



REDDIG RCC/28

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**RLA/03/901**

**TWENTY EIGHTH MEETING OF THE  
COORDINATION COMMITTEE  
(RCC/28)**

**FINAL REPORT**

**(Lima, Peru, 2 to 4 May 2022)**

*The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.*

**INDEX**

i -	Index .....	i-1
ii -	History of the Meeting .....	ii-1
	Details of the Meeting .....	ii-1
	Opening .....	ii-1
	Working Languages .....	ii-1
	Participants and Organization .....	ii-1
	List of Conclusions .....	ii-1
iii -	List of Participants .....	iii-1
<b>Report on Agenda Item 1:</b>		
	Approval of the agenda and of the meeting schedule .....	1-1
<b>Report on Agenda Item 2:</b>		
	Review of the Report of the Twenty-sixth Meeting of the Coordination Committee (RCC/26) and the Report of the Twenty-seventh Extraordinary Meeting of the Coordination Committee (RCC/27).....	2-1
<b>Report on Agenda Item 3:</b>		
	Report of the activities carried out to date since the last meeting of the Coordination Committee.....	3-1
<b>Report on Agenda Item 4:</b>		
	Work plan for 2022.....	4-1
<b>Report on Agenda Item 5:</b>		
	Financial situation of the project and approval of the budget .....	5-1
<b>Report on Agenda item 6:</b>		
	Annual project evaluation .....	6-1
<b>Report on Agenda Item 7:</b>		
	Other matters.....	7-1

## **HISTORY OF THE MEETING**

### **ii-1. PLACE AND DURATION OF THE MEETING**

The Twenty Eighth Meeting of the Coordination Committee of Project RLA/03/901 - *REDDIG Management System and Satellite Segment Administration*, was carried out in Lima, Peru and via teleconferences (Zoom), from 2 to 4 May 2022.

### **ii-2. OPENING**

Mr. Fabio Rabbani, Regional Director of the ICAO South American Regional Office, welcomed the participants, pointing out the importance of the topics to be dealt with and wishing success in the deliberations. Thereafter, he inaugurated the meeting. In addition, Mr. Francisco Almeida, CNS Regional Officer welcomed, thanked the State's participation and initiated the Meeting.

### **ii-3. WORKING LANGUAGES**

The meeting working languages for the discussions and documentation were Spanish and English. Documentation was presented in both languages.

### **ii-4. PARTICIPANTS AND ORGANIZATION**

The Meeting was attended by 57 participants of 13 member States of the REDDIG II (Argentina, Brazil, Colombia, Chile, Ecuador, France, Guiana, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay and Venezuela) and COCESNA, 2 observers States (United States and Panama), 3 companies from the industry (AIREON, LUMEN and SITA) including ICAO specialists. The list of participants is being presented in page iii-1.

Mrs. Veronica Chavez, Technical Assistance Officer acted as Secretary assisted by Mr. Francisco Almeida, CNS Regional Officer and by Mr. Javier Vittor, REDDIG Administrator.

### **ii-5. LIST OF CONCLUSIONS**

<b>No.</b>	<b>Title</b>	<b>Page</b>
RCC/28-1	APPROVAL OF THE BUDGET OF PROJECT RLA/03/901 REV "X"	5-2

**LISTA DE PARTICIPANTES / LIST OF PARTICIPANTS****ARGENTINA**

1. Hernán Aguirre (virtual)
2. Moira Callegare (virtual)

**BRASIL**

3. Bruno Pacheco
4. Valdileide Freire

**CHILE**

5. Francisco Uzieda
6. Christian Vergara
7. Pedro Pastrian (virtual)

**COLOMBIA**

8. Andrés Colmenares
9. Robinson Quintero
10. Xabier Beitia (virtual)

**ECUADOR**

11. Washington Quinde (virtual)
12. Jimmy Sandoval (virtual)

**ESTADOS UNIDOS / UNITED STATES**

13. Al O'Neill (virtual)
14. Nigel Simmons (virtual)
15. Raquel Ramos (virtual)
16. Will Turner (virtual)
17. Chris Lester (virtual)

**FRANCIA (Guyana Francesa)**

18. Serge Cupoli (virtual)
19. Sharon Benali (virtual)
20. Igor Bordelais (virtual)

**GUYANA**

21. Mortimer Salisbury (virtual)
22. Sewchan Hemchan (virtual)

**PANAMÁ**

23. Edgar Roca Valdés (virtual)
24. Daniel De Ávila (virtual)
25. Nimio Álvarez

**PARAGUAY**

26. Juan Felix Estigarribia
27. Alexander Aguayo

**PERÚ**

28. Luis Silva Gárate
29. Arnaldo Guardamino
30. Yunnior Lévano
31. José Díaz Zegarra (virtual)

**SURINAM**

32. Jurgen Cicilson (virtual)

**TRINIDAD & TOBAGO**

33. Veronica Ramdath (virtual)
34. Steve Saroop (virtual)
35. Satnarine Maharaj (virtual)
36. Rupnarine Baboolal (virtual)
37. Richard Halliday (virtual)
38. Naresh Seeparsad (virtual)
39. Adam Khan (virtual)

**URUGUAY**

40. Miguel Vera
41. Ricardo Clavijo

**VENEZUELA**

42. Lenin Sequeira
43. Jarumy Castillo
44. Luis Escobar

**COCESNA**

45. Roger Alberto Pérez
46. José Manuel Flores

**AIREON**

47. Athayde Frauche (virtual)

**SITA**

48. Kaio Quinan

**LUMEN**

49. Luis Ladera
50. Christian Vera
51. Francelys Figueroa
52. Jorge Nano (virtual)
53. Jelitza Carvallo (virtual)
54. Jesús Cornelio (virtual)

**OACI**

55. Verónica Chávez
56. Francisco Almeida
57. Cristian Javier Vittor

**Agenda Item 1:           Approval of the agenda and of the meeting schedule**

1.1                   Under this Agenda Item, the Meeting reviewed and approved the agenda and meeting schedule included as **Appendixes A** and **B** to this part of the Report.

**APPENDIX A**  
**PROVISIONAL AGENDA**

- Agenda Item 1: Approval of the agenda and meeting schedule
- Agenda Item 2: Review of the Report of the Twenty-sixth Meeting of the Coordination Committee (RCC/26) and the Report of the Twenty-seventh Extraordinary Meeting of the Coordination Committee (RCC/27)
- Agenda Item 3: Report of the activities carried out to date since the last meeting of the Coordination Committee
- Agenda Item 4: Work plan for 2022
- Agenda Item 5: Financial situation of the project and approval of the budget
- Agenda Item 6: Annual project evaluation
- Agenda Item 7: Other matters

## **EXPLANATORY NOTES TO THE PROVISIONAL AGENDA**

### **Agenda Item 1: Approval of the agenda and meeting schedule**

The provisional Agenda and the Schedule proposed by the Secretariat for the Twenty-eighth Meeting will be presented for the consideration and approval of the Coordination Committee.

### **Agenda Item 2: Review of the Report of the Twenty-sixth Meeting of the Coordination Committee (RCC/26) and the Report of the Twenty-seventh Extraordinary Meeting of the Coordination Committee (RCC/27)**

The Committee will review the report of its Twenty Sixth Meeting (RCC/26) conducted by means of teleconference from 2 to 5 March 2021 and the report of the Twenty Seventh (extraordinary) Meeting of the REDDIG Coordination Committee (RCC/27) carried out by means of a teleconference, on 31 August 2021. Likewise, the Committee will analyze the status of implementation of conclusions formulated during said meeting, as well as of conclusions in force from previous meetings.

### **Agenda Item 3: Report of the activities carried out to date since the last meeting of the Coordination Committee**

Under this agenda item, will analyze the activities carried out since the last meeting of the Committee regarding:

- a) Monitoring of the performance of REDDIG II;
- b) REDDIG II training program; and,
- c) New services and activities in REDDIG II.

### **Agenda Item 4: Work plan for 2022**

The Committee will analyze the work program planned for 2022:

- a) New REDDIG II activities and services;
- b) New MEVAIII / REDDIG II activities and interconnection services; and,
- c) Training programme for 2022

### **Agenda Item 5: Financial situation of the project and approval of the budget**

The Committee will consider the status of the cost-sharing contributions to the project and a summary of the obligations assumed during 2021, as well as the project budget for 2022 for approval.

