notifications of the bringing into use of systems to which Resolution **76 (Rev.WRC-15)** applied. The Bureau intended to write to the notifying administrations to inform them that they should begin implementation of the resolution and consider among themselves how to ensure compliance with its requirements. With regard to Resolution **35 (WRC-19)**, the rules for bringing into use would apply *mutatis mutandis* to deployment and thereby prevent a single satellite from being used to deploy more than one real satellite, while allowing it to be used for multiple filings that all shared the same orbital parameters.

3.170 The **Chairman** suggested that the Board instruct the Bureau to prepare a draft new rule of procedure for consideration at its next meeting to ensure that the approach was clear to all administrations.

3.171 **Mr Vallet (Chief SSD)** said that the Bureau could do so but asked how it should deal with related cases in the interim. He suggested that the Board instruct the Bureau to implement the approach provisionally so as to avoid having to hold cases in abeyance until a formal decision was taken on the rule of procedure.

3.172 **Mr Henri** said that he would not be in a position to support the interim application of the approach.

3.173 The **Chairman** suggested instructing the Bureau to hold related cases in abeyance as there were still issues related to the application of the two resolutions that required clarification.

### **Implementation of Resolution 771 (WRC-19) (§ 3.2 of Addendum 9 to Document RRB21-2/3(Rev.1))**

3.174 **Mr Vallet (Chief SSD)** introduced § 3.2 of Addendum 9 to the Director's report on the implementation of Resolution **771 (WRC-19)**, which provided a tighter regulatory regime than No. **11.44** for the bringing into use of non-GSO satellite systems in the bands 37.5-42.5 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz notified before the end of WRC-19. The idea of the conference was to allow administrations to notify their non-GSO systems without the need for coordination before the end of WRC-19, provided that they would be brought into use on a short deadline, set as 23 November 2022. As such assignments could be modified in accordance with Nos. **11.43A** and **11.43B**, the Bureau had been asked about the possibility of adding a satellite in a different orbital plane, after the end of WRC-19, and using it to bring into use the entire system in conformity with the new orbital parameters, while still complying with the requirements of Resolution **771 (WRC-19)**. On the one hand, it could be argued on the basis of No. **11.44C** that the additional satellite and new orbital parameters, once examined and given a favourable finding under No. **11.31**, were part of the non-GSO satellite system notified before the end of WRC-19 and could be used to fulfil the obligations of Resolution **771 (WRC-19)**. On the other hand, Resolution **771 (WRC-19)** resolved that a specific date for the bringing into use had to be observed for frequency assignments notified before the end of WRC-19. Consequently, it could be argued that the conference was seeking to restrict the list of frequency assignments that could be notified without coordination and thereby provide all administrations with a defined and closed list of such frequency assignments that they could take into account in the planning of their new systems. Based on such an understanding, using a satellite with orbital parameters notified after WRC-19 appeared to contradict the resolution. The Bureau therefore sought the view of the Board on the situation.

3.175 The **Chairman** said that, based on his understanding of Resolution **771 (WRC-19)**, it was not possible to modify notifications which had been submitted before the end of WRC-19.

3.176 **Ms Beaumier** said that the development of the resolution had been contentious, but its intent, in her view, was to restrict the list of assignments that could be brought into use without coordination. Thus, the modification after the end of WRC-19 of a notification submitted to add a satellite for the bringing into use of the system with different orbital characteristics to those notified before the end of WRC-19 ran counter to that intent. Moreover, as was discussed earlier under Addendum 9, such a practice raised questions of spectrum reservation. While noting the arguments outlined by Mr Vallet in support of two possible but conflicting applications of the Radio Regulations, in her view the intent of WRC-19 with the adoption of Resolution **771 (WRC-19)** should prevail, meaning that, if an administration wished to modify its filing, it would have to receive a new date of receipt and that part would be subject to coordination under No. **9.12**. She suggested articulating that position in a rule of procedure on No. **11.43B**.

3.177 **Mr Henri** said that, if modifications were submitted after the end of WRC-19 to a notified non-GSO filing before the end of WRC-19, Resolution **771 (WRC-19)** would not apply and the modifications would be subject to coordination and a new date of receipt under No. **11.43A**. In order to comply with Resolution **771 (WRC-19)**, frequency assignments to non-GSO satellite systems should be brought into use with the characteristics as notified before the end of WRC-19.

3.178 The **Chairman** concurred that frequency assignments to non-GSO systems subject to Resolution **771 (WRC-19)** could only be brought into use with a satellite that conformed to the parameters notified before the end of WRC-19 on 23 November 2019. Any such modification to the submission received after that date would render the frequency assignments subject to coordination.

3.179 In the light of all the comments made, the **Chairman** proposed that the Board conclude on Addendum 9 to Document RRB21-2/3(Rev.1) as follows:

"The Board considered in detail Addendum 9 of Document RRB21-2/3(Rev.1) on the processing, notification and bringing into use of non-geostationary satellite systems. The Board thanked the Bureau for the

information provided and for bringing these cases to its attention, and considered various sections of the addendum individually as follows:

- § 1 Processing of modifications to existing coordination requests;
 

The Board noted and agreed with the proposed practice of the Bureau and specifically that the epfd limits should be verified for entire non-geostationary satellite systems, which is in conformity with the provisions of the Radio Regulations and the associated rules of procedure. The Board noted that the issue may also be related to the efficient use of the orbit/spectrum resources, and for that reason might be further considered in the preparation of its Report on Resolution **80 (Rev.WRC-07)** to WRC-23;
- § 2.1 Receivability of notification notices submitted in accordance with Resolution **32 (WRC-19)**;
 

The Board noted that the planned practice of the Bureau was in conformity with the application of RR No. **9.1** and Resolution **32 (WRC-19)**, and that the actions of the Bureau were in agreement with the decision of WRC-19 in adopting Resolution **32 (WRC-19)**. The Board instructed the Bureau to inform the Administration of India of the application of RR No. **9.1** and the rules of procedure on this provision in addition to the application of Resolution **32 (WRC-19)**. The Board noted that such an explanation on the relationship between Resolution **32 (WRC-19)** and RR No. **9.1** should be included in a new rule of procedure for the sake of clarity and transparency, and instructed the Bureau accordingly;
- § 2.2 Applicability of Nos. **22.5L** and **22.5M** to non-geostationary satellite systems notified before the end of WRC-19;
 

The Board noted that while non-GSO systems completely notified at the end of WRC-19 were exempted from the need to coordinate with other non-GSO systems, which were also completely notified at the end of WRC-19, this did not include exemption from the application of RR Nos. **22.5L** and **22.5M** aimed at the protection of GSO networks. The Board agreed with the proposed approach by the Bureau which the Board considered as practical and in conformity with Resolutions **769 (WRC-19)** and **771 (WRC-19)**. The Board also noted that this approach is in conformity with paragraph 6 of the rule of procedure on RR No. **11.50**;
- § 2.3 Notification of a configuration for which the associated coordination request is submitted but not yet published;
 

On the understanding that this practice would not give rise to additional cost-recovery invoices, the Board noted that the approach from the Bureau should be communicated to administrations in a transparent manner. The Board also noted that there could be a risk in the bringing into use of frequency assignments to be found invalid if it can only be associated with the configuration finally notified out of the two mutually exclusive configurations that had been submitted. The Board also noted that administrations remained responsible for ensuring that the bringing into use of the notified configuration complied with the relevant provisions of the Radio Regulations;

The Board therefore instructed the Bureau to develop a draft rule of procedure that would reflect the proposed course of actions to be taken for notifications of configurations for which the associated coordination request was submitted but not yet published and to apply this course of actions provisionally until a formal decision on a rule of procedure was taken;
- § 3.1 Simultaneous bringing into use of multiple non-geostationary satellite systems with a single satellite;
 

While supporting in principle the approach proposed by the Bureau, the Board noted that aspects related to the application of Resolutions **35 (WRC-19)** and **76 (Rev.WRC-15)** required further study. The Board instructed the Bureau to pursue efforts to develop an approach for a draft new rule of procedure for consideration at the 88th meeting of the Board and further instructed the Bureau to hold such cases received in abeyance until a formal decision on this matter could be taken;
- § 3.2 Implementation of Resolution **771 (WRC-19)**;

After having carefully considered the case as introduced in this section, the Board indicated that the objective of Resolution **771 (WRC-19)** was to restrict the list of assignments that could be brought into use without coordination and that a modification of the system to add a satellite in a different orbital plane after WRC-19 and to bring into use the entire system with an actual satellite conforming to the added orbital parameters would be contrary to that objective. Consequently, the Board concluded that frequency assignments to non-GSO systems subject to Resolution **771 (WRC-19)** can only be brought into use with a satellite that conformed with the orbital parameters notified before the end of WRC-19 on 23 November 2019. The Board instructed the Bureau to act in accordance with the adopted approach.”

3.180 It was so **agreed**.

**Report from the Bureau on harmful interference to emissions of the United Kingdom high frequency broadcasting stations published in accordance with RR Article 12 (Addendum 10 to Document RRB21-2/3(Rev.1))**

3.181 **Mr Vassiliev (Chief TSD)** introduced Addendum 10 to the Director’s report, containing the report from the Bureau on the monitoring campaign it had conducted pursuant to the Board’s instructions at the 86<sup>th</sup> meeting in order to determine the sources of harmful interference on the frequencies reported by the Administration of the United Kingdom. The monitoring campaign had been conducted between 21 May and 30 June 2021. Four of the 10 administrations requested to provide assistance had agreed to do so, with the international monitoring stations reporting to the Bureau on a weekly basis. The overall measurement results set out in Annex 1 showed that, in the 15 frequencies monitored, all interference sources derived from direction-finding measurements were located in China, with the exception of two seemingly located in the Democratic People’s Republic of Korea, with one close to the border with the Republic of Korea. Annex 2 contained images showing a number of direction-finding measurements.

3.182 Responding to questions from **Mr Hashimoto**, he said that it was for the Board to decide whether or not the monitoring exercise should be continued. The four participating administrations were prepared to continue, but it would be challenging to engage others due to the volume of information to be assimilated before tangible results could be provided. Furthermore, the number of reports already received might be sufficient to draw a conclusion. It was difficult to estimate the precision or tolerance in kilometres of the direction findings due to the different equipment used by administrations and the proximity to the possible source of interference. The Bureau would be pleased to investigate further, if requested, but the multiple intersecting lines shown in the images in Annex 2 indicated that the results presented were quite reliable.

3.183 The **Chairman**, drawing attention to Figures 3 and 5 in Annex 2, said that the numerous lines intersecting on the territory of China appeared to demonstrate the accuracy of the results. There was perhaps no need to ask the Bureau to investigate further the tolerance of the direction-finding lines used.

3.184 **Ms Beaumier** thanked the Bureau for producing the report so soon after receiving the results and welcomed the light it shed on the situation, which had been ongoing for some time. She sought clarification of the next steps to be taken pending the preparation by the Bureau of a report containing recommendations to the administrations concerned.

3.185 **Mr Borjón** thanked the four administrations that had agreed to participate in the monitoring campaign.

3.186 The **Chairman**, recalling the results obtained over the five-week campaign, said that there appeared to be no need for the campaign to continue. The Board should send the results to the Administration of China and call on it to take all possible steps to eliminate the harmful interference.

3.187 **Mr Azzouz, Mr Mchunu and Mr Hoan** agreed with those suggestions.

3.188 **Ms Beaumier** said that the results should also be communicated to the Administration of the United Kingdom and to all concerned administrations, including the two administrations identified as the location of a source of interference. **Ms Jeanty, Mr Borjón, Mr Talib and Ms Hasanova** endorsed that view.

3.189 **Mr Vassiliev (Chief TSD)**, responding to a question from the **Chairman**, said that it would not be in line with the Bureau's practice to send the results of such a monitoring campaign to all concerned administrations. Furthermore, sending the information to the Democratic People's Republic of Korea might open other interference cases, for which no requests for assistance had been received.

3.190 The **Director**, urging caution, said that hitherto the Bureau had solely been dealing with the Administrations of the United Kingdom (as the complainant) and China. Moreover, the results of the international monitoring campaign had shown that the great majority of the interference sources detected had come from China. Thus, in his view, it would be prudent at present to share the results with that administration only, and request that it takes the necessary measures to eliminate the harmful interference. Indeed, if other detected sources of interference located outside China were brought to the Bureau's attention, they could be addressed at that juncture. As the origin of those interference sources was not entirely clear at present, there was a risk should the monitoring campaign results be sent to parties that were not involved, which could cause offence.

3.191 **Mr Alamri and Mr Hashimoto** endorsed that view.

3.192 **Ms Beaumier** said that she would have no difficulty in communicating the results to the Administrations of China and the United Kingdom only at the current stage. The United Kingdom could decide what further steps it wished to take if required, and could always complain about the interference to the other administrations concerned without necessarily bringing the issue back to the Board.

3.193 **Ms Jeanty** said that, in the light of the Director's comments, she agreed with that approach, and noted that the information was contained in a publicly available document accessible to any administration.

3.194 The **Chairman** proposed that the Board conclude on the matter as follows:

"In considering Addendum 10 of Document RRB21-2/3(Rev.1), which contained the report from the Bureau on the monitoring campaign on harmful interference to emissions of United Kingdom high frequency broadcasting stations published in accordance with RR Article 12, the Board expressed its great appreciation to the Administrations of Australia, France, Japan and the United States which had agreed to participate in the monitoring campaign and expressed its satisfaction with the results obtained. The Board also thanked the Bureau for having organized the monitoring campaign and preparing the report.

Based on the results provided, the Board decided that no further monitoring results were required at this stage and instructed the Bureau to discontinue the monitoring campaign. Furthermore, the Board instructed the Bureau to bring the results of the monitoring campaign to the attention of the Administrations of China and the United Kingdom and to invite the Administration of China to take every possible measure to eliminate the harmful interference."