**Agenda Item 6: Annual evaluation of the project**

The Committee will take note of the project's situation at the end of the previous year, including the management and outputs indicators, as well as the monitoring and control of the project with regard to the approved work plan for 2021, shown in the corresponding forms, concluding with the review of the survey conducted among participant States concerning their annual project evaluation.

**Agenda Item 7: Other business**

Under this Agenda item, the Committee may examine any other related matter that it deems appropriate.

**APPENDIX B****MEETING SCHEDULE**

<b>HOUR</b>	<b>Monday 2 May 2022</b>	<b>HOUR</b>	<b>Tuesday 3 May 2022</b>	<b>HOUR</b>	<b>Wednesday 4 May 2022</b>
08:30 09:00	Register of participants	09:00 10:30	Agenda Item 4	09:00 10:30	Agenda Item 7
09:00 09:15	Opening				
09:15 09:30	<i>Coffee Break</i>	10:30 11:00	<i>Coffee Break</i>	10:30 11:00	<i>Coffee Break</i>
09:30 12:30	Agenda Items 1 & 2	11:00 12:15	Agenda Item 5	11:00 12:15	Review of the Preliminary Report
12:30 13:30	<i>Lunch Break</i>	12:15 13:00	<i>Lunch Break</i>	12:15 13:00	<i>Lunch Break</i>
13:30 15:00	Agenda Item 3	13:00 14:00	Agenda Item 6	13:00 14:00	Review of the Preliminary Report

**Agenda Item 2: Review of the report of the Twenty-Sixth Meeting of the REDDIG Coordination Committee (RCC/26) and the report of the Twenty-Seventh Extraordinary Meeting of the Coordination Committee (RCC/27)**

- 2.1 Under this agenda item, the Meeting reviewed the following working paper:
- *WP/02 – Review of the report of the last meetings of the Coordination Committee (presented by the Secretariat).*
- 2.2 Under this agenda item, the Meeting discussed and approved the report of the Twenty-sixth meeting of the REDDIG Coordination Committee (RCC/26) which was held via teleconference on 2-5 March 2021. The meeting was attended by 44 participants from 14 Member States (Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, France, Guyana, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, and Venezuela), 1 observer State from the North America, Central America and Caribbean Region (United States), 1 industry company (AIREON), and ICAO specialists.
- 2.3 The RCC/26 meeting agreed on the following conclusions:
- RCC/26-1** Implementation of REDDIG II ground network (MPLS) nodes in States of other Regions;
  - RCC/26-2** Approval of the budget of Project RLA/03/901 rev “V”; and
  - RCC/26-3** Improvement of logistics for the internment and import of REDDIG equipment and spare parts
- 2.4 The Meeting also approved the report of the Twenty-Seventh (Extraordinary) meeting of the Coordination Committee of Project RLA/03/901, held via teleconference (Zoom) on 31 August 2021.
- 2.5 The meeting was attended by representatives of 12 REDDIG Coordination Committee member States (Argentina, Brazil, Chile, Ecuador, France (French Guiana), Guyana, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, and Venezuela), one international organization (COCESNA), and ICAO officers, totaling 31 participants.
- 2.6 The RCC/27 (extraordinary) meeting formulated the following conclusions:
- RCC/27-1** Implementation of REDDIG II ground network (MPLS) nodes in States of the CAR Region; and
  - RCC/27-2** Approval of the budget of Project RLA/03/901 rev “V”.
- 2.7 After reviewing the conclusions formulated by previous meetings, the RCC/28 meeting considered that the following conclusions were still valid: 8-8, 22-3, 22-4, 24-3, 26-1 and 27-1.
- 2.8 The following conclusions were deemed finalized: 22-1, 22-2, 24-1, 24-2, 24-6, 26-2, 26-3 and 27-2.
- 2.9 The **Appendix** to this part of the report presents the conclusions still valid, including those formulated by this Meeting.

## APPENDIX

### VALID CONCLUSIONS ADOPTED BY THE REDDIG COORDINATION MEETINGS AND THEIR STATUS OF IMPLEMENTATION

No.	Title	Content	Status	Remarks
8-8	REDDIG Administration	That, until such time that the institutional aspects related to the management of multinational systems for the provision of air navigation services are more clearly defined, the States agree that, for the next two years, starting 15 October 2005, the REDDIG will continue to be managed through the ICAO technical cooperation mechanism, as an extension of Regional Project RLA/03/901.	Valid	Taking into account that the establishment of the South American Air Navigation and Safety Organization, a multinational system with the capacity to manage REDDIG, continues undefined, the RCC/20 meeting (Lima, Peru, 21-23 March 2017) approved Rev S of the RLA/03/901 project document, extending the management of REDDIG until 2023.
22-1	Technical visits by the REDDIG Administrator to the network nodes	That the Secretariat: a) Make the necessary arrangements for the REDDIG Administrator to visit at least two network nodes per year.	Completed	Currently, two annual visits have been included in the plan of activities.
22-2	Training in technological tools for analyzing voice and data applications carried over REDDIG	That the Secretariat: a) At the request of REDDIG member States, organize training courses on the use of tools for analyzing information (voice and data) carried over REDDIG.	Completed	A first training course was delivered during the RTO/8 meeting (Santiago, Chile), and will be repeated at the RTO/9 meeting. Currently in each RT the reinforcement of this knowledge is evaluated.

22-3	Study for replacing REDDIG II connectivity equipment and updating the IOS of network routers	That the REDDIG II Administrator: a) Coordinate the conduction of a study to replace connectivity equipment, mainly the NETGEAR, and to update the IOS of network routers.	Valid	All IOS of the network routers were updated in 2019. Trials on the use of CISCO switches to replace Netgear switches are scheduled for 2020 in the Curitiba and Asuncion nodes.
22-4	Acquisition of firewall equipment for REDDIG II	That the Secretariat:  a) At the request of REDDIG member States, and together with the ICAO TCB, purchase firewall equipment for REDDIG II; b) The initial budget assigned for this acquisition would be USD 375,000.00.	Valid	The bidding process was completed and is in the implementation stage. Regarding the implementation, it is delayed due to an emerging situation related to the consequences of the pandemic and the conflict in Europe.
24-1	Procedure for sending for repair broken equipment within a reasonable time	<del>That:</del> <del>With regard to the replacement of spare parts stored in the SAM Regional Office:</del>  a) <del>After the spare part is delivered and receipt acknowledged, the receiving State has a period of 60 days to send the equipment for repair at the factory;</del>  b) <del>If the deadline set out in the previous item is not met, the Project Management will not respond to any other request for spare parts from that State;</del>  c) <del>States that are currently in possession of broken equipment will be subject to that stated in this conclusion.</del>	Completed	<del>The REDDIG administration is anticipating the revision of the REDDIG Operation and Maintenance Manual for this year.</del>

24-2	Creation of the REDDIG <i>ad hoc</i> group	That: <del>—The participating States of Regional Project RLA/03/901 form an <i>ad hoc</i> group to study technological proposals, for employment in the future REDDIG III, to be implemented starting in 2022.</del>	Completed	The group is formed and active.
24-3	Interconnection of regional IP networks	That: a) The Secretariat proceed with the necessary administrative procedures for carrying out a meeting in Lima, with the participation of ICAO officers and telecommunication providers of the APAC, EUR and SAM regional IP networks. b) The participation of the Secretary of the Communications Panel (CP) be coordinated using resources of Regional Project RLA/03/901 (air tickets and DSA).	Valid	Two teleconferences were held with the participants of the APAC regional IP network (CRV) on 21 January and 24 February 2021. Coordination with participants of Europe's regional IP network (PENS) was initiated in January 2021.
24-6	Approval of the budget for Regional Project RLA/03/901 Rev "U"	That the Secretariat: a) <del>Take relevant action to allow for the approval by ICAO Headquarters of the revision to Project RLA/03/901 for its subsequent submission to REDDIG member States, as shown in Appendix A to this part of the report.</del>	Completed	<del>Rev "U" was duly signed by the ICAO Secretary General and circulated to the States for the corresponding processing.</del>