3.195 It was so **agreed**.

## **4 Rules of Procedure (Documents RRB21-2/1(RRB20-2/1(Rev.3)) and RRB21-2/3(Rev.1))**

### **§ 9 of Document RRB 21-2/3(Rev.1)**

4.1 **Mr Henri**, Chairman of the Working Group on the Rules of Procedure, reported that the group had met once on Thursday, 8 July 2021. With regard to § 9 of the Director's report (Document RRB 21-2/3(Rev.1)), the Group had agreed to the proposed editorial correction to § 2.3 of the Rule of Procedure on No. 11.32, set out in § 9.2 of the report. Turning to § 9.3, on a possible new rule of procedure on the simultaneous bringing into use of multiple GSO satellite networks with a single satellite, the group had agreed to include

in a draft rule of procedure the first paragraph of § 3.2.4.1 of Document WRC-15/4(Add.2)(Rev.1), which described the Bureau's current practice, subject to some alignment with the wording of the rules of procedure and the addition of a sentence confirming that the approach could only be considered under the condition that the space station was associated with one or more satellite network filings at one single orbital position, and that a satellite located at less than 0.5° of the nominal position of two different satellite networks could not be considered for the bringing into use or continuing use of the notified characteristics of both satellite networks at those different orbital positions under Nos. **11.44** and **11.44B** or **13.6**.

### **List of rules of procedure (Document RRB21-2/1(RRB20-2/1(Rev.3))**

4.2 With regard to the list of proposed rules of procedure set out in Document RRB21-2/1(RRB20-2/1(Rev.3)), he noted that the latest changes to the document had been introduced by correspondence by the participants of the Working Group on the Rules of Procedure, and that the document would be further updated to reflect the agreements reached at the current session. In its consideration of the document, the group had noted that there were two remaining issues in Attachment 2 concerning footnotes ADD **5.218A** and ADD **5.564A** for which no action was required at the current stage. The working group had agreed on a list of draft rules of procedure to be prepared for circulation in a CCRR and considered at the next meeting. The list contained all of the draft rules for which draft text had already been discussed at the 86<sup>th</sup> meeting and were presented in § 9.1 of the Director's report.

4.3 **Mr Hoan**, referring to Attachment 2, said the reasons for a new rule of procedure on No. **5.218A** were not clear; the phrase "and not exceeded for more than 1% of time at the border of a country" should be deleted.

4.4 It was so **agreed**.

### **WRC decisions involving RRB consideration of requests from notifying administrations for extension of certain regulatory deadlines**

4.5 **Mr Henri** reported that the group had continued its consideration of WRC-12, WRC-15 and WRC-19 plenary decisions relating to the Board's consideration of requests from notifying administrations for extensions to certain regulatory deadlines, which it had begun at its previous meeting. It had agreed to include a number of such decisions in the Rules of Procedure (including from § 3.20 of the minutes from the thirteenth plenary meeting of WRC-12, § 3.19 of the minutes from the seventh plenary meeting of WRC-15 and § 3.16 of the minutes from the eighth plenary meeting of WRC-19). It had decided not to include the invitation by WRC-19 for ITU-R to study requests for extensions of regulatory time-limits from developing countries that did not qualify as *force majeure*. It had also agreed that such plenary decisions should be part of a stand-alone section in the Rules of Procedure and requested the Bureau to prepare a draft rule of procedure to that effect for circulation in a CCRR and consideration at the Board's next meeting.

### **Disputed territories**

4.6 The group had held a lengthy, but fruitful discussion on disputed territories and thanked the Bureau for the update on progress and its excellent work on that extremely sensitive issue. The additional explanations and discussions had alleviated concerns regarding the treatment of the notification of stations in disputed territories and the coordination contour of a station located either in, or overlapping, a disputed territory. The group had agreed on a preliminary modified text for the rule of procedure on Resolution **1 (Rev.WRC-19)**, and had welcomed the clarifications provided, including on the application of the rule to regional terrestrial agreements and the definition of a disputed territory. It was confident that a consensus would be reached on the draft rule of procedure on Resolution **1** at the Board's next meeting and that the text would subsequently be submitted to administrations for comments in a circular letter.

4.7 The group had made good progress in its discussions under Part C of the Rules of Procedure of the Board and had agreed on the principle for dealing with late submissions. Although it had been decided that the existing approach should not be changed, additional text concerning language and admissibility of late submissions had still to be finalized (see § 11.1).

4.8 Unfortunately, the group had not had time to consider the issue of a rule of procedure concerning the processing, notification and bringing into use of non-GSO satellite systems raised in § 1 of addendum 9 to the Director's report. However, having noted the similarity between § 1 of addendum 9 and questions raised during discussion of § 3.2 on the implementation of Resolution **771 (WRC-19)**, the group would appreciate an analysis by the Bureau, for consideration at the 88<sup>th</sup> meeting, of the treatment of modifications under Nos. **11.43A** and **11.43B** to recorded frequency assignments, given the slight difference in the language used in certain rules of procedure, including on Nos. **9.27**, **11.43A** and **11.43B**.

4.9 The **Chairman**, having thanked Mr Henri for his work as the Chairman of the Working Group on the Rules of Procedure, proposed that the Board conclude on item 4 of the agenda as follows:

"Following a meeting of the Working Group on the Rules of Procedure, under the chairmanship of Mr Y. HENRI, the Board decided to update the list of proposed rules of procedure in Document RRB21-2/1 taking into account the proposals by the Bureau in § 9.1 and § 9.3, and § 2.1 and § 2.3 of Addendum 9, of Document RRB21-2/3(Rev.1). The Board agreed to the editorial correction of the Rules of Procedure as presented in § 9.2 of Document RRB21-2/3(Rev.1). The Board confirmed the list of WRC-12, WRC-15 and WRC-19 Plenary decisions involving consideration by the Board of requests from notifying administrations for the extension of certain regulatory deadlines that could be considered for inclusion in the Rules of Procedure. The Board decided that such WRC Plenary decisions should be part of a separate section in the Rules of Procedure.

The Board also decided on the principles for dealing with delayed submissions, while not changing the existing approach, as contained in the internal arrangements and working methods of the Board under Part C of the Rules of Procedure, but outlining additional conditions such as timelines that would ensure that comments and replies to comments on the submission of another administration were received before the start of the meeting.

The Board instructed the Bureau to prepare the relevant draft rules of procedure for these above-mentioned items and to circulate them to the administrations for comments for consideration by the Board at its 88<sup>th</sup> meeting. The Board further instructed the Bureau to publish the updated version of Document RRB21-2/1 on the website.

On the issue of frequency assignments to stations located in disputed territories, the Board thanked the Bureau for the update on progress, including possible improvements to the text of the rule of procedure on Resolution **1 (Rev.WRC-97)**. Following thorough discussions, the Board agreed on the elements to be included and instructed the Bureau to prepare a draft rule of procedure on Resolution **1 (Rev.WRC-19)** for consideration at the 88<sup>th</sup> Board meeting.

Taking into account the similarity between § 1 of Addendum 9 of Document RRB21-2/3(Rev.1) and some questions raised during the presentation of § 3.2 on Resolution **771 (WRC-19)**, the Board instructed the Bureau to prepare for the 88<sup>th</sup> Board meeting an analysis on the treatment of modifications under RR Nos. **11.43A/11.43B** to frequency assignments already recorded in the MIFR."

4.10 It was so **agreed**.



**5 Requests relating to the extension of regulatory time-limits to bring into use frequency assignments to satellite networks (Documents RRB21-2/2, RRB21-2/6, RRB21-2/8, RRB21-2/11 and RRB21-2/5)**

**Submission by the Administration of India requesting the extension of the regulatory time-limit to bring into use the frequency assignments to the INSAT-KA68E satellite network (Document RRB21-2/2)**

5.1 **Mr Loo (Head SSD/SPR)** introduced Document RRB21-2/2, which contained, in Annex 1, a request from the Administration of India for the extension of the regulatory time-limit to bring into use the frequency assignments to the INSAT-KA68E satellite network. He recalled that, at its 84<sup>th</sup> meeting, the Board had already agreed to a 12-month extension of the regulatory time-limit for bringing into use the frequency assignments until 9 May 2021 on the basis of *force majeure*. The Administration of India was now requesting a further 24-month extension until 9 May 2023 because of the impact of the second wave of COVID-19. As indicated in § 4 of Annex 1, the sudden second wave and safety measures introduced had significantly hampered the efforts and launch plans of the Indian operator, meaning that India had not been in a position to fulfil the bringing-into-use criterion for the INSAT-KA68E filing before 9 May 2021. As detailed in the letter on the status and readiness schedule from the project director in Attachment 1, it was expected that the spacecraft would be ready for shipment to the launch base by November/December 2021 provided that the COVID-19 situation improved and restrictions were relaxed. In order to expedite the launch of the INSAT-KA68E satellite network, the satellite operator was receiving launch support from a foreign launch service provider, Arianespace, which had confirmed a feasible launch opportunity in Q3/4 2022, as indicated in the letter provided in Attachment 2. The Administration of India considered that the unintentional and unavoidable delays in bringing into use were beyond its control, that the case met all the conditions required to qualify as *force majeure* and that it had provided all the necessary information required.

5.2 **The Chairman** noted that the submission from the Administration of India was dated 6 May 2021. However, it would have been clear long before that date that it would not be possible to launch the GSAT-20 satellite before 9 May 2021. While the COVID-19 pandemic would understandably have had an impact, he wondered how much had actually been done initially to manufacture the GSAT-20 satellite. The satellite should have been at the launch site by March 2021 at the latest for a launch on 9 May 2021 and all the relevant technical operations should have been concluded by the end of 2020, i.e. before the second wave of COVID-19 in the country.

5.3 **Mr Hashimoto**, recalling input documents for the 84<sup>th</sup> meeting, said that equipment would already have had to be manufactured before the revised launch date for the GSAT-20 satellite of Q2 2021. It was not clear from the submission when the Administration of India had changed its launch provider, and when it had decided to request a further extension. Furthermore, the revised timeline for the satellite launch and the impact of the second wave of COVID-19 were not explained in sufficient detail. Although the work plan had undoubtedly been affected by the COVID-19 pandemic, careful consideration should be given to the need for a two-year extension.

5.4 **Mr Borjón** said that the Administration of India might have left it to the very last moment to bring the issue to the Board to see how the situation evolved. He was not surprised that *force majeure* was being invoked given the new wave of COVID-19. While he was in favour of granting an extension, he did have some doubts about the proposed duration, and suggested that the Board might invite the Administration of India to provide additional information and instruct the Bureau to maintain the frequency assignments to the INSAT-KA68E satellite pending its consideration by the Board.

5.5 **Mr Talib** said that India had been hit particularly hard by COVID-19 in the spring of 2021. However, the information provided by the administration on the availability and launch of the satellite failed to justify the grounds for requesting a second extension. More detailed information on the steps to be taken during

the proposed 24-month extension should be provided before taking a decision. The Board might wish to grant a shorter extension depending on the additional information submitted.

5.6 **Mr Alamri** expressed sympathy with the Administration of India, noting that India was one of the countries hardest hit by the second wave of COVID-19. The pandemic had hindered the launch of the GSAT-20 satellite prior to 9 May 2021, and the administration was now unable to fulfil its obligation for bringing into use the frequency assignments to the satellite network INSAT-KA68E. A launch window in Q3/4 2022 had been identified by Arianespace. Taking into account the difficulties faced by the Administration of India and the efforts it had made to meet its regulatory obligations, he considered that the case met the conditions to qualify as *force majeure* and would support the granting of an extension. The Board should request further information from the administration before deciding on the duration of the extension.

5.7 **Ms Hasanova** agreed that India was one of the countries most affected by COVID-19 and noted that Arianespace had confirmed that the launch would be feasible during Q3/4 2022. Taking into account the letter from the project director contained in Attachment 1 and the COVID-19 situation, she had been in favour of granting an extension. However, in the light of comments made, she agreed that more information should be sought before determining the duration of any second extension.

5.8 **Mr Azzouz** said that there was a strong link between the delay in the satellite launch and the pandemic. As India had been one of the countries worst hit, it could not meet the deadline and, in his view, the case met all the conditions to qualify as *force majeure*. In order to be consistent with the Board's decision at its 86<sup>th</sup> meeting that, given the impossibility of predicting how the COVID-19 situation would develop, any extensions granted should not allow additional time for contingencies, the Board might wish to conclude that the case met all the conditions to qualify as *force majeure* and grant an extension to the end of December 2022.

5.9 **Ms Beaumier** expressed sympathy with the Administration of India for the difficulties it had undoubtedly experienced due to the pandemic, which might well have led to further delays. However, she had been surprised that the request had been submitted to the Board when the regulatory time-limit was about to expire and not to the previous meeting. She had also been surprised to learn from the submission that the manufacturer would be ready to deliver GSAT-20 to the launch base towards November/December 2021 when the information submitted to the 84<sup>th</sup> Board meeting (RRB20-2/27) had indicated that the GSAT-20 spacecraft was at an advanced stage of integration and expected to be ready for shipment to the launch base for indigenous launch at the end of March 2020. It had been her understanding that the main reasons for the extension already granted by the Board had been the missing subsystems for the launch vehicle and delays brought about by the pandemic. While the delays in preparation of the launch vehicle, compounded by the second wave of COVID-19, and the reliance on a foreign launch provider might lead to additional delays, it was not clear why so much time was being requested to complete the GSAT-20 satellite when it was supposed to have been ready for delivery by the end of March 2020 and whether all the delays were attributable to COVID-19. The discrepancy between the information provided to the 84<sup>th</sup> and current meetings of the Board raised some questions and should be clarified. Furthermore, insufficient details had been provided to justify fully the length of extension requested. She agreed that, in order to be consistent with previous decisions, the Board should not consider any extension beyond the launch window identified, and was not currently in a position to confirm that all the conditions of *force majeure* had been met.