26-1	Implementation of REDDIG II ground network (MPLS) nodes in States of other Regions	<p>That the Secretariat: Take the necessary measures for the procurement and installation of REDDIG II ground network (MPLS) nodes in States of other Regions, as described below:</p> <p>a) One node in Madrid (Spain), based on interest expressed by Argentina, Brazil and Venezuela, for the establishment, initially, of AMHS communications with the Madrid COM centre. The cost will be shared by the three States concerned; and</p> <p>b) One node in Johannesburg (South Africa), based on interest expressed by Argentina, for the establishment of voice and data communications with the ANSP of the Johannesburg FIR. The cost will be charged to Argentina's annual fee.</p>	Valid	Both nodes are in the installation stage.
26-2	Approval of the budget of Project RLA/03/901 Rev "V"	<p><del>That the Secretariat: Take the necessary actions for the approval by ICAO Headquarters of the revision of Project RLA/03/901 shown in Appendix A to this part of the report, for its subsequent submission to REDDIG member States.</del></p>	Completed	A new revision was made to update costs and add new nodes, as presented at the RCC/27 meeting (27-2).
26-3	Improvement of logistics for the internment and import of REDDIG equipment and spare parts	<p><del>That the Secretariat: Circulate a letter to member States of Project RLA/03/901, indicating that the Coordination Committee urges them to make the necessary efforts to improve logistics (internment, import) regarding REDDIG equipment and spare parts in their respective States, so as not to affect other States and the proper operation of the network.</del></p>	Completed	Letter SA5192 dated 29 April 2021 was sent to the States.
27-1	Implementation of REDDIG II ground network (MPLS) nodes in States of the CAR Region	<p>That the Secretariat: Take the steps described below, with a view to the implementation of REDDIG II (MPLS) nodes in CAR States:</p> <p>a) Confirm with Panama its intention to be part of Regional Project RLA/03/901 or the hiring</p>	Valid	The MIII-RII/INTERCON/2 meeting (Lima. 5-6 May 2022) will address the implementation of the nodes with the CAR States concerned.

		<p>of the service directly from the telecommunications provider (Lumen);</p> <p>b) Following confirmation of item a), make arrangements for the implementation of REDDIG II (MPLS) nodes in the following CAR States: Aruba, Curaçao, Jamaica, and Puerto Rico; considering that the cost must not exceed USD 5,100.00 per month for the hiring of all nodes without AOSC. c) Prioritise the hiring of the nodes of Curaçao, Jamaica, and Puerto Rico, in case the value of item b) is higher than established and provide a technical solution for communications with Aruba.</p> <p>d) Costs will be quoted by the States participating in Regional Project RLA/03/901.</p> <p>e) Coordinate, with the support of the NACC Office, the granting of authorisation by CAR States concerned for the implementation of the nodes.</p> <p>f) Contract 22501528 concerning the MEVA III nodes in Bogota and Caracas shall be cancelled, as soon as the REDDIG II nodes are established in the CAR States.</p>		
27-2	Approval of the budget of Project RLA/03/901 rev "V"	<p><del>That the Secretariat:</del></p> <p><del>a) Circulate a letter to member States for a period of 10 working days for approval of the new revision of Project RLA/03/901 to replace conclusion RCC/26-2;</del></p> <p><del>b) Then arrange for its approval by ICAO Headquarters, and its subsequent submission to REDDIG member States, as shown in Appendix A to this part of the report.</del></p>	Completed	It was approved on 25 January 2022 and sent to the States with letter SA5049 and letter SA5050 on 26 January 2022 for the respective signature.

28-1	Approval of the budget of Project RLA/03/901 rev. "X"	That the Secretariat: After completing the adhesion process of Panama or before August 1, 2021, prepare the proposal for revision X of Project RLA/03/901 that includes the review and update of expenses and fees. This proposal must be circulated to the member States for their corresponding acceptance and subsequently start the approval process by the ICAO headquarters, for its subsequent presentation to the REDDIG member States.	Valid	
------	---	--	-------	--

**Agenda Item 3: Report of the activities carried out to date since the last meeting of the Coordination Committee (RCC/26 and RCC/27)**

3.1 Under this agenda item, the Meeting reviewed the following working paper:

- WP/03 - *Report on the activities carried out to date since the last meetings of the Coordination Committee* (presented by the Secretariat); and
- WP/07 - *Proposed COCESNA services through the REDDIG MPLS node of Ilopango, El Salvador.*

**Report on the activities carried out to date since the last meeting of the Coordination Committee**

3.2 The Meeting discussed the following activities agreed at the Twenty-sixth meeting of the Coordination Committee (RCC/26):

- a) Monitoring REDDIG II performance
- b) REDDIG II training programme;
- a) Operation of REDDIG II and analysis of the implementation of new services.

MONITORING REDDIG II PERFORMANCE

*Network availability*

3.3 The Meeting took note that network availability in 2021 was 99.9891%. **Appendix A** to this part of the report presents the availability of the network up to 2021.

*Logistical aspects*

3.4 **Appendix B** to this part of the report shows the logistics carried out by the Regional Office during 2021.

*Satellite network spare parts*

3.5 The Secretariat noted that REDDIG equipment was exceeding the halfway point of its useful life, so it was normal that failures started to appear, thus requiring more frequent equipment shipping, repair and replacement logistics.

3.6 It was also noted that the following expenditures were incurred for the repair of an item:

- a) Payment to the factory for the maintenance performed;
- b) Payment to the transport company; and
- c) Payment for customs agent services.

3.7 The Secretariat requested that States proceed to send the broken equipment for factory maintenance as soon as possible. If spare equipment is available at the SAM Office, the REDDIG II Administration can send it to the requesting State to increase the availability of the node. Once the original node item returns from factory maintenance, the spare material should be returned to the SAM Office spare part storeroom.

3.8 According to the REDDIG II Manual, States that have received replacement material, but have not sent the original failed equipment for factory maintenance, will not be able to request another replacement item, until they comply with the procedure stipulated in the aforementioned conclusion.

3.9 **Appendix C** to this part of the report shows the stock of spare parts kept in the Regional Office storeroom.

*Status of the nodes*

3.10 **Appendix D** to this part of the report shows 2021 statistics on REDDIG support, breakdowns and availability.

3.11 The Secretariat reported that ATS voice communications were re-established in Guayaquil, with the installation of FXS boards in the REDDIG II node of Ecuador. This was a mitigating measure, until a new telephone switch was installed in Guayaquil.

3.12 The Secretariat noted the long periods of times that the pieces of equipment remained in the respective customs offices, and the importance for the focal points to assist with logistics in order to avoid these situations. **Appendix E** to this working paper contains the list of focal points of States participating in the network, as updated during the RCC/28 Meeting.

*Transfer of the Bogota REDDIG node*

3.13 Regarding the transfer of the Bogota node, the material is already available and ready for installation. Likewise, the Colombian Administration approved the execution of the civil works (installation of ducts to connect the antenna to the equipment in the technical room), under Project RLA/03/901. It is estimated that this activity will be completed in the second half of the year.

*Additional ground network (MPLS) nodes*

3.14 The Meeting noted that COCESNA's MPLS node in Ilopango (El Salvador) was installed in late March 2022 and was ready to connect voice and data services to the other nodes of the network.

3.15 COCESNA submitted a working paper (RCC/28-NE/07), listing the services it intended to provide through the ground node implemented in Ilopango, El Salvador.

3.16 Initially, the services considered for implementation through COCESNA's REDDIG II MPLS node are as follows:

- a) CENAMER - Bogota ATS channels
- b) CENAMER - Guayaquil ATS channels
- c) CENAMER - Bogota AMHS interconnection
- d) CENAMER - Quito AMHS interconnection
- e) CENAMER - Lima AMHS interconnection, as an alternative outlet for international messaging.
- f) CENAMER – FAA (Atlanta) AMHS interconnection
- g) COCESNA - AIREON connection for the provision of satellite ADS-B data
- h) Data interconnection for possible radar data exchanges (CENAMER - Colombia, CENAMER - Ecuador)

3.17 The Secretariat noted that items a), b) and f) were constant communications in the Air Navigation Plan (ANP) and in the letters of agreement between the centres involved, their configuration, testing and activation being only a technical matter.

3.18 Also, based on the interest of each State (Colombia, Ecuador, and Peru), items c), d) and e) could be implemented as extra-plan AMHS interconnections (P1), which could later be included in the ANP, by means of a proposal for amendment (PFA).

3.19 Regarding COCESNA's intention to use REDDIG to receive satellite ADS-B data, the AIREON representative informed that the company has taken note and that the issue will be discussed in the next coordination meetings between COCESNA and AIREON specialists.

3.20 Finally, the representative of COCESNA reported that, with regard to item h), there were already some agreements that could be reviewed in order to exchange surveillance data, and that new agreements could also be entered into.