5.10 **Mr Hoan** said that India had been seriously affected by COVID-19. Measures imposed to prevent the spread of the virus could have caused further delays to the bringing into use of the frequency assignments to the INSAT-KA68E satellite network, and the Board should consider the request of the administration positively and with sympathy. He asked if the Board was authorized to grant an extension twice for the same reason and noted the need for further information regarding the change of launcher and length of extension required before the Board could take a decision.

5.11 The **Chairman** said that the Administration of India might consider that the new variant of COVID-19 constituted other grounds for *force majeure*.

5.12 **Ms Jeanty** referring to the question of whether or not the Board could authorize an extension twice for the same reason, recalled that the Board had, at its previous meeting, agreed any extensions granted should reflect actual delays encountered and not allow additional time for further possible delays, and that administrations were free to request further extensions in the future should conditions continue to make it impossible to meet regulatory deadlines (§ 6.2 of RRB21-1/23). While she had sympathy with India as one of the countries worst affected by the pandemic, discrepancies in the information provided regarding the completion of the satellite and the length of the period between delivery to the launch base and launch window were concerning. Furthermore, no explanation had been given on the change of the launch provider, and the requested extension period was lengthy. The administration should be requested to provide further information to support its request before the Board took a decision.

5.13 **Mr Henri** said that, although India had been greatly affected by COVID-19, the second wave had not hit the country until April 2021. The administration had provided no further justification for the additional seven-month delay requested to prepare the GSAT-20 satellite, which should have been ready for launch in May 2021; the failure to use the launch vehicle from India; and the change in launch provider. An extension of 15-16 months would appear to be more reasonable than the 24 months requested. However, he was not in a position to grant an extension without further clarifications from the administration, including the provision of a detailed launch schedule.

5.14 **Ms Beaumier**, having endorsed the comments of Mr Henri, recalled that the Board had previously discussed the issue of granting an extension twice on the same grounds, and that the ITU Legal Adviser had indicated that an administration could invoke the same reason for requesting a further extension, under certain conditions. She noted that, in order to qualify as *force majeure*, an event had to be unforeseen, or if foreseeable, it must be inevitable or irresistible. While further delays might have been anticipated because of further waves of COVID-19, the impact of the second wave on India had not been foreseeable, and the Board could therefore consider an additional request for extension invoking the same event. However, based on the information provided, the Board was not in a position to conclude that the request met all four conditions required to qualify as a case of *force majeure*.

5.15 The **Chairman** proposed that the Board conclude on the matter as follows:

“The Board carefully considered the submission of the Administration of India as presented in Document RRB21-2/2. The Board expressed its sympathy with the Administration of India for the difficulties experienced due to the global pandemic. While this submission provided some information to support the request, the Board noted that for a number of issues little or no information was provided, in particular:

- no reasons were provided for the additional seven-month delay in manufacturing the GSAT-20 satellite and what its current state of preparedness was;
- no explanation was given for the change of the launch provider;
- no explanation was provided why the launch vehicle from India could not be used;
- a detailed launch schedule was not provided;
- a justification for the 24-month extension period was not provided, given that from the information in the submission an extension period of 15 months seemed more reasonable.

The Board further noted that, while some of the delays could be attributed to the world pandemic, insufficient information was provided to demonstrate that the request met all the conditions required to qualify as a case of *force majeure* as a result of the global pandemic due to COVID-19. Consequently, the Board concluded that it was not in a position to decide on the request from the Administration of India at its 87<sup>th</sup> meeting. The Board instructed the Bureau to invite the Administration of India to provide additional information to the 88<sup>th</sup> Board meeting on the issues raised above that would support its request. The Board also instructed the Bureau to continue to retain the frequency assignments to the INSAT-KA68E satellite network in the MIFR until the end of the 88<sup>th</sup> Board meeting.”

5.16 It was so **agreed**.

**Submission by the Administration of Malaysia requesting the extension of the regulatory time-limit to bring into use frequency assignments to the MEASAT satellite networks at 91.5°E and 148°E (Document RRB21-2/6)**

5.17 **Mr Loo (Head SSD/SPR)** presented Document RRB21-2/6, which contained additional clarifications from the Administration of Malaysia in the light of the Board's discussion of its request to extend the regulatory time-limit to bring into use frequency assignments to the MEASAT satellite networks at 91.5°E and 148°E, as reflected in the minutes of its 86<sup>th</sup> meeting.

5.18 Following the Board's decision not to grant the extension to the regulatory time-limit of the MEASAT-1A satellite network at 91.5°E as it might not be required, the administration confirmed that it would submit that request at a later date if it proved necessary.

5.19 It had also confirmed that the MEASAT-3d satellite operated on chemical propulsion. In Annex 1 to the information was a letter from AIRBUS, the manufacturer of the MEASAT-3d satellite, which explained that the initial planned launch could have been brought forward by at least six weeks from 1 August 2021 to 20 June 2021 as it had been requested by MEASAT, allowing the administration to have met the regulatory time-limits. Prior to the pandemic, AIRBUS had been confident that it could deliver the MEASAT-3d satellite for launch as early as 1 June 2021. Given the impact of COVID-19, it could now not deliver the satellite until first quarter of 2022.

5.20 In Annex 2 was a letter from Arianespace, the launch service provider, which confirmed that it had been contracted for a launch window from 1 June 2021 to 30 September 2021. Owing to COVID-19, the launch had been rescheduled and an initial launch window from 15 January 2022 to 14 August 2022 had been given, though that would be reduced to a three-month window at a meeting of the interested parties on 15 July 2021.

5.21 Annex 3 detailed the schedule under which MEASAT-3d and MEASAT-3 could have brought back into use the C- and Ku-bands at 148°E. Assuming the reduced schedule and a launch date of 20 June 2021 (which could have been further brought forward by as many as 20 days with the additional margin of the programme), MEASAT-3d would have arrived at 91.5°E on 26 June 2021 after a typical seven days of geostationary transfer orbit. In-orbit testing of the C- and Ku-band payloads on MEASAT-3d and transfer of traffic from MEASAT-3 could be completed within seven days. On 2 July 2021, MEASAT-3 would have begun relocation from 91.5°E at a rate of 6° per day and arrived at 148°E on 12 July 2021 and therefore complied with the regulatory time-limit. MEASAT-3 would then have continued to serve the region from 148°E until the satellite's end of life, which was predicted to be until at least March 2027.

5.22 The operator noted the tight margins in the schedule described, but the financial reality of being a satellite operator in a developing country and the importance of the networks to the country's communication services left it with limited options. The operator had previously begun efforts to establish a long-term replacement programme for the MEASAT-2 satellite to carry the C-, Ku- and Ka-bands as early as 2014, and those efforts remained ongoing, but pursuing two satellite programmes concurrently was prohibitively expensive for a developing country.

5.23 Consequently, the Administration of Malaysia was requesting an extension of 14.5 months to the MEASAT-2, MEASAT-148E, MEASAT-2A and MEASAT-2R satellite networks, based on the current launch window of 15 January –14 August 2022, although it was noted that a reduced launch window would be determined on 15 July 2021.

5.24 **Mr Alamri** noted that the administration would only request an extension for the assignments at 91.5°E if it proved necessary in the future. Regarding the frequency assignments at 148°E, the Board's task was to determine whether the Administration of Malaysia was capable of meeting the original deadlines. The information provided by the administration had demonstrated that it had indeed been capable of doing so and fulfilling their obligation to bring back into use the frequency assignments at 148°E by relocating MEASAT-3 from 91.5°E to 148°E, if not for the impact of COVID-19, and therefore the case met all the

conditions of *force majeure*. He was consequently in favour of granting the 14.5-month extension to the assignments at 148°E.

5.25 **Mr Talib** said that the information provided responded to all the questions that the Board had raised at its 86<sup>th</sup> meeting. There were sufficient details and a demonstrable link between the delay and the impact of COVID-19 in order to approve the request for the extension of the regulatory time-limit to bring back into use the C- and Ku-band frequency assignments at 148°E. Furthermore, 14.5 months was described as the worst-case scenario and the launch might take place much earlier.

5.26 **Mr Hoan** noted the administration's decision not to request an extension for the assignments at 91.5°E at that time. For the assignments at 148°E, the administration had answered the questions raised at the previous meeting, detailing how it could have met the regulatory time-limits if not for COVID-19. While he had shared the concerns of other members as to the administration's ability to relocate MEASAT-3 from 91.5°E to 148°E and noted the tight schedule, he was satisfied with the response. COVID-19 had clearly caused a delay to the bringing back into use of the assignments. Given that 148°E was clearly important to Malaysia, which had held a satellite in that position since 1996, and the fact that Malaysia was a developing country, he proposed that the Board accept the extension request.

5.27 **Ms Beaumier** said that the detailed information had demonstrated a tight but theoretically feasible schedule to meet the regulatory time-limits, though one which rested on several assumptions that gave cause for concern. Firstly, one was led to assume that the integration of the satellite into the launch vehicle had been factored into the reduced launch campaign. If not, the process would obviously take longer and there was little room for manoeuvre in an already tight schedule. Secondly, the drift rate of 6° per day was ambitious and uncommon and might not be possible given the age, health and fuel load of the MEASAT-3 satellite. Lastly, the anticipated end of life of March 2027 for MEASAT-3 was overly optimistic, in particular given the planned relocation and the recent thruster anomalies reported by MEASAT in publicly available sources.

5.28 Concurring, however, that the Board's task was to assess the ability of the Malaysian Administration to meet the deadlines and not the probability of it doing so, she sought reassurance from the Bureau that the satellite would in fact be capable of performing such a relocation at the described drift rate. If the response was satisfactory, she was prepared to accept that the case met the conditions of *force majeure* and to approve the extension. The length of any extension should, however, be more closely linked to the launch window and not extend beyond the end of Q1 2022, when the launch was tentatively scheduled. If the launch window was moved to later, the Board could then review the length of the extension. In any case, it should not at that time grant an extension beyond the end of the current launch window.

5.29 **Ms Jeanty** said that, while the information suggested a straightforward project, MEASAT-3 would have to be relocated from 91.5°E to 148°E and a daily drift of 6° was rather optimistic. Moreover, a launch campaign of twenty days was short on average. In addition, MEASAT-3, having been launched in 2006, might be nearing its end of life, sooner than the optimistically forecasted March 2027. With MEASAT press releases of 26 June and 27 June 2021 reporting that it had already experienced failures, there was doubt as to whether it would survive the move. MEASAT itself had noted the challenges associated with relocating the satellite but considered it the only option for the operator of a developing country. The information was helpful and the orbital position was clearly important to Malaysia, particularly as a developing country, but it was not possible to conclude at that time that the regulatory time-limit would have been met in normal circumstances.

5.30 **Mr Hashimoto** said that, even though the initial launch date had been beyond the regulatory deadline, the time-saving measures described by the manufacturer were feasible. The period between satellite delivery and launch was short and the MEASAT-3 relocation process very tight, but the administration had shown that it was not impossible. It was important to bear in mind that Malaysia was a developing country and subject to certain constraints. He was therefore in favour of granting an appropriate extension to the regulatory time-limit for the bringing back into use of the frequency assignments at 148°E.

5.31 **Mr Henri** said that the proposed schedule for meeting the regulatory time-limit in normal conditions could be qualified as academic and to a certain extent as rather unrealistic. Firstly, the initial delivery date from the satellite manufacturer of 1 August 2021 had already been after the deadline for the bringing back into use of the filing for 148°E. Even if the satellite could have been delivered early, there was no proof that the co-passengers of the dual launch would also have been ready. Typically, it took 7-10 days for a satellite to reach its final position, so the seven-day time-frame given by Malaysia was feasible but somewhat optimistic. While drifting at 6° might technically be possible, it would sacrifice much of the satellite's fuel reserves and, indeed, useful life to the point where its ability to provide services once at 148°E could be in doubt. In addition, the 20-day launch campaign also seemed optimistic, given that a typical campaign for the type of satellite and systems involved was at least 30 days and that the measures described by AIRBUS only anticipated a saving of two or three days in processing. Moreover, it did not appear to take into account combined operations with the launch vehicle and co-passenger. Lastly, the proposed timeline rested on meeting optimistic deadlines and assumptions at each and every stage in order just barely to meet the deadline of 12 July 2021.

5.32 The lack of information as to why the construction of a dedicated satellite had not been built to replace MEASAT-2 and fulfil the July 2021 deadline was also cause for concern.

5.33 Overall, he had serious doubts as to whether the case fulfilled the criteria to qualify as *force majeure*. If granted, any extension should rest on the same assumptions described in the accelerated programme and therefore not extend beyond 30 April 2022 – one month after the anticipated launch at the end of Q1 2022.

5.34 The **Chairman** said that it was important to take into consideration the financial situation of the country when considering why a new satellite had not been built and launched.

5.35 **Mr Loo (Head SSD/SPR)** said that, while there was no theoretical limit on the maximum drift speed when moving a satellite in a geostationary orbit, it would ultimately depend on the amount of fuel available and how much of the satellite's operational life the operator was willing to sacrifice. Based on the limited cases that the Bureau had encountered, satellites would typically drift at 1-3° per day, though there had been a case of a satellite drifting at 6.15° per day.

5.36 **Mr Henri** said that that information was in line with his understanding of satellite drift, which was typically held to 1-2° per day to preserve the satellite's operational life.

5.37 The **Chairman** said that, if Board members were of a mind to accept the extension request, they could agree at that meeting in principle and then approve the length of the extension at the next meeting, after the parties had met to determine a three-month launch window.

5.38 **Ms Hasanova** said that the Malaysian Administration had been providing satellite communication services from 148°E since 1996 and the orbital position was clearly important to the country. Launching a satellite was a costly undertaking, in particular for developing countries; and as a developing country Malaysia found itself in a difficult situation; in her opinion it would be reasonable to agree with the Malaysian request and to extend the Malaysian C- and Ku-band assignments at 148°E, particularly as the worldwide COVID-19 pandemic had clearly caused delays.

5.39 **Mr Azzouz** said he was satisfied that the administration could have met the regulatory deadlines, based on the time-saving measures described by the manufacturer. COVID-19 had had an impact and therefore the case should be considered as fulfilling the conditions of *force majeure* and the extension should be granted.

5.40 **Mr Borjón** and **Mr Mchunu** supported the granting of the extension to the C- and Ku-band assignments at 148°E in view of the detailed information presented by the administration.

5.41 In the light of all the comments made, the **Chairman** proposed that the Board conclude on Document RRB21-2/6 as follows:

“The Board considered in detail the submission contained in Document RRB21-2/6 and thanked the Administration of Malaysia for the clarifications provided, which addressed concerns raised at the 86th meeting. The Board noted that:

- the plan and schedule to meet the 12 July 2021 regulatory deadline to bring back into use the frequency assignments to the MEASAT-2, MEASAT-148E, MEASAT-2A and MEASAT-2R satellite networks at 148°E were very optimistic and based on some assumptions that raised additional questions;
- the launch of the MEASAT-3d satellite at 91.5°E was tentatively scheduled for Q1 2022 with the current launch window from 15 January to 14 August 2022, and that the parties to the launch service agreed to meet on 15 July 2021 to determine a reduced 3-month launch window;
- the plans for the MEASAT-3 satellite to continue to serve the region from the 148°E orbital slot up to the satellite’s end of life, which was predicted to be at least until March 2027, were considered by the Board to be overly optimistic taking into account that, according to publicly available information, the MEASAT-3 satellite was launched in 2006 and had experienced a recent thruster anomaly;
- the Administration of Malaysia had experienced difficulties as a developing country to pursue two satellite programmes concurrently;
- the interest to support a future satellite programme and continued spectrum access at 148°E was uncertain;
- the use of an aging MEASAT-3 satellite at 148°E without concrete plans to provide services or replace the satellite would be perceived as spectrum reservation and contrary to the principles of rational and efficient use of spectrum/orbital resources.

The Board concluded that there was insufficient information at this time to determine whether the situation met all the conditions required to be considered as a case of *force majeure*. The Board therefore instructed the Bureau to invite the Administration of Malaysia to provide additional information on the launch campaign timelines, the readiness of the co-passengers, and the health of the MEASAT-3 satellite in sufficient detail to demonstrate that the regulatory deadline could have been met, if not for the COVID-19 pandemic. Additional information on plans to provide services upon relocation at 148°E and an updated detailed rationale for the length of the extension requested should also be provided.

The Board further instructed the Bureau to retain the frequency assignments to the MEASAT-2, MEASAT-148E, MEASAT-2A and MEASAT-2 satellite networks in the MIFR until the end of the 88th Board meeting.”

5.42 It was so **agreed**.

**Submission by the Administration of Cyprus withdrawing its request for the extension of the regulatory time-limit to bring back into use frequency assignments to the KYPROS-APHRODITE-2 satellite network (Document RRB21-2/8)**

5.43 **Mr Loo (Head SSD/SPR)** introduced Document RRB21-2/8, which contained a submission from the Administration of Cyprus withdrawing its request for the extension of the regulatory time-limit to bring back into use frequency assignments to the KYPROS-APHRODITE-2 satellite network. Recalling that the request for extension had been considered by the Board at its previous meeting, he said that despite the efforts to find a way to bring back into use the above-mentioned filing the operating agency had not been able to do so due to various circumstances.

5.44 **Ms Beaumier** expressed appreciation to the Administration of Cyprus for clarifying with such transparency the status of their efforts to bring back into use the frequency assignments to the KYPROS-APHRODITE-2 satellite network. She hoped the experience gained would serve the administration and operator well in the future.

5.45 **Mr Hoan** thanked the Administration of Cyprus for its submission.

5.46 The **Chairman** proposed that the Board conclude on the matter as follows:

“The Board noted the withdrawal of the request from the Administration of Cyprus for the extension of the regulatory time-limit to bring back into use frequency assignments to the KYPROS-APHRODITE-2 satellite network as presented in Document RRB21-2/8. The Board thanked the administration for its conscientious action, for its transparency and for sharing the information. The Board hoped that the experience gained with this project would serve the Administration of Cyprus well in its future endeavours. The Board instructed the Bureau to suppress from the MIFR the frequency assignments to the KYPROS-APHRODITE-2 satellite network.”

5.47 It was so **agreed**.

**Submission by the Administration of India requesting the extension of the regulatory time-limit to bring back into use the frequency assignments to the INSAT-EXK82.5E satellite network (Document RRB21-2/11)**

5.48 **Mr Wang (Head SSD/SNP)** introduced Document RRB21-2/11, which had been submitted by the Administration of India and set out further considerations in support of its view that the delay in meeting the regulatory time-limit for bringing back into use the frequency assignments to the INSAT-EXK82.5E satellite network qualified as a case of *force majeure* owing to the COVID-19 pandemic. The administration asserted that, given its expertise and experience and various other considerations set out in § 4 of the submission, the Indian satellite operator had been in a position to adhere to the extension granted by WRC-19 for bringing back into use the frequency assignments before 3 January 2021. However, the consequences of the pandemic and restrictions introduced had halted most activities and affected the schedule, with the time-frame for the satellite realization being increased from 10-11 months (Q3/4 2020) to 26-29 months (Q2 2022). The Board was requested to revise its earlier decision and accede to the request to extend the regulatory time-limit to bring back into use the frequency assignments to the INSAT-EXK82.5E satellite network until 3 January 2023.

5.49 The **Chairman**, responding to a question from **Mr Talib**, said that the Board had the authority to provide an extension in the event of *force majeure* or co-passenger delay irrespective of the extension granted by WRC-19. At its previous meeting, the Board had noted that, even in the absence of the delays experienced as a result of the global pandemic, it would not have been possible to meet the regulatory time-limit to bring back into use the frequency assignments to the INSAT-EXK82.5E satellite network, and had decided not to accede to the request from the administration. The Administration of India could raise the issue at WRC-23, if it so wished, but the Board could, in principle, reconsider its decision should different circumstances be brought to its attention. He noted that no indication of time-frame had been given for the actions set out in § 4 of the submission.

5.50 **Mr Henri** thanked the administration for the additional information, which recognized that the Indian satellite operator had only 12-13 months to fulfil the regulatory time-limits following the extension granted by WRC-19. While the administration explained that difficulties in adhering to the tight time-frame were experienced because of COVID-19, it had failed to provide additional information identifying specific factors that had upset the project and the associated delay attributable to COVID-19. It had also failed to provide evidence on how it could have met the regulatory deadline in the absence of any pandemic-related delays. In the absence of such information, he was reluctant to reconsider the Board’s decision at its previous meeting and was not in a position to accede to the request.

5.51 **Ms Beaumier** said that she shared the views of Mr Henri. She noted that some of the information provided, including with respect to when the interfaces and layouts of the satellites had actually been finalized and the time required to complete the testing and launch campaign, contradicted that provided in previous submissions and raised further doubts. The pre-COVID-19 project schedule of 13-14 months slightly



exceeded the duration of the extension granted by WRC-19. There was also no indication in the document that the project had been on track to meet the deadline of 3 January 2021 before the country had entered lockdown on 22 March 2020.

5.52 **Ms Jeanty** said that she shared the views of previous speakers. While she thanked the Administration of India for providing the information, there was little evidence to substantiate the claim that the satellite operator would have been able to meet the regulatory time-limit even if there had been no pandemic-related delays, and it was not clear if items for the satellite had been procured before or after WRC-19. Furthermore, the requested extension of 24 months was quite long considering that the project was supposed to have been completed in around one year. For those reasons, she was reluctant to accept the request.

5.53 **Mr Hashimoto** thanked the administration for the additional information, which indicated that the Indian satellite operator could have adhered to the regulatory time-limit granted by WRC-19. Yet, the two-year extension had already been requested at the Board's 85<sup>th</sup> meeting in October 2020. Drawing attention to the revised workplan presented in the table in § 5 of the submission, he said that, in considering the request, the Board should take into account the fact that the future impact of COVID-19 could not be assumed.

5.54 **Mr Borjón** said that the new information provided by the Administration of India did not contain the concrete, solid and sustained elements required for the Board to revise an earlier decision. Recalling the Board's decision at the 86<sup>th</sup> meeting, he said that the submission provided no evidence of the efforts made on the project before the pandemic. Furthermore, according to the revised time-frame in § 5, more time than originally requested was being sought. He was therefore unable to support the requested extension.

5.55 **Ms Hasanova** thanked the administration for the document. Although she understood the difficulties faced, the document contained no information on the status of the satellite construction or manufacture or other evidence for the delays. Without such information, she was unable to support the request.

5.56 **Mr Azzouz** said that, although he had some sympathy with the Indian Administration, the satellite launch schedule was extremely tight and construction work had not started until the end of WRC-19, leaving very little time to meet the regulatory time-limit. The Board could not grant the required extension but might refer the matter to WRC-23 for decision. Accordingly, it might instruct the Bureau to retain the frequency assignments to the INSAT-EXK82.5E satellite network in the MIFR until the end of WRC-23.

5.57 **Mr Alamri** said that the administration had not provided additional information and evidence on the project timeline and status of satellite construction to support the argument that it could have met the regulatory time-limit of 3 January 2021 established by WRC-19, if not for COVID-19.

5.58 **Mr Talib** said that, although he had some sympathy with the Indian Administration, it had not given relevant reasons for the delay related to the construction of the satellite. He therefore did not support the 24-month extension requested.

5.59 **Mr Hoan** said that, while he had sympathy with the administration, no information had been provided to convince him to accede to the request.

5.60 **The Chairman** said that the Administration of India had not provided information, including on the status of satellite construction, to clarify the efforts made that would have enabled it to meet the regulatory deadline granted by WRC-19 if not for COVID-19. He asked the Board if it wished to instruct the Bureau to retain the frequency assignments in the MIFR until the end of WRC-23 to enable the administration to seek an extension at the conference.

5.61 **Mr Henri** said that he would be reluctant to retain the frequency assignments in the MIFR until the end of WRC-23. Recalling the decision taken at the 86<sup>th</sup> meeting, he said that the Administration of India had

not given additional information that would enable the Board to change its mind. Accordingly, the frequency assignments should be suppressed. **Mr Hashimoto** and **Mr Hoan** supported those comments.

5.62 The **Chairman** said that the administration would have the right to raise the issue at WRC-23 if it did not agree with the decision of the Board.

5.63 **Mr Borjón** endorsed the views of Mr Henri. The Board was reviewing its decision, but had received no new information to substantiate a case of *force majeure* and enable it to provide an extension in addition to the one already granted by WRC-19. By retaining the frequency assignments in the MIFR until the end of WRC-23, the Board would, in fact, be granting a longer extension than the one originally requested, and the frequency assignments should therefore be suppressed.

5.64 **Ms Beaumier** supported the comments of the two previous speakers. According to the revised schedule, the satellite was due to be launched at the end of 2022. If the frequency assignments were maintained in the MIFR until the end of WRC-23, the satellite would already have been in space for almost a year, and the conference would be presented with a *fait accompli*.

5.65 The **Chairman** proposed that the Board conclude on the matter as follows:

“The Board considered in detail the submission of the Administration of India as presented in Document RRB21-2/11. The Board noted that, while the submission provided some additional information, little or no new information was provided for a number of issues and that, in certain cases, contradictions were found compared with the information provided to the 86<sup>th</sup> meeting. In particular, the Board noted that:

- the submission confirmed the late action from the Administration of India to meet the regulatory deadline to bring back into use the frequency assignments to the INSAT-EXK82.5E satellite network;
- the programme schedule prior to the pandemic slightly exceeded the length of the extension granted by WRC-19;
- the request provided contradictory information as to the status of the satellite construction with no evidence that it was on track before the country entered lockdown;
- the request provided contradictory schedules for the launch campaign;
- the requested extension period of 24 months seemed difficult to justify, when the information provided would suggest an extension of 13 months to be sufficient.

The Board further noted that the submission from the Administration of India provided no new evidence, substantiating proof or new arguments in support of the request. Consequently, the Board concluded that it could not accede to the request from the Administration of India to change its decision at the 86<sup>th</sup> meeting. Furthermore, the Board instructed the Bureau to suppress the frequency assignments to the INSAT-EXK82.5E satellite network from the MIFR.”

5.66 It was so **agreed**.

### **Submission by the Administration of the United States requesting an extension of the period of suspension of operation under No. 11.49 of the frequency assignments to the AFRIBSS satellite network at 21°E (Document RRB21-2/5)**

5.67 **Mr Loo (Head SSD/SPR)** introduced Document RRB21-2/5, which contained a submission from the Administration of the United States requesting an extension to the period of suspension of operation under No. **11.49** of the frequency assignments to the AFRIBSS satellite network at 21°E. In its letter set out in Annex 1, the administration had referred to a series of communications with the Bureau. He reminded the Board that, following an unexpected failure of the Afristar-1 satellite operating under the AFRIBSS satellite network filing in November 2017, Afristar-1 had been deorbited. The procurement process for a replacement satellite had begun in 2018, but because the date limit for resumption of operation under No. **11.49** was 31 October 2020 and the contract for the new satellite had been awarded only in Q4 2020, the operator had requested

approval of a plan to drift an operational satellite from 105°E to 21°E, and to operate at that location with the performance and frequency specifications of the AFRIBSS frequency assignments. That process was expected to have been completed before the Board's meeting in March 2021, when the administration intended to submit a request for extension. However, due to delays partially attributable to the COVID-19 pandemic, that had not been possible. The authority for the move had only been granted on 24 May 2021, and the replacement satellite, which was fully capable of operating on all the frequency assignments in the AFRIBSS filing, was expected to arrive at 21°E by the end of 2021, or shortly thereafter. The Administration of the United States had therefore requested the Bureau not to cancel the assignments to the AFRIBSS network and to allow the frequency assignments to remain suspended until 31 January 2022.