#### *New ATS speech communications*

3.21 The Meeting was informed that, at the request of the Administrations of Argentina and Paraguay, an internal setup had been established at the Asunción node (extension 5522), assigned to the FT TWR of Encarnación (Paraguay) to facilitate coordination with FT TWR of Posadas (Argentina).

#### *Temporary AFTN SPIM - SUMU circuit*

3.22 The REDDIG Administration reported that, in March 2022, at the request of Uruguay and Peru, a temporary AFTN circuit had been established between the Lima COM centre and the Montevideo COM centre, to replace the AFTN circuit between the Ezeiza COM centre and the Montevideo COM centre, which was discontinued because the new system at the Ezeiza AMHS COM centre no longer supported AFTN users (no gateway implemented).

3.23 Peru and Uruguay have already expressed the intention to implement an AMHS interconnection (P1) between their AMHS COM centres, pending the installation of a new system in Montevideo, which should occur in the course of 2022. Once the AMHS interconnection was implemented, the temporary AFTN circuit would be deactivated.

#### *Ground network upgrade*

3.24 The Meeting noted that the current contract is N° 22502088 - Ground Network (MPLS based - 5/1 Mbps) services for the SAM Digital Network (REDDIG II) - 1 February 2021 until 31 December 2022, extendable for two more years.

3.25 On a monthly basis, a report is sent to Montreal showing State availability values that fall below 99.7%, as the case may be, in order to penalise Lumen for cases of non-compliance. The availability of Lumen/Centurylink in 2021 is shown in **Appendix F** to this part of the report.

#### *REDDIG telephone directory*

3.26 The REDDIG Administration requested the focal points to update the telephone directory (ATS and Administrative) on an annual basis or when modifications were made. In this regard, it was noted that this information was subject to the operational documents/letters of agreement between States and that

any modification, in addition to being informed and coordinated with the REDDIG Administration, should be incorporated into the official documentation of the States and be communicated through the official channels.

3.27 Emphasis was made on the need to inform the different CNS units about the alternatives available to them for coordination with their counterparts, including administrative telephone services, messaging, and REDDIG ATS speech services.

#### *Coordination improvements*

3.28 The REDDIG II Administration emphasized that the NCC and adjacent nodes should be informed of every technological changes, failures or service reconfigurations in the States' systems that affected communications over the network (PABX, voice switching, MTA, automated systems, surveillance data exchange, etc.).

#### *Node configuration back-up*

3.29 In 2021, back-ups were made of network equipment configurations, for each station, which were stored and available at the Manaus NCC.

#### *Security*

3.30 The Meeting took note that passwords of station routers and switches were changed annually in order to preserve security and integrity of equipment processes and configurations. In some cases where situations were detected at State LAN level, access lists were implemented. These measures would be reinforced once the firewalls and switches that were in the process of being provided and installed were in place. In case of any intervention by local technical staff, they should contact the NCC and report their activities and request access.

3.31 The Secretariat reported that the Technical Cooperation Bureau (TCB) had carried out the procurement process for the firewall equipment, as per Conclusion RCC/22-4. It was noted that the purpose of the firewalls was to provide security, standardise equipment and replace the edge routers in each node.

#### *Procurement of spare parts*

3.32 Based on the information on the useful life of the equipment and the specificities of the logistical and administrative processes of each State, which caused spare part shortages, it was recommended that the Administrations of each State make provision for the procurement of spare parts for their nodes in order to deal with any new occurrences immediately and ensure the operability of services. So far, the only State that had taken steps to purchase spare parts for its nodes was Brazil. Venezuela had some spare parts from a similar national network.

#### *Solar explosions*

3.33 The Meeting took note that solar flares affecting the satellite network were reported on an annual basis. This phenomenon occurred twice a year and was resolved by virtue of the geographical redundancy of the Manaus and Ezeiza NCCs.

## REDDIG II TRAINING PROGRAMME

3.34 The Meeting took note that, due to the pandemic, the training courses scheduled for 2020 and 2021 could not be delivered.

3.35 The following training activities had been scheduled:

a) **Recurrent training on REDDIG operation and maintenance:**

It is a regular task of the REDDIG Administrator to deliver this training during his annual visits to the nodes, which was not feasible due to Covid-19 restrictions;

b) **Course on firewall security and configuration policies and Advanced course on firewall management and monitoring:**

In both cases, training could not be delivered due to Covid-19, which affected the bidding process.

c) **Training for the Manaus NCC staff on IP packet analysis using *sniffer* (radar, AMHS, etc):**

This activity could not take place due to Covid-19 restrictions.

3.36 With regard to RTO-09, it was to be held in Cochabamba (Bolivia), but was postponed until circumstances allowed.

## REDDIG II OPERATION AND ANALYSIS OF THE IMPLEMENTATION OF NEW SERVICES

### *Development of a space for consultations on the network*

3.37 The Meeting was informed that the Brazilian Administration had provided a mobile phone to NCC technical staff to give access to electronic messaging (WhatsApp, Signal, Telegram, etc.); a tool that had greatly facilitated coordination throughout the pandemic period. Currently, all NCC staff was using this complementary means, and the Administrator used his own mobile phone service for this same purpose.

### *Antivirus software in NMS servers*

3.38 The Meeting took note that, as was done annually, the antivirus was renewed in 23 NMS servers, with a one-year licence. The renewal was due on 31 December each year. The antivirus update was carried out by NCC Manaus staff in January 2022.

### *Corrective maintenance*

3.39 The REDDIG II Administration reported that, due to the volcanic ash that affected the Guayaquil node (Ecuador), the satellite station had been shut down to safeguard the integrity of the equipment. When conditions improved, prior to the start-up of the Guayaquil station, maintenance had been carried out on its RF components. It should be noted that services continued to be provided at all times over the ground network.

3.40 Failures occurred in the coolers of the Lima NMS servers.

3.41 There was a failure in the source of the NMS server in the Bogota node and a spare part was being procured to restore its operation.

*Preventive maintenance*

3.42 The Meeting took note that, due to the pandemic, it was impossible to fulfil the preventive maintenance programme planned for 2021. However, it was the intention to complete this task in 2022, paying special attention to the RF part of each station. Only remote corrective maintenance of the software had been carried out.

*Visit to the nodes*

3.43 The Secretariat reported that, although two missions were to be undertaken by the REDDIG Administrator, they had been cancelled due to the pandemic in the Region.

3.44 Regarding this issue, Conclusion RTO/8-2 on the need for technical visits by the REDDIG Administrator, as approved by the Coordination Committee of Project RLA/03/901, remained valid.

*Analysis of REDDIG II performance improvement requirements*

3.45 Participants were informed that issues related to security, additional nodes inside and outside the Region, new services, ground network bandwidth upgrades, interconnections between Regions, the useful life of the existing REDDIG equipment and possible actions, continued to be analysed in 2021.

3.46 In this sense, work was being done on a platform based on the ground network, taking into account known factors (cost/benefit, delay, jitter, throughput, latency, error rate, interaction of factors, etc.). This had led to rethinking whether the satellite network should continue to be considered as the primary means. In this regard, there had been some tests in which all services had been carried over the ground network as the primary means, with very positive results. **Appendix G** to this part of the Report presents the prioritization in the use of network segments as of February 2022.

3.47 On this issue, the Meeting discussed the possibility of establishing the ground segment (MPLS) as the primary means of communications, leaving the satellite segment as a secondary means. After some comments and discussion, the Secretariat noted that an argument could be a reduction in the cost of contracting satellite segment bandwidth.

3.48 At present, the Project hires 4.4 MHz of bandwidth from the space segment provider (Intelsat). It could be desirable to contract less bandwidth (for example, 3 MHz) in order to provide redundancy circuits.

3.49 The Meeting agreed that a study should be conducted to identify, in each node, the communications to be served with redundant circuits, in order to determine the minimum bandwidth to be hired.

3.50 The Secretariat would circulate a State letter asking about any interest in the implementation of the ground segment as the primary means, and for a list of the communications that should have redundancy, in order to calculate the minimum bandwidth.

*Support to coordination of extra-regional interconnections*

3.51 The Secretariat highlighted that support has been provided to Trinidad & Tobago, Venezuela, Peru, Brazil, and United States (FAA) for the establishment of AMHS/P1 interconnections.

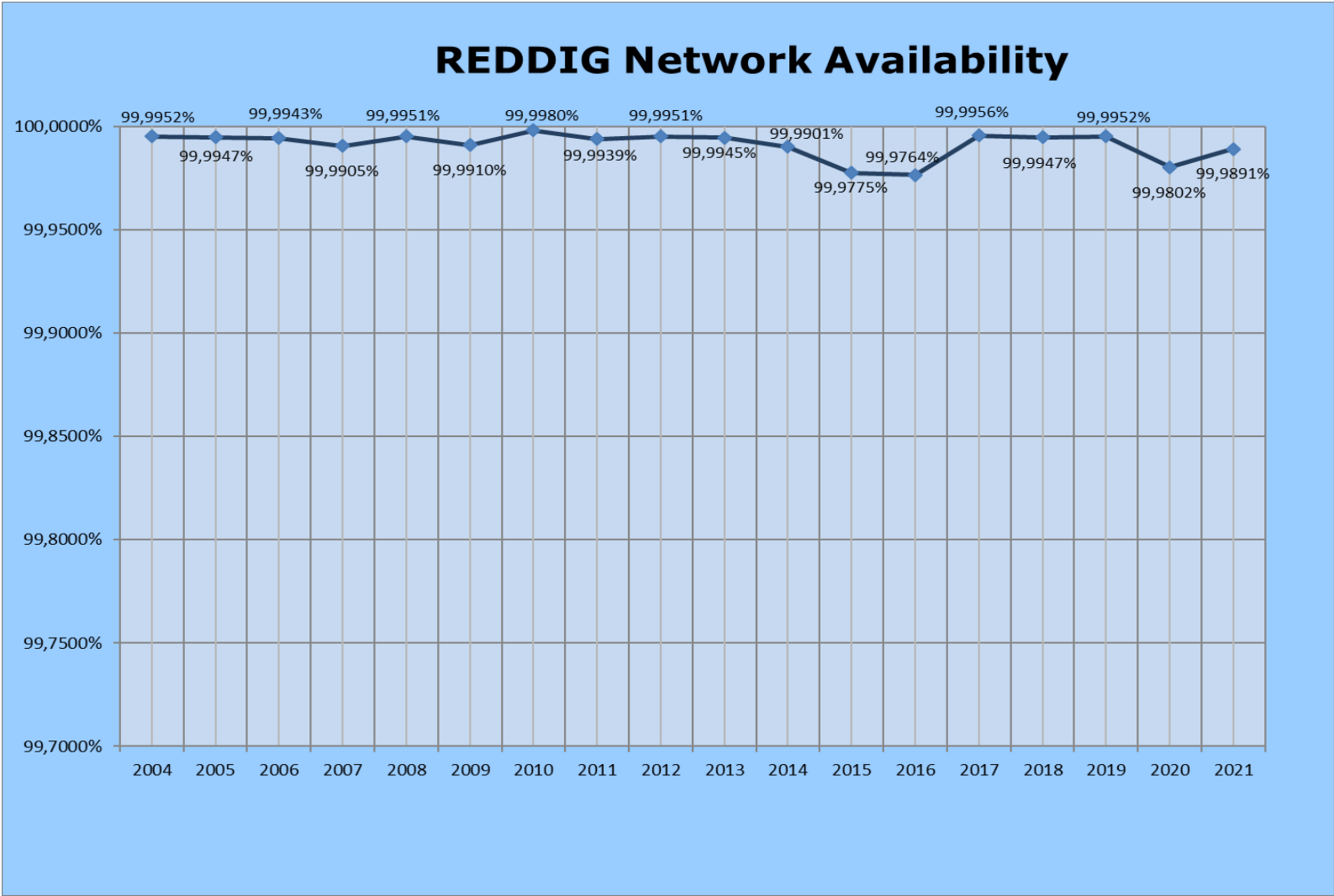
3.52 The REDDIG Administration had an active participation in the interconnection processes of AMHS systems in the Region, as well as in different services that were exchanged between States, such as tests with the OPMET bank in Brasilia. Note was also taken that it provided assistance in various situations that arose in each State in relation to services and systems, and which were external to REDDIG.

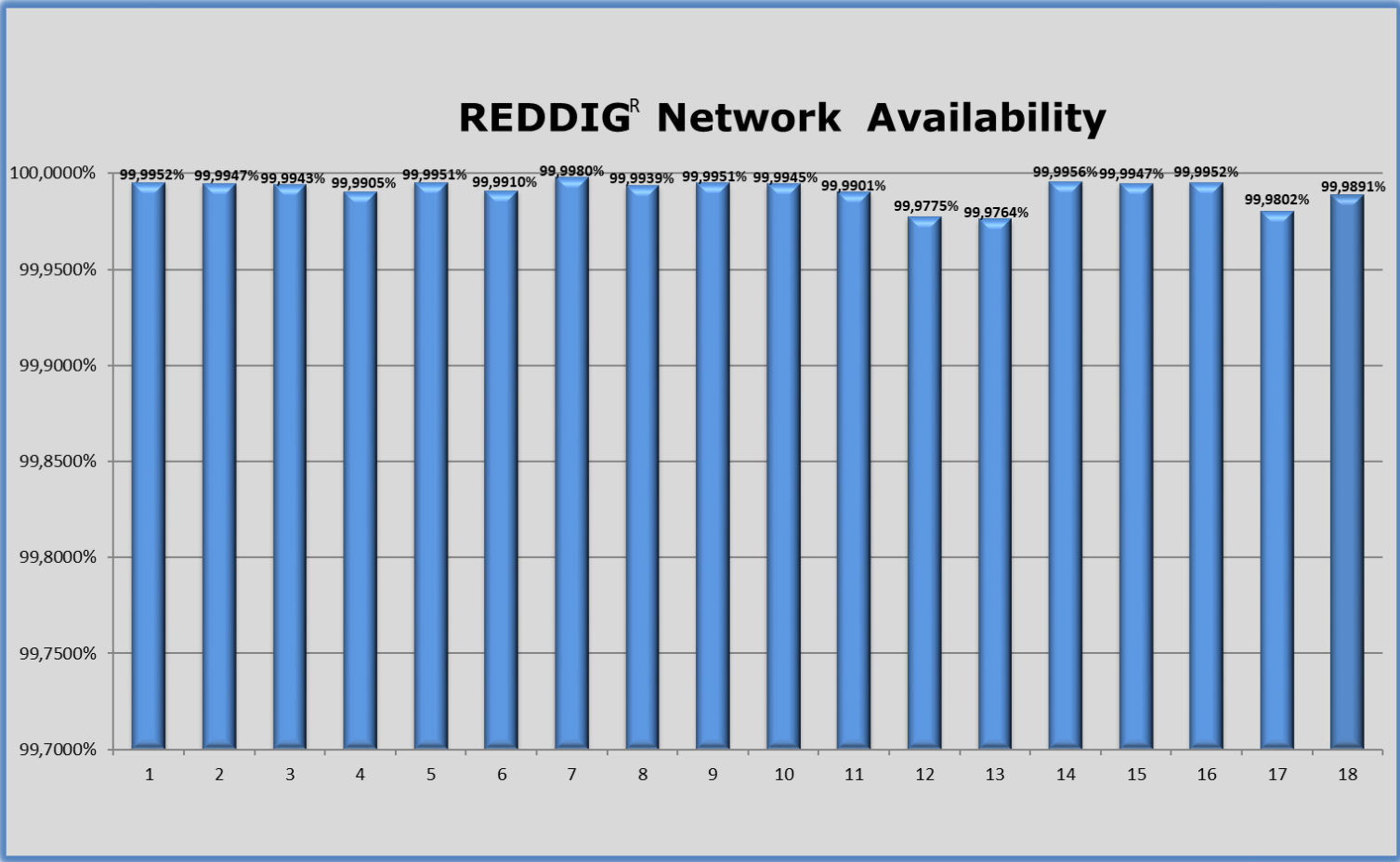
3.53 Coordinated actions had also been carried out with INTELSAT in relation to interference, measurements and antenna re-aiming at the time of transponder migration (particularly with the Brasilia node).