5.68 In reply to a question from the **Chairman** as to the action taken between 31 October 2020 and the current meeting of the Board and why the Bureau had not already suppressed the frequency assignments or at least informed the Board of the situation, **Mr Loo (Head SSD/SPR)** said that the Administration of the United States had written to the Bureau in November 2020 stating its intention to submit a request for extension to the March 2021 meeting of the Board. However, owing to delays in the licensing process and the failure of the replacement satellite to reach the orbital location in time, it had not submitted that request. It had written to the Bureau on 17 March 2021, requesting that the assignment be provisionally maintained until the Board meeting in July 2021. Usually, when an administration indicated that it would be submitting a request to the Board, the Bureau refrained from suppressing the network pending the Board's decision. **Mr Vallet (Chief SSD)** endorsed those comments, adding that it was more difficult both in terms of administrations' planning and the Bureau's workload to reinstate a network than to suppress one.

5.69 The **Chairman** said that the Bureau should inform the Board should other such situations occur.

5.70 In response to questions from **Ms Hasanova**, **Mr Loo (Head SSD/SPR)** said that the use of an operational satellite from 105°E at 21°E was intended as a temporary arrangement as it had not been possible to procure a replacement satellite for 21°E before the deadline for bringing back into use under No. **11.49**. However, limited details had been provided by the administration, including on the replacement satellite and the life of the satellite moved from 105°E.

5.71 **Mr Henri** said that, although the request was of interest, the lack of detailed information provided by the administration would make it difficult to link the request to a case of *force majeure*. The extent to which delays in the licensing process were attributable to COVID-19 had not been explained, and it was not clear that everything possible had been done by the operator and notifying administration to bring the assignments back into use by the due date. He would also be interested to learn when the administration had received a request from the operator to move the satellite from 105°E to 21°E; with the drifting expected to take around seven months, the operation should have been initiated by March 2020 if the regulatory deadline was to have been met. **Mr Alamri** endorsed that view.

5.72 **Ms Jeanty** said that Afristar-1 had been launched in 1998, so the failure of such an old satellite would not be entirely unexpected. Furthermore, the duration of the licensing process was something that an administration could influence. As the administration had not specifically invoked a case of *force majeure*, she asked on what grounds the Board could consider the request. Based on the information provided, however, it would not be possible for the Board to grant an extension on the basis of *force majeure*.

5.73 The **Chairman** said that the Board only had the mandate to consider the extension of regulatory time-limits in situations that qualified as cases of *force majeure* or co-passenger delay.

5.74 **Ms Beaumier** said that the request for extension appeared to have been presented in a somewhat unorthodox manner. While the Board had the authority to extend a suspension period in situations that qualified as *force majeure*, those grounds had not been invoked and insufficient evidence had been provided by the administration to demonstrate that all four conditions for *force majeure* had been met. For example, it was not clear whether the in-orbit failure, while not self-induced, had been unforeseen or whether it had been impossible, or just difficult, to meet the deadline. In addition, she wondered what factors other than COVID-19 had contributed to the delays. While she welcomed the efforts of the operator to find an interim

satellite, it had been expected to arrive at the orbital location after the bringing-back-into-use date, and it was not clear why the administration had not made a request for extension earlier. Furthermore, no information had been provided on the replacement satellite. Accordingly, based on the available information, the Board could not currently grant a request for extension.

5.75 **Mr Azzouz** observed that the administration had finalized the procurement contract for a replacement satellite almost two years from the start of the suspension period. However, the administration had failed to provide any information regarding the status of the satellite construction, launch service provider, contract signature date and final launch window. Accordingly, the Board might wish to conclude that it had insufficient information at the present time to grant the request.

5.76 **Mr Borjón**, recalling that the Board had been delegated the authority to examine requests for time-limited extensions in the case of *force majeure*, said that there was not enough information in the submission to grant an extension on such grounds. He was therefore not currently in a position to support the request.

5.77 **Mr Hoan** agreed that there was insufficient information for the Board to conclude that the case qualified as *force majeure* and pointed out that no detailed explanation had been given for the lengthy delay between the request for a relief satellite and completion of the domestic licensing process. It would be difficult for the Board to accede to the request at the current meeting.

5.78 **Mr Hashimoto** said that the Board required more information before taking a decision. While the expected satellite failure might satisfy a requirement for *force majeure*, delays in the domestic licensing process probably would not.

5.79 Following comments from **Ms Hasanova**, **Ms Beaumier** and **Mr Henri**, **Mr Loo (Head SSD/SPR)** summarized the exchange of correspondence between the Administration of the United States and the Bureau, including the documents listed in reference in Annex 1 of Document RRB21-2/5, which had been circulated by email. He noted that the Bureau had been informed on 12 July 2018 of the suspension of the AFRIBSS satellite network following a series of unfortunate events. The Bureau had not replied until 6 March 2019 owing to a delay in receipt of the initial correspondence from the notifying administration. It had found evidence that the Afristar-1 satellite had been at the 21°E position only until 6 December 2017 and had informed the administration that, in conformity with the provisions of No. **11.49**, the frequency assignments should be brought back into operation no later than 31 October 2020. In its correspondence dated 26 August 2019, the administration had requested an extension of the date of bringing back into use until 31 October 2023 since the construction and launch of the replacement satellite were expected to be completed by then. The Bureau had replied on 5 September 2019, advising the administration to bring its request to the 82<sup>nd</sup> meeting of the Board for consideration as the request was beyond the mandate of the Bureau. On 6 October 2020, the Bureau had sent a reminder to the administration to confirm the bringing-back-into-use date of the assignments before the expiry of the regulatory time-limit established under No. **11.49**. On 30 November 2020, the Administration of the United States had requested the Bureau to provisionally maintain the assignments until the 86<sup>th</sup> meeting of the Board as it was considering submitting a request for extension to that meeting, following a request from the operator to move an operational satellite to 21°E. However, on 17 March 2021 it had informed the Board that the domestic licensing process had been delayed, and that it expected to submit its request to the Board in July 2021. It had requested the Bureau to provisionally maintain the assignment pending the consideration of its request by the Board in July.

5.80 In reply to a question from the **Chairman** as to why the item was on the agenda when the letter dated 8 June 2021 set out in Annex 1 to Document RRB21-2/5 contained no specific request to the Board to consider an extension, **Mr Loo (Head SSD/SPR)** said that, based on the previous correspondence received, as the Bureau had already clearly expressed in an earlier correspondence to the administration that such requests which were within the mandate of the Bureau should be submitted to the Board, the Bureau had taken the letter as the administration's intention to submit the issue to the Board.

5.81 The **Chairman** said that the Bureau was correct in bringing the matter to the Board; it was already mid-2021 and the date limit of bringing back into use was 31 October 2020.

5.82 **Ms Beaumier** said that, although she welcomed the opportunity to review the correspondence, which clarified a few issues, it did not address important questions raised by Board members. The administration had not specifically invoked a case of *force majeure*, and had not demonstrated that all four conditions of *force majeure* had been met. Furthermore, it had not clearly explained the rationale of some of its decisions, including the plans to begin construction of a replacement satellite in Q4 2020 for completion in October 2023, despite only having enough fuel to maintain Afristar-1 in orbit until June 2021. Although the administration had encountered difficulties, the Board still did not have enough information to understand why compliance with the regulatory deadline had been impossible. **Mr Azzouz** endorsed those comments.

5.83 The **Chairman** agreed that the correspondence failed to answer a number of the Board's questions.

5.84 **Mr Henri** thanked the Bureau for explaining the comprehensive exchange of correspondence. The Administration of the United States appeared reluctant to bring the issue to the Board, even though there was no other way for it to obtain an extension. Reiterating his earlier comments, he emphasized that certain key information was still missing. Although he understood the need to replace Afristar-1, it was difficult to qualify the situation as a case of *force majeure* based on the information provided; additional details were required.

5.85 **Mr Borjón** expressed his appreciation to the Bureau for its handling of the case and encouraging the administration to bring the issue to the Board. There was not enough evidence for the Board to grant an extension on the basis of *force majeure* at present. The Board should instruct the Bureau to continue to take into account the frequency assignments to the AFRIBSS satellite network until the end of the 88<sup>th</sup> meeting to give the Administration of the United States an opportunity to demonstrate to the Board that the conditions for *force majeure* had been met.

5.86 **Mr Talib** said that the case did not meet the requirements to be considered as *force majeure*.

5.87 **Ms Jeanty** said that the information provided by the Bureau did not change her position; the case, as presented, did not qualify as *force majeure*.

5.88 **Ms Hasanova** thanked the Bureau for providing the correspondence and agreed that, based on the information provided by the administration, the Board was not currently in a position to conclude that the case was an instance of *force majeure*.

5.89 The **Chairman** proposed that the Board conclude on the matter as follows:

"The Board considered in detail the request from the Administration of the United States as contained in Document RRB21-2/5. The Board noted that:

- it only had the mandate to consider the extension of regulatory time-limits to bring into use or bring back into use frequency assignments to satellite networks in situations that qualified as cases of *force majeure* or co-passenger delay;
- the Administration of the United States did not specifically invoke a case of *force majeure*;
- no evidence was provided that could demonstrate that the conditions of *force majeure* had been met;
- the Administration of the United States reported an in-orbit failure of the satellite that occurred in November 2017;
- the satellite launched in 1998 was nearing the end of its projected lifetime so that failures could have been expected;
- there were plans to begin construction of a replacement satellite in the last quarter of 2020 in order for the replacement satellite to be completed in October 2023 despite only having enough fuel to maintain the satellite in orbit until June 2021;

- the Administration of the United States made considerable efforts to find a replacement satellite after the failure had occurred but no information was provided on the replacement satellite, the plans and timelines to relocate the temporary replacement satellite from 105°E to 21°E and for obtaining the necessary domestic regulatory approvals;
- no clear information was provided on the difficulties that had been experienced that directly caused the domestic licensing process delay and what the impact of the global pandemic due to COVID-19 had been on these delays.

The Board decided that there was insufficient information to conclude that the request met the conditions required to be considered as a case of *force majeure*. Consequently, the Board further decided that it was not in a position to grant an extension to the regulatory time-limit to bring back into use the frequency assignments to the AFRIBSS satellite network until 31 January 2022. The Board instructed the Bureau to continue to take into account the frequency assignments to the AFRIBSS satellite network until the end of the 88<sup>th</sup> Board meeting.”

5.90 It was so **agreed**.

5.91 **Mr Vallet (Chief SSD)**, recalling the Chairman’s earlier comment that the Bureau should inform the Board of any similar cases, recalled that, at its 84<sup>th</sup> meeting, the Board had granted an extension to the regulatory time-limit to bring back into use the frequency assignments to the IRANSAT 43.5E satellite network until 7 October 2023. The Bureau had reminded the Administration of the Islamic Republic of Iran that, according to the rules of procedure under No. **11.48**, the deadline for the provision of updated Resolution **49 (Rev.WRC-19)** information would be 15 July 2021, i.e. one year following the Board’s decision to grant an extension. The Bureau had received a communication from the Administration of the Islamic Republic of Iran explaining that it was experiencing difficulties in meeting the deadline for the provision of Resolution **49 (Rev.WRC-19)** information and requesting a six-month extension. It would respond to the administration indicating that a decision to grant any such extension was within the purview of the Board, not the Bureau, and that it might wish to submit the issue to the Board’s meeting in October 2021. The Bureau would, in the meantime, maintain the assignments to the IRANSAT 43.5E satellite network.

5.92 The Board **noted** that information.

## **6 Submission by the Administration of the United States regarding the status of the USABSS-38 satellite network (Document RRB21-2/4)**

6.1 **Mr Wang (Head SSD/SNP)** introduced Document RRB21-2/4 containing a request from the Administration of the United States to reinstate the USABSS-38 satellite network, which had been due to be cancelled after the regulatory time-limit of 11 December 2020 had elapsed, and the correspondence referenced therein between the Bureau and the administration in chronological order.

6.2 The USABSS-38 satellite network filing had been submitted on 11 December 2012, with a regulatory time-limit for its bringing into use of 11 December 2020, in accordance with § 4.1.3 of Article 4 of Appendix **30**. In accordance with the decision of WRC-19, the complete due diligence information required under Resolution **49 (Rev.WRC-19)** should be received no later than 30 days following the end of that regulatory time-limit. Six months prior to that deadline, the Bureau had reminded the administration that, if the necessary information was not received in time, or the network could not be brought into use before the end of the regulatory time-limit, the satellite network would be cancelled.

6.3 Not having received the Resolution **49 (Rev.WRC-19)** information, Appendix **30** Part B submission and notification, the Bureau informed the administration on 11 February 2021 that the frequency assignments of the network and relevant special sections would be cancelled. Shortly thereafter, the Bureau received the necessary submissions on 17 February 2021, after the regulatory time-limit. Consequently, the

Bureau wrote to the administration in its letter of 1 March 2021 that it could not accept the submissions and that it would proceed with the cancellation.

6.4 In its reply of 11 March 2021, the administration acknowledged having missed the deadline, which it attributed to an administrative oversight caused by the impact of COVID-19 on working conditions. It had already taken measures to ensure such an oversight never happened again, as had the operator, and requested that the Bureau maintain the filing.

6.5 On 16 March 2021, the Bureau informed the administration that such a request fell beyond the remit of the Bureau and advised the administration to submit it to the 87<sup>th</sup> meeting of the Board. Until then, the Bureau would continue to take into account the Part A information of the USABSS-38 satellite network in examination of other satellite networks.

6.6 On 6 April 2021, the Director of the Bureau wrote to the administration to bring to its attention the decisions taken by the Board at its 86<sup>th</sup> meeting with respect to its resubmission of notified frequency assignments to the USASAT-55W satellite network, which was an unrelated matter but had arisen from similar administrative failings.

6.7 The administration then submitted its request to the Board on 8 June 2021, explaining the exceptional circumstances behind its failure to comply with the regulatory time-limit. It had also noted the importance of the assignment, the cancellation of which would have a detrimental impact on access to communication services and could interrupt the operations of multiple operators, with the filing being the subject of long-standing bilateral coordination agreements.

6.8 The Board was requested to take the above into consideration and maintain the filings.

6.9 Responding to a question from **Ms Jeanty, Mr Wang (Head SSD/SNP)** said that, according to the correspondence received from the administration, there had been a satellite in the orbital position and operating since May 2012. In the recently received notification, however, the administration had given the date of bringing into use as 11 September 2020 by the submission of notification. The Bureau had verified that there was a United States satellite in the orbital position in question.

6.10 **Ms Beaumier** suggested that the general lateness of the administration's submission of the information and the later date given for the filing's bringing into use might relate to the recent completion of coordination activities in support of the Part B submission and asked the Bureau to confirm that and the network's current coordination status.

6.11 **Mr Wang (Head SSD/SNP)** said that the network had been described in the document as being the subject of long-standing coordination with other operators, but the Bureau had yet to examine the submissions of this satellite network in detail and could not say whether any coordination was required based on the characteristics provided in the Part-B submission.

6.12 The **Chairman** noted that COVID-19 had had a dramatic impact on working conditions and, although the administration had missed the deadline, it had responded quickly to the Bureau's letter of 11 February 2021 with all the information to satisfy the Bureau's request.

6.13 **Ms Beaumier** said that it was unfortunate to be looking again at a missed deadline by the Administration of the United States, but she noted that the incident had occurred before the Board's consideration of the resubmission of notified frequency assignments to the USASAT-55Q satellite network at its 86<sup>th</sup> meeting and that remedial measures had already been taken. In addition, the administration had responded quickly with the necessary information once alerted to the oversight, and the satellite network was providing important services from the orbital position. Consequently, subject to information from the Bureau on the coordination status of the Part B submission, she was in favour of accepting the late submission and maintaining the filings.

6.14 **Ms Hasanova** said that she was in favour of acceding to the request from the administration, as it had provided the information requested by the Bureau only six days after having been alerted to the oversight, caused by COVID-19, and had already taken measures to avoid any recurrence.

6.15 **Mr Hoan** recalled that the Board had at its 84<sup>th</sup> meeting considered a similar case of the late submission of information by the United States for assignments to the USABSS-36 satellite network and had acceded to that request. In the current case, an administrative oversight caused by COVID-19 had led to the delay, but the satellite network had seemingly been coordinated and was in operation. Based on the information provided, reinstating the frequency assignments would not adversely affect other networks; therefore, he was in favour of acceding to the request.

6.16 **Mr Henri** suggested that corroborating correspondence and supporting documents be included in similar cases in the future and made available before the meeting. He thanked the Bureau for the information on the Resolution **49 (Rev.WRC-19)** submission, which had not been covered in Document RRB21-2/4. He also recalled the request made by the administration in relation to the USABSS-36 satellite network to the Board at its 84<sup>th</sup> meeting, owing to an administrative misunderstanding. Given that the administration had already taken corrective measures to remedy the issue, he was in favour of acceding to the request and instructing the Bureau to maintain the USABSS-38 filing. In line with the decision taken on the USABSS-36 case at the 84<sup>th</sup> meeting, he suggested that, since it would have no impact on other administrations or on the USABSS-38 satellite network, and it would avoid the Bureau having to re-examine all satellite networks received subsequent to the current date of receipt of that satellite network, the Board should instruct the Bureau to establish 13 July 2021, the last day of the 87<sup>th</sup> meeting, as the new date of receipt for the USABSS-38 network.

6.17 The **Chairman**, supporting the proposal of Mr Henri, asked the Bureau to check whether maintaining the filing would have any coordination implications or impact on other administrations.

6.18 **Mr Wang (Head SSD/SNP)** said that a preliminary analysis of the filings had found that there were still networks of three other administrations that might be affected should the satellite network be reinstated, and coordination was therefore necessary. In its Part B submission, however, the United States requested application of § 4.1.18 of Appendix **30**, i.e. provisional entry of the network into the List. Therefore, the coordination status of the satellite network would not have any impact on its entry into the List. Otherwise, an examination of the notification had found no problems and the bringing into use had been confirmed by the administration, while the Bureau had verified that there was a physical satellite at the orbital position. Consequently, agreeing to the request would have no significant impact on other parties.

6.19 **Mr Hashimoto** was in favour of acceding to the request of the administration, given the length of time the satellite network had been in operation and the potential impact of its cancellation.

6.20 **Mr Alamri** noted that the required information had been submitted only approximately two months after the regulatory time-limit for the bringing into use of the filings and one month after the deadline for the Resolution **49 (Rev.WRC-19)** information, a short delay in any case and one that could be attributed to the impact of COVID-19. Consequently, he was in favour of instructing the Bureau to accept the request of the administration.

6.21 **Ms Jeanty** said she was in favour of acceding to the request as the administration had replied promptly to the Bureau's letter of 11 February 2021 and already taken corrective measures to avoid any recurrence.

6.22 **Mr Borjón** said he supported the request given the corrective action already taken by the administration and noted the benefit of the services provided by the USABSS-38 network.

6.23 **Mr Azzouz** said that, while the case had not been the first such situation involving the Administration of the United States, he supported acceding to its request and reinstating the filing, given its importance, the



short delay in responding to the Bureau's letter of 11 February 2021 and the measures taken to avoid a further recurrence.

6.24 **Mr Talib** and **Mr Mchunu** agreed to accede to the request of the administration and reinstate the USABSS-38 filing.

6.25 In the light of all the comments made, the **Chairman** proposed that the Board conclude on Document RRB21-2/4 as follows:

"The Board considered in detail the request from the Administration of the United States as presented in Document RRB21-2/4. The Board noted that:

- the Administration of the United States had failed to react to the reminder sent by the Bureau six months prior to the regulatory time-limit on the need to submit the Resolution **49 (Rev.WRC-19)** information and to complete the bringing into use procedure of Appendix **30**;
- the Administration of the United States provided the required Resolution **49 (Rev.WRC-19)** information, Part B submission and the notification six days after the Bureau had informed the administration of the suppression of the frequency assignments to the USABSS-38 satellite network;
- the Administration of the United States confirmed that the frequency assignments to the USABSS-38 satellite network had been brought into use and the Bureau also confirmed that a satellite had been operational in the orbital position since May 2012 and, as such, cancellation would have a detrimental impact on end users;
- although this was another case of failure from the Administration of the United States to comply with regulatory deadlines, the administration had subsequently taken measures to avoid recurrences of this nature and that the global pandemic due to COVID-19 had contributed to delays in the administrative processes;
- the Administration of the United States had requested the assignments of the USABSS-38 satellite network to be entered provisionally into the Appendix 30 List by invoking § 4.1.18 of Appendix **30**;
- the reinstatement of the frequency assignments to the USABSS-38 satellite network would have no negative impact on satellite networks of other administrations.

Consequently, and given a similar case during its 84th meeting, the Board decided to accede to the request from the Administration of the United States. The Board instructed the Bureau to reinstate the frequency assignments to the USABSS-38 satellite network with a new date of receipt of 13 July 2021 for Part B and notification submissions."

6.26 It was so **agreed**.

## **7 Submission by the Administration of the United Kingdom of Great Britain and Northern Ireland requesting an appeal to the decision of the Radiocommunication Bureau concerning some frequency assignments to the O3B-D and O3B-E satellite networks in the MIFR (Document RRB21-2/7)**

7.1 **Mr Sakamoto (Head SSD/SSC)** introduced Document RRB21-2/7 containing a request from the Administration of the United Kingdom to review the unfavourable findings of the Bureau with respect to the O3B-D and O3B-E satellite networks, which had been due to the networks' failure to meet the requirements specified in No. **5.551H** in relation to epfd in the 42.5 - 43.5 GHz band produced by all stations of the non-GSO system operating in the frequency band 42 -42.5 GHz at the site of any radio astronomy station. As the notified assigned frequency bands for the O3B-D and O3B-E networks were 37.5 - 42.5 GHz and 40 - 42.5 GHz, respectively, the Administration considered that only the 42-42.5 GHz portion of each frequency band was affected by No. **5.551H** and therefore suggested splitting the assignments at 42 GHz and

reinstating them with bands of 37.5 - 42 GHz for the O3B-D network and 40 - 42 GHz for the O3B-E network. Otherwise, the entire programme built on the assignments would be severely compromised.

7.2 For its part, the Bureau gave findings for the entire notified assigned frequency bands of filings when they overlapped with frequency bands of allocations to which limits such as those described in No. **5.551H** applied. It never modified the assigned frequency or assigned frequency band of submissions to avoid such overlaps, as that fell outside its remit under the Radio Regulations and doing so would entail a series of other changes to submitted characteristics.

7.3 **Mr Hashimoto, Ms Hasanova and Ms Beaumier** asked if an administration had previously appealed an unfavourable finding of the Bureau in similar circumstances.

7.4 The **Chairman** said that cases appealing an unfavourable finding by the Bureau, not necessarily related to epfd limits, had been raised before for review by the Board, including ones in which the Board had recognized the Bureau as having acted correctly, but proposed a different solution based on information provided by the administration and the circumstances of each individual case.

7.5 **Mr Sakamoto (Head SSD/SSC)** said that, to the best of his knowledge, no similar cases had been brought before the Board. While the Bureau had likely received similar requests to that of the Administration of the United Kingdom, the Bureau's explanation that it could not change submitted characteristics had always proved sufficient.

7.6 Responding to a question from **Ms Hasanova, Mr Sakamoto (Head SSD/SSC)** said that the power levels of individual emissions within an assignment could serve as the basis for a finding and the Bureau could provide individual findings for each emission.

7.7 Responding to a question from **Mr Azzouz, Mr Sakamoto (Head SSD/SSC)** said that the Administration could submit a new notification and request for coordination, removing the affected 500 MHz from the assigned frequency band, but that would be considered a new submission and would therefore require new dates of receipt and protection.

7.8 **Mr Azzouz, Mr Henri, the Chairman and Ms Jeanty** considered that the Bureau had acted correctly and in accordance with the Radio Regulations.

7.9 **Mr Henri** said that, though the notified bandwidth of the assigned frequency band was large, the assignment to the O3B-D system was a single assigned frequency, the smallest unit taken by the Bureau for its technical and regulatory examination, that could not be split, contrary to, e.g. an assigned frequency group. It was the prerogative of administrations to decide on the assigned frequency and associated frequency bandwidth that they wished to notify; administrations were regularly advised at world radiocommunication seminars or workshops organized by the Bureau to carefully ensure that the entire notified frequency band of a frequency assignment had to be in conformity with No. **11.31** and that in case of any unfavourable finding, even if only applicable to a small part of the assigned frequency band, the entire frequency assignments would be declared unfavourable. He therefore concurred with the approach taken by the Bureau and said that any change to the notified assigned frequency band of the frequency assignment should trigger new dates of receipt and protection and be subject to the consequences thereof.

7.10 In response to a question from **Mr Henri, Mr Sakamoto (Head SSD/SSC)** said that the Bureau, in order to determine compliance with No. **5.551H**, compared the epfd value submitted by the administration against the limit and did not make its own epfd calculations. Responding to a question from the **Chairman**, he added that the submitted values for the two networks had exceeded the limit, hence the unfavourable finding.

7.11 **Ms Jeanty** said that resubmitting the notice and retaining the same dates of receipt and protection was not possible under No. **11.36**. Deciding differently would set a precedent and create difficulties in the future. In addition, she asked the Bureau whether the epfd limits under No. **5.551H** applied to non-GSO satellite systems in the broadcasting-satellite service in the same way as for non-GSO systems in the fixed-

satellite service, or whether No. **5.551H** actually covered a larger frequency band in the case of the fixed-satellite service, namely 41 - 42.5 GHz.

7.12 **Mr Sakamoto (Head SSD/SSC)** said that, to protect the radio astronomy service, the epfd limits described in No. **5.551H** applied to all non-GSO satellite systems in the fixed-satellite and broadcasting-satellite services operating in adjacent frequency bands. The administration's understanding of the frequency band affected was correct and the epfd values that it had submitted applied only to the 42 - 42.5 GHz portion of its filings.

7.13 **Mr Talib** concurred that the Bureau had correctly applied Nos. **11.31** and **11.36** in its treatment of the case and assessment of non-compliance with No. **5.551H**, as had been recognized by the administration. He asked, however, if acceding to the request of the administration would have an impact on other administrations or services, in particular the radio astronomy service.

7.14 **Mr Sakamoto (Head SSD/SSC)** said that acceding to the request of the administration would have a profound impact on many findings already made by the Bureau, as it would undermine the Bureau's principle that it could not change the submitted characteristics of filings, namely assigned frequency and assigned frequency band, and therefore necessitate the review of all unfavourable findings made on that basis, unless the Board could explain why and how its decision was strictly limited to the case in question and did not affect past and future findings. Furthermore, as the assignment had received an unfavourable finding, it had not been taken into account in the Bureau's examination of many other filings submitted on the same day after the regulatory regime of that particular frequency band had been modified by WRC-19. If the Bureau's finding was changed and the date of receipt kept, all those other filings would have to be reviewed based on the new finding.

7.15 Responding to a question from **Ms Beaumier**, **Mr Sakamoto (Head SSD/SSC)** said that it would be possible to insert a flag in the validation software alerting administrations to non-compliance with No. **5.551H** when they entered the corresponding epfd values.

7.16 **Mr Azzouz** suggested either developing a new rule of procedure to highlight the matter to administrations or simply proceeding on a case-by-case basis in the consideration of such issues.

7.17 **Mr Hoan** agreed that such issues should be considered on a case-by-case basis and considered that the Bureau had acted correctly in the case in question.