-----

APÉNDICE / APPÉNDIX A

Disponibilidad de la REDDIG / REDDIG Availability





**APPENDIX B****Movimientos Logísticos / Logistic Movements**

<b>REGISTRO DE SERVICIOS - ADMINISTRACIÓN Y LOGÍSTICA DE EQUIPOS Y PARTES</b>						
<b>EVENTO</b>	<b>NODO</b>	<b>EQUIPO/PARTE</b>	<b>DOC EMBARQUE</b>	<b>ENVIO DE</b>	<b>HASTA</b>	<b>GASTOS ENVIO US\$</b>
<b>OR-21001</b>	<b>SUMU</b>	<b>Redundancy Switching System (RSS)</b>	<b>SAMRO-86</b>	Lima RO	Carrasco, Uruguay	p/Uruguay (REDDIG)

## APÉNDICE C / APPENDIX C

### Repuestos REDDIG II 2022 / REDDIG II Spare Parts

Description	Qty	Unit Price USD	Total Price USD
<b>INDOOR Equipment</b>			
— IDU 1070 19" NS + PS AC	1	20,664.00	20,664.00
— License Key Mesh Topology		included	
<b>GORGY TIMING Equipment</b>			
GPS Master Clock— RT9s including on-outdoor GPS	1	3,289.00	3,289.00
Antenna and cable			
GPS standalone outdoor Antenna for RT9s (without cable)	1	937.00	937.00
<b>LAN Port Server</b>			
NPORT 5610-8	1	1,230.00	1,230.00
<b>10 MHz Redundancy Equipment</b>			
BIAS-T switch (10MHz redundancy system)	1	2,125.00	2,125.00
Passive DC-Block (Power injector 10MHz pass)	4	542.00	2,168.00
Passive DC-Block (RF Bandwidth)	4	130.00	520.00
Passive Splitter (2 Port RF Bandwidth)	2	265.00	530.00
<b>Spare Parts for HPE PROLIANT DL160 Server</b>			
Fans for HPE PROLIANT DL160 Server	10	124.00	1,240.00
Hot-Plug HP Midline HDD 500GB 7.2K SATA	2	405.00	810.00
<b>OUTDOOR Equipment</b>			
<b>RF Equipment</b>			
— IBUC 80W	1	18,653.00	18,653.00
— Tx 1+1 switching system	1	8707.00	8707.00
— Rx 1+1 switching system	1	9,523.00	9,523.00
Waveguide Switch (CPRG flange) + Control cable	1	3,528.00	3,528.00
LNB with external 10MHz reference	1	804.00	804.00
RF filter (for LNB path)	1	676.00	676.00
N-Female Type coaxial connector (for CNT/LMR-400 Type coaxial cable)	4	45.00	180.00
N-Male Type coaxial connector (for CNT/LMR-400 Type coaxial cable)	4	44.00	176.00

N-Male Type coaxial connector (for CNT/LMR-600 Type coaxial cable)	4	67.00	268.00
<b>EQUIPOS Y PIEZAS DE REPUESTO EN GENERAL</b>			
<del>Modem Satelital</del>	<del>4</del>		
Cable de energia	1		
Tarjeta MOD	1		
Tarjeta SIC/DEMODO	1		
Tarjeta FPG	1		
Tarjeta UIM	1		
Cable de consola	1		
Cable de RF N-SMA Macho	1		
ROUTER Cisco 2901	1		
Two port Async-Sync Serial WAN interface card	1		
Two port Async-Sync Serial WAN interface card	1		
<del>two port voice interface card FXS</del>	<del>4</del>		
ROUTER Cisco 2911	1		
24 PORT RJ45 PATCH PANEL	1		
01 TARJETA EVM-HD TELEFONICO	1		
Cable serial CISCO V.24 DTE DB25	1		
Cable serial CISCO V.24 DCE DB25	1		
Cable telefonico RJ11 cross over	1		
High density 8 port analog and digital extension module	1		
ROUTER Cisco 2901	1		
Two port Async-Sync Serial WAN interface card	1		
<del>two port voice interface card FXS</del>	<del>4</del>		
Cable serial CISCO V.24 DCE DB25	1		
<del>Rx 1+1</del>	<del>4</del>		
<del>Handheld Terminal with 2 m cable</del>	<del>1</del>		
<del>Accesorios para RX 1+1</del>	<del>1</del>		
Cables de energia	2		
Cable Coaxial de RF con conectores tipo N 6m.	1		
Cable de Gestion para LNB	1		
Cable Coaxial de RF con conectores tipo N 30 cm.	2		
Wave Guide Switch for LNB	1		
LNB Banda C	1		
LNB Banda C	1		

<del>Switch Netgear de 26 Puertos</del>	<del>1</del>		
Cable USB	1		
Switch Netgear de 26 Puertos	1		
<del>IBUC 40W</del>	<del>1</del>		
<del>IBUC 40W</del>	<del>1</del>		
1+1 Interface	1		
Switch de Guia de Onda	1		
Cable Coaxial con conectores tipo N 30cm	2		
Cables de gestión con conector tipo Militar	2		
Cable de gestión tipo ethernet	1		
Cable de Energía	2		
Manuales de Curso de Rio de Janeiro			
Documentos Oficiales REDDIG II			
Manuales REDIG II			
Documentos Oficiales REDDIG II			
<del>IBUC Terrasat 80 W</del>	<del>1</del>		
<del>IBUC Terrasat 80 W</del>	<del>1</del>		
Tarjeta Serial MOXA de 8 Puertos RS-232 PCI	1		
Disco Duro Externo IOMEGA NAS 2 Tb	1		
Fuente para Disco Duro	1		
Manuales	1		
UPS Eaton Eclipse ECO 1200 VA	1		
Cable Multipuerto Moxa 8 puertos	1		
Cable Cisco V.24 DTE	5		
Cable Cisco V.24 DCE	11		
Cable DB25 Male-Female	6		
Cable Patch Cord ethernet RJ45	6		
Cable Multiple Cisco 8 puertos ethernet con adaptadores a DB25	2		
Two port Async-Sync Serial WAN interface card	1		
Four port Async-Sync Serial HWIC	1		
Four port Async-Sync Serial HWIC	1		
Eight port Async interface card	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		

Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Two Port Voice Interface Card FXS.	1		
Four Port Voice Interface Card FXS	1		
Four Port Voice Interface Card FXS	1		
<del>Four Port Voice Interface Card FXS</del>	1		
<del>Four Port Voice Interface Card FXS</del>	1		
One Port 2nd Gen Multiflex trunks Voice Wan Interface Card E1/T1	1		
High Density voice/fax external Module	1		
Two Port 2nd Gen Multiflex trunks Voice Wan Interface Card E1/T1	1		
Eight port Async-Sync interface card	1		
Module Adapter for SM Slot on CI	1		
Module Adapter for SM Slot on CI	1		
Impresora Laser Jet Pro 400 M401dn	1		
Cables de Energía	1		
8 Port Device Server 10/100 eth	1		
RSS 16 SLOT 4U Chasis	1		
Power Module	1		
Network Control Card	1		
Dual 8 wire Module Jack A/B card	1		
Dual 8 wire Module Jack A/B card	1		
D25 A/B Card	1		
D25 A/B Card	1		
D25 A/B Card	1		
D25 A/B Card	1		
<del>RSS 16 SLOT 4U Chasis</del>	±		
<del>Power Module</del>	±		
<del>Network Control Card</del>	±		
<del>Dual 8 wire Module Jack A/B card</del>	±		
<del>Dual 8 wire Module Jack A/B card</del>	±		
<del>D25 A/B Card</del>	±		



Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
10 Base-T Ethernet Card	1		
10 Base-T Ethernet Card	1		
ISDN Card	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
E1 Expansion	1		
V.35 H	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Modulo Ram 32 MB	1		
Modulo Ram 32 MB	1		

Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Chasis CX950	1		
Multiplexor CX950e Chasis+Placa Madre	1		
Multiplexor CX950e Chasis+Placa Madre	1		
Modem Linkway 2100	1		
Tarjeta MODEM	1		
Tarjeta Ethernet	1		
FR TIA	1		
Fax CANON H12130	1		
Telefono analogico CONAIRPHONE	1		
SSPA 40 W	1		