7.18 **Mr Alamri** supported the view that the Bureau had acted correctly in delivering its unfavourable finding and that it was the responsibility of the notifying administration to meet the requirements of the Bureau's regulatory examination. Nevertheless, inserting a flag in the software to alert administrations to non-compliance with No. **5.551H** would be helpful.

7.19 **Ms Hasanova** agreed with the decision taken by the Bureau and did not think that the Board should reverse it. Ultimately, the administration was responsible for submitting the correct characteristics and the Bureau was not in a position to make any modifications to that end.

7.20 **Mr Borjón** agreed with the action taken by the Bureau and could not accede to the request, given the potential impact on other submissions. He supported the proposal to instruct the Bureau to insert a flag in the validation software to alert administrations to non-compliance with No. **5.551H**.

7.21 **Mr Hashimoto** also supported the action taken by the Bureau and suggested that modifications to the Bureau's software would help to avoid such cases in the future.

7.22 **Ms Beaumier** emphasized that, as well as a flag in the validation software to alert administrations to non-compliance with No. **5.551H**, a more general warning would be appropriate to alert administrations to the risks involved with grouping frequency assignments together over a large frequency band that overlapped multiple allocations as the assignments might be subject to different regulatory provisions which could give rise to an unfavourable finding applicable to all the frequency assignments in the band, to reinforce the information given at the Bureau's seminars and to help those not in attendance.

7.23 **Mr Sakamoto (Head SSD/SSC)** said that that was possible but asked how large a notified frequency band should be to trigger a warning in that regard and whether the Table of Frequency Allocations should be used to that end.

7.24 The **Chairman** said that there were various reasons why an administration might notify a large frequency band for its frequency assignments, including as a means of optimizing cost recovery, and suggested that a flag or warning be generated when a given notified frequency band was subject to epfd or similar limits or a group of frequency assignments extended beyond the frequency band covered by such limits. For example, if limits applied to a frequency band spanning 10 MHz and an administration was notifying a frequency assignment with a frequency band spanning 20 MHz, there should be a warning suggesting that the administration split the frequency band or risk an unfavourable finding for the entire filing.

7.25 **Ms Beaumier** understood that it would be complicated to perform a verification of whether “large” assigned frequency bands overlapped with multiple frequency allocations and suggested instead that a general reminder would appear in the software when administrations prepared filings, alerting them to the risks of assignments’ frequency bands overlapping multiple allocations that might be subject to various regulatory provisions. She also asked whether the validation software could be developed to verify compliance of submissions with regulatory limits other than those described under RR No. **5.551H**.

7.26 **Mr Vallet (Chief SSD)** said that the flags, or fatal errors, in the validation software depended on clearly defined rules, which were possible to develop for checking compliance with No. **5.551H** and other such limits. It was not possible, however, to insert a general warning about overlapping with frequency allocations in the validation software, though a pop-up notification to that effect could be inserted in the SpaceCap software to appear at the beginning of the capturing process.

7.27 In the light of all the comments made, the **Chairman** proposed that the Board conclude on Document RRB21-2/7 as follows:

“The Board considered in detail the request from the Administration of the United Kingdom of Great Britain and Northern Ireland as contained in Document RRB21-2/7. The Board noted that:

- the Bureau had acted correctly and in conformity with the provisions of the Radio Regulations in the treatment of this case;
- the Bureau regularly warned administrations during world radiocommunication seminars against notifying assignments with large bandwidths to which different provisions of the Radio Regulations might apply with different limits and restrictions;
- the notified epfd value for the frequency assignments to the O3B-D and O3B-E satellite networks exceeded the epfd limit for the protection of the radio astronomy service in accordance with RR No. **5.551H**;
- it was not possible for the Bureau to subdivide the notified assigned frequency bands of the frequency assignments as this would constitute a modification generated by the Bureau which was beyond its authority pursuant to the Radio Regulations;
- it was the responsibility of the administrations to prepare and submit filings, and to comply with the applicable provisions of the Radio Regulations.

Consequently, the Board decided not to accede to the request of the Administration of the United Kingdom and instructed the Bureau to inform the administration of this decision. Furthermore, the Board instructed the Bureau to:

- develop a validation rule that would issue a warning when the notified epfd limits of a particular frequency assignment exceeded the limits required in compliance with RR No. **5.551H** and other similar provisions of the Radio Regulations (see Section A.17 of Annex 2 to Appendix 4);

- modify the SpaceCap software in order to add a general warning to remind administrations that frequency assignments having assigned frequency bands overlapping several frequency allocations in the Table of Frequency allocations may potentially be subject to different provisions of the Radio Regulations and to encourage administrations to submit separate groups for each regulatory regime in order to avoid unfavourable findings should the regulatory requirements applicable to only a subset of these frequency allocations not be met.”

7.28 It was so **agreed**.

## **8 Status of the ARABSAT 5A and 6A, and the TURKSAT-5A satellite networks (Documents RRB21-2/3(Rev.1) Addenda 7 and 8, RRB21-2/9, RRB21-2/12 and RRB21-2/DELAYED/3)**

**Submission by the Administration of Saudi Arabia (Kingdom of) regarding the coordination of the ARABSAT satellite networks 5A and 6A at orbital location 30.5°E and the upcoming TURKSAT-5A satellite network at orbital location 31°E in the Ku-band (10.95-11.2 GHz, 11.45-11.7 GHz and 14.0-14.5 GHz) (Document RRB21-2/9)**

**Submission by the Administration of Turkey regarding the coordination of the ARABSAT satellite networks 5A and 6A at orbital location 30.5°E and the upcoming TURKSAT-5A satellite network at orbital location 31°E in the Ku-band (10.95-11.2 GHz, 11.45-11.7 GHz and 14.0-14.5 GHz) (Documents RRB21-2/12 and RRB21-2/DELAYED/3)**

8.1 **Mr Vallet (Chief SSD)** introduced Addendum 7 to Document RRB21-2/3(Rev.1), which presented the outcome of investigations on the regulatory statuses of the relevant satellite associated with the TURKSAT-5A, ARABSAT-5A and ARABSAT-6A satellite networks at the orbital positions 30.5°E or 31°E, as requested by the Board at its 86<sup>th</sup> meeting. He pointed out that, in the submissions from the notifying administrations, the references to “TURKSAT-5A”, “ARABSAT-5A” and “ARABSAT-6A” related to actual satellites, not satellite networks. Table 1 set out the list of satellites from the Administrations of Saudi Arabia and Turkey, their orbital position and date of protection. Table 2 set out the history of bringing into use, suspension and bringing back into use of the satellite networks listed in Table 1. Although all the TURKSAT filings at 31°E were listed as currently suspended, the Bureau had received a letter from the Administration of Turkey on 3 June 2021 indicating that the TURKSAT-5A satellite had been deployed at 31°E on 5 May 2021, on which the 90-day period for bringing back into use would begin. He recalled that No. **13.6** had not been routinely used before 1 May 2009. When that provision had first been applied more systematically, the Bureau had focused its efforts on the cases where no satellite or no part of a frequency range were found in reliable public information. Since mid-2014, however, the Bureau systematically used No. **13.6** to check the presence of all frequency bands on board satellites. Table 3 presented the respective coordination status of the various satellite networks under No. **11.41**.

8.2 Responding to a question from **Mr Azzouz**, he said that although there had been some coordination meetings in the past, they had not led to complete coordination agreements, as Table 3 showed. The situation had been relatively simple when the ARABSAT and TURKSAT filings had been using separate parts of the Ku-band but had become more complicated as the filings had begun to use the same frequency bands. Initially, there had been no real operational problems as the use of the frequency bands was less dense. The problem of operational interference was, however, becoming acute with the satellites in orbit now planning to operate the frequency bands at full capacity.

8.3 **Mr Henri** said that, for the sake of completeness, Table 2 should include the names of the satellites used for the regulatory actions listed therein.

8.4 **Mr Vallet (Chief SSD)**, said that the Bureau would be pleased to make those additions, with a note to the effect that historical data before mid-2014 were based on publicly available information and that the Bureau had therefore not always checked the accuracy of the data with the notifying administration.

8.5 He then turned to Addendum 8 to Document RRB21-2/3(Rev.1), which reported on the coordination activities between Saudi Arabia and Turkey at the videoconference organized by the Bureau on 9-10 June 2021. Both delegations had exchanged technical information about the ARABSAT-6A satellite located at 30.5°E and the TURKSAT-5A satellite located at 31°E and discussed the technical and operational features of both satellites and potential technical solutions to make the two satellites compatible. They had concluded that, because of the overlap between the service areas of both satellites and other operational constraints, only frequency segmentation could be considered as an implementable technical solution. However, both delegations had indicated that the practical implementation of such a technical solution would impose severe restrictions on the planned operations of their satellites. Although both delegations had exchanged proposals based on frequency segmentation of the bands 14-14.5 GHz /10.95-11.2 GHz and 11.45-11.7 GHz, no final agreement had been reached and coordination had not been completed. The coordination of the bands 13.75-14 GHz /12.5-12.75 GHz, which was expected to be easier, had not been discussed due to a lack of time. Both delegations had agreed to hold another coordination meeting, with the participation of the Bureau, after the July meeting of the Board.

8.6 Document RRB21-2/9 contained a submission by the Administration of Saudi Arabia, as the notifying administration for the ARABSAT intergovernmental organization, presenting its assessment of the current situation. It explained that, during the coordination meeting, both delegations had indicated their willingness to reach a mutually agreeable solution to ensure the technical coexistence of their respective satellites at 30.5°E and 31°E, and had discussed possible technical solutions based on the information available. They had recognized the need for an operational arrangement based on frequency segmentation as an interim solution. In order to avoid interference during the coordination process of the in-orbit ARABSAT-6A satellite network and the TURKSAT-5A satellite operation, the Administration of Saudi Arabia was proposing, as an interim approach, to share half of the capacity (250 MHz) in the bands 14-14.5 GHz /10.95-11.2 GHz and 11.45-11.7 GHz. Although such an operational arrangement would have severe financial and contractual implications on the current service of the ARABSAT network to the Middle East and North Africa (MENA) region, it had been proposed by the Administration of Saudi Arabia by way of compromise and should be kept in force until both parties had reached a final coordination agreement. Taking into account the long-standing operation of ARABSAT satellite networks in those frequency bands, the Board should request the Turkish Administration not to cause harmful interference to the existing operations of ARABSAT over the MENA region when the TURKSAT-5A satellite network began operation at 31°E and instruct the Bureau to assist both administrations to continue their coordination efforts in a spirit of cooperation, taking into account the relevant provisions of the Radio Regulations, including No. 9.6 and associated rules of procedure.

8.7 Document RRB21-2/12 contained a submission by the Administration of Turkey as the notifying administration of TURKSAT satellite networks, which presented its evaluation of the coordination meeting. It had provided all the necessary information for TURKSAT-5A and had explained why it would not be feasible to move that satellite. It had proposed a final compromise solution based on frequency segmentation and uplink site selection, which would impose significant limitations on the operations of TURKSAT-5A. Its proposal had been rejected and the counter-proposal of the Administration of Saudi Arabia was unacceptable. The Administration of Turkey recalled that it had already provided evidence to the Board that the standard Ku-band frequencies had not been operated by ARABSAT at 30.5°E until ARABSAT-6A had been launched. It therefore refuted the claim made by the Administration of Saudi Arabia that ARABSAT had been operating in that frequency band for the previous 10 years and considered that ARABSAT had not fulfilled the requirement to coordinate with the Administration of Turkey. The continued uncoordinated transmissions in the Ku-band through ARABSAT-6A at 30.5°E were causing interference and created equipment failure risks for TURKSAT-5A, whose ongoing operation was critical. The Board should request that the Administration of Saudi Arabia protect TURKSAT satellite operations at 31°E in the relevant frequencies where ARABSAT satellite networks had not yet been coordinated; take all necessary precautions

and not cause harmful interference to TURKSAT satellite operations at 31°E operating in accordance with the Radio Regulations; and eliminate any harmful interference immediately, in accordance with No. **11.42**.

8.8 In Document RRB21-2/DELAYED/3, the Administration of Turkey, responding to Document RRB21-2/9, confirmed that it had been providing real satellite services at the 31°E orbital location since 1996 in compliance with ITU rules and regulations over areas including the MENA region, Europe and Turkey. It noted that TURKSAT-5A, which had started its operational phase, would also provide services over those regions, and emphasized that the continued uncoordinated transmissions from ARABSAT-6A in the standard Ku-band frequencies were severely affecting most of the TURKSAT-5A transponders. It explained that the extended Ku-band frequencies (12.50 - 12.75 GHz and 13.75-14.00 GHz) had been operated by ARABSAT over the MENA region by the ARABSAT-2A satellite network, and that, as the TURKSAT-5A satellite was designed to serve outside that region, the ARABSAT-2A satellite network would be protected. Similarly, TURKSAT-5A operations based on TURKSAT satellite networks registered in the MIFR should be protected by ARABSAT outside the MENA region.

8.9 In reply to a question from **Mr Talib** as to the technical and financial feasibility of sharing the Ku-frequency bands, the **Chairman** said that financial feasibility was a matter for the operators. Sharing could be achieved through frequency segmentation and polarization or separation of the service areas. The operational arrangement presented was likely to be technically feasible.

8.10 **Mr Vallet (Chief SSD)** added that, although frequency segmentation was a technically feasible solution, it presented severe operational consequences and was generally the last resort for administrations. The various proposals made were technically feasible.

8.11 The **Chairman** said that, as the conditions for using various parts of the Ku-band were different, it would be challenging for the Board to provide any specific recommendations regarding separation, which was a matter for the administrations themselves to resolve. The focus should not be on the date of protection of frequency assignments, but on ensuring compatible use, and such situations had been resolved in the past. The Board should therefore encourage both administrations to find a solution to ensure that their satellite systems could operate without interference and instruct the Bureau to continue to facilitate the coordination process.