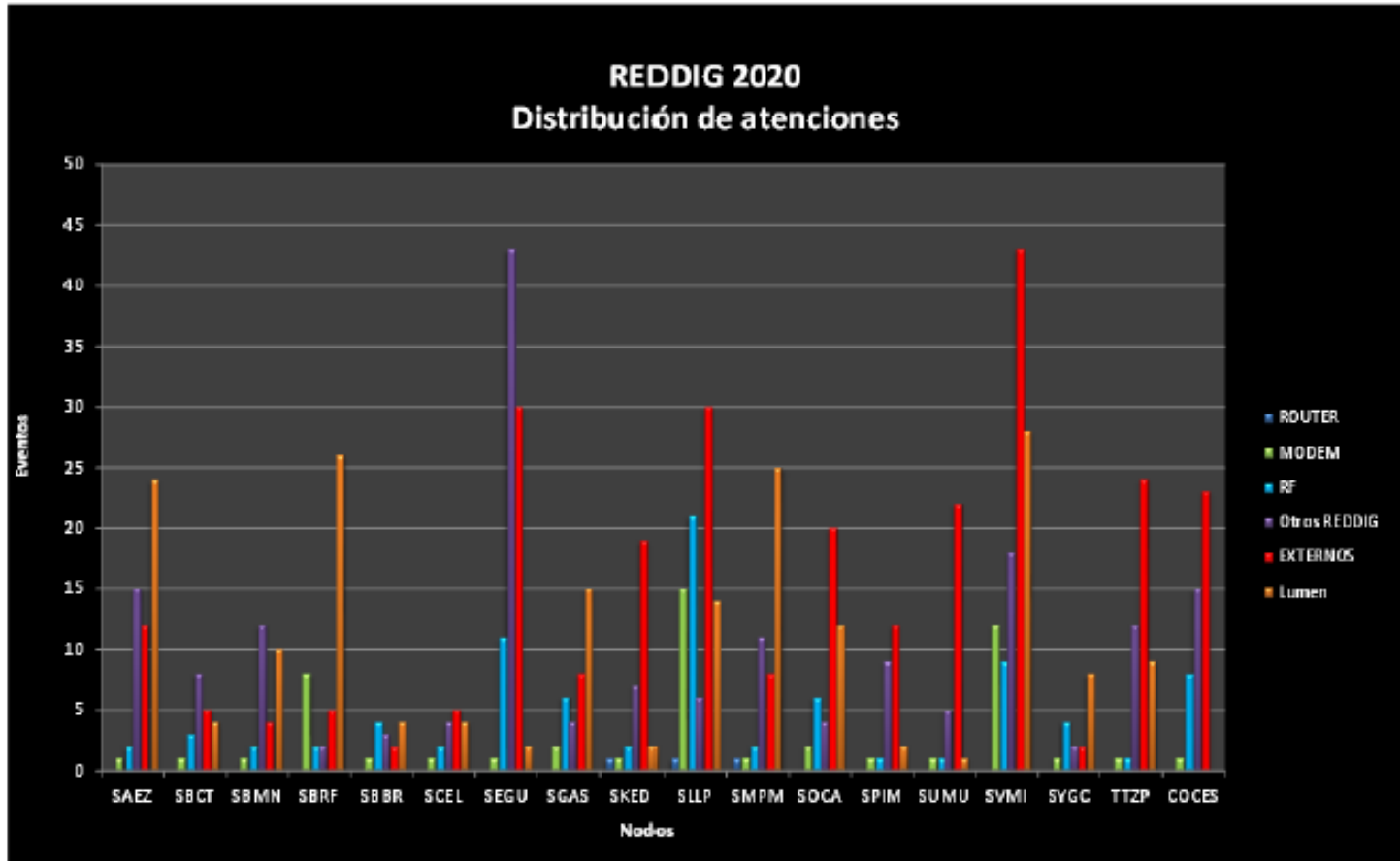
SSPA 40 W	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Rollo de cable ASSy 3 x 2.5 50 m	1		
Rollo de cable Multipar 50 m	1		
Rollo de cable Multipar 50 m	1		
LNB Banda C	1		
Cables Patch Cord Ethernet 3m	1		
Cables DB9-DB25 3m	1		
Rollo de Cable Coaxial 50R 50m	1		
SSPA 40 W	9		
GPS Datum	2		
Cable de consola Cisco	1		
Cable de Gestion SSPA Paradise	1		
Conectores Tipo N 50R sin ensamblar	1		
Pulsera anti estatica	1		
Paquete de Placas vacias para equipos Memotec.	1		
Combinador-Divisor de RF	4		
Convertidos RS232-RS485	1		
Paquete de instalacion SUN SOLARIS	1		
Tarjeta Multipuerto Serial	1		
Cable multipuerto DB25 para Multi I/O Memotec	1		
Cable Patch Cord Ethernet RJ45 5m	2		
Cable de consola Memotec	1		
Adaptador DB9-DB25	2		
Adaptador DB25-M34	2		

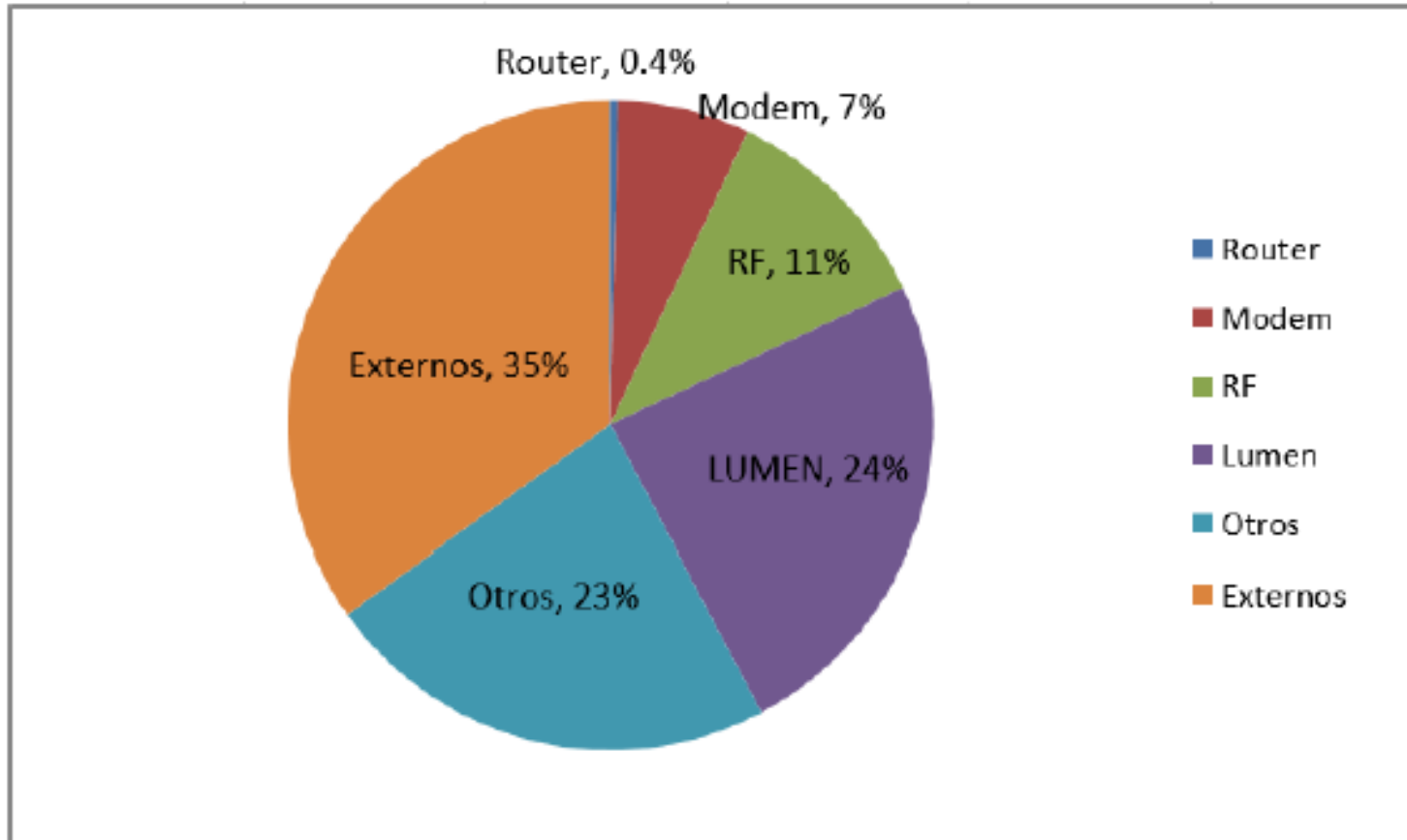
---

Cable de energia	1		
Cable RF Coaxial N-SMA Male	2		

**APÉNDICE D/ APPENDIX D**

**Atenciones y Averías / Attentions and Faults**





\*se observa que el 58% de las atenciones obedecieron a "Otros" y "Externos"