8.12 **Ms Beaumier**, endorsing the Chairman's comments, said that it was not realistic to expect such a complex issue to be resolved in one coordination meeting, and was pleased that the two administrations had agreed to hold another meeting in July. Although the Board was not in a position to recommend any particular solution at present, it should encourage the administrations to continue their coordination efforts in goodwill, taking into account the rules of procedure on No. **9.6**.

8.13 **Mr Borjón** said that he supported the Chairman's comments, as did **Mr Azzouz**, who added that both parties should be requested to take all practical and operational measures to avoid harmful interference between the existing operation of the ARABSAT network and the TURKSAT-5A satellite when it reached its orbital position of 31°E.

8.14 **Mr Henri** said that both parties should be encouraged to find a step-by-step solution beginning with frequency segmentation focusing on the MENA region and to continue to discuss the issue under the auspices of the Bureau.

8.15 **Ms Jeanty** endorsed the comments of previous speakers.

8.16 **Ms Hasanova** thanked the Bureau for organizing the coordination meeting. The matter was highly complex. Both satellites used the same frequency bands and were in operation with only 0.5° of separation. ARABSAT had notified its satellite networks according to No. **11.41** with respect to TURKSAT and TURKSAT therefore had priority according to the Radio Regulations. The Board did not have the authority to invite the administrations to share their preferences; it was not important which administration first started operation, rather which had priority according to the Radio Regulations. She agreed that the Board should encourage

both parties to find a solution to complete coordination and to operate without causing interference to each other.

8.17 **Mr Hashimoto** thanked the Bureau for convening the coordination meeting and for reporting on the outcome of the investigation on the regulatory status of the satellite networks. The clarification of regulatory status might help the parties to reach an agreement at the next coordination meeting.

8.18 **Mr Hoan**, having thanked the Bureau for its efforts to organize the frequency coordination meeting, said that it should continue to support both parties in reaching an agreement.

8.19 The **Chairman** proposed that the Board conclude as follows:

“The Board carefully considered Addenda 7 and 8 to Document RRB21-2/3(Rev.1), the submissions from the Administrations of Saudi Arabia (Kingdom of) and Turkey as contained in Documents RRB21-2/9 and RRB21-2/12 respectively, and considered delayed Document RRB21-2/DELAYED/3 for information. The Board thanked the Bureau for the reports on the regulatory statuses of the relevant satellite networks of the Administrations of Saudi Arabia and Turkey and the outcome of the coordination activities between the two administrations, and for the support provided to the administrations in their coordination efforts. The Board noted:

- that several coordination meetings would be required to resolve such a complex situation involving operational satellite systems;
- with satisfaction that the administrations were willing to pursue coordination discussions and that a next coordination meeting was already planned;
- that the focus should not be on the date of protection of frequency assignments but rather on ensuring compatible use;
- that both administrations were considering frequency segmentation as a means to satisfactorily progress the coordination.

Consequently, the Board encouraged the Administrations of Saudi Arabia and Turkey to continue their coordination efforts in goodwill, taking into account the rules of procedure on RR No. **9.6**, as well as a frequency segmentation approach, and to find mutually acceptable solutions so that the satellite systems of the two administrations could operate free from harmful interference. The Board instructed the Bureau to continue to provide support to the two administrations in their coordination efforts, to continue to organize coordination meetings as required and to report on any progress to future meetings of the Board.”

8.20 It was so **agreed**.

## **9 Submission by the Administration of Saudi Arabia (Kingdom of) regarding the implementation of the RRB decisions on the coordination of satellite networks at 25.5°E/26°E in the Ku-band (Documents RRB21-2/10, RRB21-2/3(Rev.1)(Add.1) and RRB21-2/DELAYED/5)**

9.1 **Mr Vallet (Chief SSD)** introduced Addendum 1 to Document RRB21-2/3(Rev.1), which reported on the discussions held between the Administrations of Saudi Arabia and France, acting as notifying administrations for the ARABSAT and EUTELSAT intergovernmental satellite organizations, respectively, and on its own behalf in the case of France, and the Islamic Republic of Iran, concerning the coordination of their satellite networks at the orbital positions 25.5°E and 26°E. The Administration of Saudi Arabia had confirmed its readiness to formalize the Ku-band agreement based on the sharing scheme derived from the Board’s decisions in 2010–2012, which was not related to the Ka-band issue. It would, however, be ready to formalize the Ka-band coordination agreement once discussions on that frequency band had been concluded. The Administration of France had said that it was prepared to sign coordination agreements encompassing both frequency bands based on the sharing scheme developed between 2010 and 2013. The Administration of the



Islamic Republic of Iran was ready to formalize the Ku-band coordination agreement. As it had not been involved in the Ka-band discussions between the Administrations of France and Saudi Arabia, it was reluctant to wait until the conclusion of those discussions. In view of the divergent views on the status of the Ka-band sharing scheme, the coordination process had stalled.

9.2 **Mr Sakamoto (Head SSD/SSC)** introduced Document RRB21-2/10, in which the Administration of Saudi Arabia responded to Document RRB21-1/DELAYED/6 submitted to the 86<sup>th</sup> meeting of the Board for information. He recalled that, at that meeting, the administration had requested an opportunity at the Board's next meeting to respond to the submission, which it had said contained much incorrect information. The administration summarized the sequence of coordination events for the Ku- and Ka-bands from 2010 up to now, emphasized that no operational arrangement for the Ka-band had been achieved with France, and that, as there was no technical link between the Ka-band and Ku-band coordination, it was not acceptable to wait until the Ka-band discussions had been finalized before concluding the Ku-band coordination. It reaffirmed its readiness to sign the Ku-band agreement immediately based on the sharing scheme agreed between the three administrations. It requested the Board to instruct the Bureau to support the concerned administrations in formalizing the Ku-band agreement based on the arrangement that had been operating since 2012 and to invite the French Administration to engage in technical discussions on coordination in the Ka-band.

9.3 Document RRB21-2/DELAYED/5, accepted for information, contained a submission from the Administration of France expressing its disappointment with much of the content of the submission of Saudi Arabia, and clarifying the points raised therein. It explained, *inter alia*, that ARABSAT had provided the first written proposal for a clear operational agreement and compatibility sharing in the Ka-band, and was surprised that the coordination conditions in the Ka-band had been qualified as unrealistic since they had been implemented over the previous seven years and had permitted the satellites of each party to operate to their full capacity in the frequency band without problems. It stated that it had an email from 2012 clearly reflecting an agreement in both the Ku- and Ka-bands between ARABSAT and EUTELSAT and proposing a Ka-band coordination agreement, and repeated its willingness to sign coordination agreements in both frequency bands.

9.4 The **Chairman**, recalling that coordination of the Ku-band would involve all three administrations, while only two were concerned with the Ka-band, noted the different positions of the parties concerned, which were preventing agreements from being reached. Although the Board could not oblige the parties to conclude an agreement on the Ku-band before the Ka-band or on both frequency bands at the same time, it could encourage them to continue their efforts in a spirit of goodwill, with a view to establishing the conditions necessary to coordinate the two satellites operating with such a narrow orbital separation. Noting the various stages required before formal signature and entry into force of an agreement, he said that, at the next round of discussions, the parties might be encouraged to come to a preliminary agreement on the situation in the Ku-band which, although not legally binding, would signal that the situation in that frequency band was stable. Negotiations on the Ka-band could continue. The Board should thank the Bureau for its efforts to organize the discussions, urge the two administrations to continue coordinating the two satellites at 25.5°E/26°E and request them to find a mutually acceptable solution in a spirit of goodwill to resolve their coordination issues.

9.5 **Mr Talib**, endorsing the Chairman's comments, said that coordination efforts for the Ku- and Ka-bands should continue in parallel with the assistance of the Bureau. **Mr Borjón** agreed with that suggestion, as did **Ms Jeanty** who recalled views expressed at the previous meeting of the Board that indicating an order for the completion of coordination might have a negative effect on the negotiations.

9.6 **Ms Hasanova**, **Mr Azzouz** and **Mr Mchunu** supported the views of the Chairman, as did **Mr Hashimoto**, who noted that the views of the parties continued to diverge.

9.7 **Ms Beaumier** agreed that the Board should reiterate its conclusions from the previous meeting encouraging continued discussions for both the Ku- and Ka-bands.

9.8 The **Chairman** proposed that the Board conclude as follows:

“The Board considered in detail Addendum 1 to Document RRB21-2/3(Rev.1) and the submission of the Administration of Saudi Arabia (Kingdom of) as contained in Document RRB21-2/10, and also considered delayed Document RRB21-2/DELAYED/5 for information. The Board once more noted with satisfaction that the satellites had been successfully operating for several years without any harmful interference and that the parties were ready to resume discussions to finalize a coordination agreement.

The Board decided to continue to encourage the Administrations of Saudi Arabia, France and the Islamic Republic of Iran to formalize the coordination of their satellite networks at the position 25.5°E/26°E in the Ku-band, and the Administrations of Saudi Arabia and France to formalize the coordination of their satellite networks at the position 25.5°E/26°E in the Ka-band as soon as possible. The Board further encouraged the administrations to continue to discuss the coordination efforts in the Ku- and Ka-bands in parallel and in a spirit of goodwill, aiming at finalizing the required coordination between their satellite networks to avoid harmful interference. The Board instructed the Bureau to continue to provide the necessary assistance to the administrations and to report on progress to the 88<sup>th</sup> meeting of the Board.”

9.9 It was so **agreed**.

## 10 Confirmation of the dates of the next meeting and indicative dates for subsequent meetings

10.1 The Board **agreed** to confirm the dates for its 88<sup>th</sup> meeting as 11–15 October 2021 if held in person and as 11–19 October 2021 if held virtually and to tentatively confirm the dates of its subsequent meetings in 2022 as:

89th meeting: 14–18 March 2022

90th meeting: 27 June–1 July 2022

91st meeting: 31 October–4 November 2022.

10.2 Regarding the format of the meeting, the **Director** said that, while all ITU-R study group meetings would be held virtually in 2021 irrespective of the COVID-19 situation, he was committed to holding the 88<sup>th</sup> meeting of the Board in person and that the Secretary-General agreed in principle, given the small number of participants involved. Any aggravation of the pandemic and the situation in and around Geneva would, however, make an in-person format more difficult. As the Secretary-General would at the beginning of September be reviewing the possibility of ITU staff returning to the office, that would be an opportune time to confirm the format for the meeting.

10.3 **Mr Alamri** suggested that the meeting be held virtually but agreed to defer a final decision until the beginning of September.

10.4 **Mr Borjón** raised the possibility of a hybrid meeting, adding that, if Board members residing in time zones furthest from Geneva were able to come to ITU for the meeting, the Board would enjoy greater flexibility in timing and might be able to meet for longer each day, if necessary.

10.5 The **Director** said that a hybrid format had not been anticipated but it was certainly feasible. It was important to note, however, that the members physically attending the meeting would inevitably benefit from greater formal and informal interaction, and it could be argued that virtual attendees would receive different treatment. As had been confirmed by the ITU Legal Adviser, all Board members had to agree on the format of the meeting. As things stood, there was nothing preventing the holding of an in-person meeting in Geneva in compliance with sanitary requirements. Furthermore, the Swiss authorities would waive any restrictions that participants might otherwise face as tourists. More problematic, however, was the situation outside of Switzerland as members’ home countries might require them to quarantine on their return, and

air travel was much less regular and much more unreliable than before. Those factors would be taken into consideration when making the final decision.

10.6 **Ms Hasanova, Mr Talib, Mr Borjón, Mr Mchunu, Mr Azzouz, Mr Henri and Mr Hashimoto** agreed to the possibility of a hybrid meeting.

10.7 **Ms Beaumier and Ms Jeanty** agreed with the possibility of a hybrid meeting in the event that an in-person meeting was possible but some members preferred not to attend. **Ms Beaumier** added that she would also entertain the possibility of a hybrid format if members were left unable to attend because of travel restrictions or logistical considerations, but she expressed a reluctance to exclude members from a physical meeting for reasons not of their choosing.

10.8 The Board **agreed** to confirm the format of the 88<sup>th</sup> meeting in early September by correspondence.

## **11 Other business: Update of the working methods under Part C of the Rules of Procedure**

11.1 **Mr Henri** drew attention to the proposed additional text to § 1.6 of Part C of the Rules of Procedure of the Board that had still to be finalized.

11.2 Following a brief discussion based on formulations suggested by the **Chairman and Ms Beaumier**, the Board **agreed** on draft text on the treatment of delayed submissions.

11.3 The Board **agreed** to conclude on the matter as follows:

“The Board considered the current provisions concerning the working methods under Part C of the Rules of Procedure during a meeting of the Working Group on Rules of Procedure and developed draft text on the treatment of delayed submissions. The Board instructed the Bureau to prepare this draft rule of procedure and to circulate it to the administrations for comments for consideration at its 88<sup>th</sup> meeting (see also the decisions under agenda item 4.1).”

## **12 Approval of the summary of decisions (Document RRB21-2/13)**

12.1 The Board **approved** the summary of decisions as contained in Document RRB21-2/13.

## **13 Closure of the meeting**

13.1 Board members took the floor to thank the Chairman for his hard work and outstanding leadership and to congratulate him on the results achieved. They thanked the Bureau and all other ITU staff for their efforts in facilitating the holding of such a successful meeting under challenging circumstances. It was to be hoped that the Board would meet in person in October.

13.2 The **Chairman** thanked speakers for their kind words and expressed his appreciation to everyone who had contributed to the smooth running and success of the meeting. He thanked Board members for their close-knit cooperation in ensuring the positive outcomes.

13.3 The **Director** praised the Chairman for his leadership and results-oriented approach and thanked Board members for their flexibility, patience and good humour, which had been key to the meeting’s success. He expressed his firm commitment to ensuring that the Board could meet in person in October and wished everyone good health in the meantime.

13.4 The **Chairman** closed the meeting at 15:15 hours on Tuesday, 13 July 2021.

The Executive Secretary:  
M. MANIEWICZ

The Chairman:  
N. VARLAMOV