## APÉNDICE E / APPENDIX E

### Puntos Focales REDDIG II / REDDIG II Focal Points

STATE / ESTADO	Name / Nombre	Position/ Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
ARG	María Malena Reinoso, EANA	Jefa Departamento Comunicaciones – Gerencia CNS	<a href="mailto:mreinoso@eana.com.ar">mreinoso@eana.com.ar</a>	(5411) 4320-2384	EANA S.E. Av. Rivadavia 578, Piso 5 Buenos Aires, Argentina
	Facundo Gatti, EANA	Gerente Ejecutivo Sistemas y CNS	<a href="mailto:fgatti@eana.com.ar">fgatti@eana.com.ar</a>	(5411) 4320-2384	EANA S.E. Av. Rivadavia 578, Piso 5 Buenos Aires, Argentina
BOL	Javier Osvaldo Campos González, DGAC	Inspector CNS	<a href="mailto:jcampos@dgac.gob.bo">jcampos@dgac.gob.bo</a>	(5912) 7152-0131	
	Hernando Lara, AASANA	Jefe Unidad Nacional CNS AASANA	<a href="mailto:nanos_24@hotmail.com">nanos_24@hotmail.com</a>	(5912) 212-7959	Aeropuerto Internacional El Alto, Bloque Técnico AASANA
	Remigio Blanco, AASANA	Responsable de Telecomunicaciones AASANA	<a href="mailto:rblanco@asana.bo">rblanco@asana.bo</a>	(5912) 237-0340	Aeropuerto Internacional El Alto, Bloque Técnico AASANA
BRA	Bruno Pacheco Santos Azevedo Costa	Asesor de Comunicaciones DECEA	<a href="mailto:pachecobpsac@decea.mil.br">pachecobpsac@decea.mil.br</a>	(5521) 21016684	Avenida General Justo, 160 Rio de Janeiro, Brasil
	Valdileide Freire de Araújo	Asesor de Comunicaciones DECEA	<a href="mailto:valdileidevfa@decea.mil.br">valdileidevfa@decea.mil.br</a>	(5521) 21016658	Avenida General Justo, 160 Rio de Janeiro, Brasil

STATE / ESTADO	Name / Nombre	Position/ Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
CHI	Christian Vergara Leyton, DGAC	Supervisor de Mantenimiento Técnico Centro de Control de Santiago	<a href="mailto:cvergara@dgac.gob.cl">cvergara@dgac.gob.cl</a>	(562) 836-4005; (562) 836-4011; (562) 644-8345	Avenida San Pablo 8411, Comuna de Pudahuel, Santiago, Chile
	Pedro Pastrían Céspedes, DGAC	Supervisor de Mantenimiento Técnico Centro de Control de Santiago	<a href="mailto:ppastrian@dgac.gob.cl">ppastrian@dgac.gob.cl</a>	(562) 836-4005; (562) 836-4011; (562) 644-8345	Avenida San Pablo 8411, Comuna de Pudahuel, Santiago, Chile
COL	Andrés Colmenares	Ingeniero Grupo de Comunicaciones y Redes Aeronáuticas - Dirección de Telecomunicaciones y Ayudas a la Navegación Aérea	<a href="mailto:andres.colmenares@aerocivil.gov.co">andres.colmenares@aerocivil.gov.co</a>	(+57) 601 241-2038 (+57) 317 860-6289	Aeropuerto Internacional El Dorado, Av. El Dorado N° 112-09 Edif. C.N.A. (Centro Nacional de Aeronavegación)
	Robinson Quintero	Ingeniero Grupo de Comunicaciones y Redes Aeronáuticas - Dirección de Telecomunicaciones y Ayudas a la Navegación Aérea	<a href="mailto:robinson.quintero@aerocivil.gov.co">robinson.quintero@aerocivil.gov.co</a>	(+57) 601 241-2040 (+57) 300 218-8209	Aeropuerto Internacional El Dorado, Av. El Dorado N° 112-09 Edif. C.N.A. (Centro Nacional de Aeronavegación)
ECU	Washington Quinde	Analista CNS para la Navegación Aérea 1	<a href="mailto:washington.quinde@aviacioncivil.gob.ec">washington.quinde@aviacioncivil.gob.ec</a> ; <a href="mailto:ing.washington.quinde@gmail.com">ing.washington.quinde@gmail.com</a>	(593) 2 2947400 ext. 2141-97 0988448196	Av. De las Américas, Edif. Servicio para la Navegación Aérea, Guayaquil
FRA	Serge Cupoli	Jefe de la Subdivisión Técnica	<a href="mailto:serge.cupoli@aviationcivile.gouv.fr">serge.cupoli@aviationcivile.gouv.fr</a>	(594) 694-403331	Aviation Civile, Aeroport de Cayenne Félix Eboué, 97351 Matoury, Guyane Francaise
GUY	Mortimer Salisbury, Guyana Civil Aviation Authority	Manager CNS and Technical Support	<a href="mailto:mbsalisbury2000@yahoo.com">mbsalisbury2000@yahoo.com</a>	(592) 261-2569	Control Tower complex, Cheddi Jagan International Airport, Timehri, East Bank Demerara, Guyana
	Sewchan Hemchan, Guyana Civil Aviation Authority	Electrical Engineer	<a href="mailto:sewchan_hemchan@yahoo.com">sewchan_hemchan@yahoo.com</a>	(592) 261-2569	Control Tower complex, Cheddi Jagan International Airport, Timehri, East Bank Demerara, Guyana

STATE / ESTADO	Name / Nombre	Position/ Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
PAR	Víctor Morán Maldonado, DINAC	Subdirector de Servicios Aeronauticos	<a href="mailto:moranchu@gmail.com">moranchu@gmail.com</a>	(595 21) 758 5208	Centro de Control Unificado, Gral. Artigas y Fernando de Mompox, Mariano Roque Alonso, Paraguay
	Juan Felix Estigarribia, DINAC	Gerente de Telecomunicacioens y Electronica	<a href="mailto:jfe2406@gmail.com">jfe2406@gmail.com</a>	(59521) 758-52019, mobile +595971627227	
	Alexander Aguayo, DINAC	Jefe de Dpto. Comunicaciones	<a href="mailto:alexanderaguayo97@gmail.com">alexanderaguayo97@gmail.com</a>	(595-21) 758-5201, Mobile +595981567951	
PER	Luis Silva Gárate, CORPAC	Jefe del Equipo encargado de la Operac. y Mantto. del Nodo REDDIG-Lima	<a href="mailto:lsilva@corpac.gob.pe">lsilva@corpac.gob.pe</a>	(511) 515-3015; (511) 414-1514	Aeropuerto Internacional Jorge Chávez, Callao, Perú
SUR	Cicilson Jurgen	Acting Chief of CADSUR CNS Division	<a href="mailto:jurmaja@hotmail.com">jurmaja@hotmail.com</a> and <a href="mailto:cns@cadsur.sr">cns@cadsur.sr</a>	(597) 531288; (597) 498898; (597) 325123, Mobile: (597) 8792810	J. A. Pengel International Airport, Zanderij, district Para, Zorg en Hoop Airport, Paramaribo
	Kofi Orlando	CNS Supervisor	<a href="mailto:oomken80@gmail.com">oomken80@gmail.com</a>	(597) 531288; (597) 498898; (597) 325123, Mobile: (597) 8531923	J. A. Pengel International Airport, Zanderij, district Para, Zorg en Hoop Airport, Paramaribo
TRI	Rohan Garib, Civil Aviation Authority	Executive Manager Air Navigation Services	<a href="mailto:rgarib@caa.gov.tt">rgarib@caa.gov.tt</a>	Office: (1 868) 669 4806 Cell: (1 868) 689 4889	P.O. Box 2163 National Mail Centre Golden Grove Road Piarco – Trinidad
	Veronica Ramdath, Civil Aviation Authority	Manager Communication Navigation Surveillance	<a href="mailto:vramdath@caa.gov.tt">vramdath@caa.gov.tt</a>	Office (1 868) 669 4806 Cell: (1 868) 774 4180	P.O. Box 2163 National Mail Centre Golden Grove Road Piarco – Trinidad

STATE / ESTADO	Name / Nombre	Position/ Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
URU	Miguel Vera, DINACIA	Técnico de la División Comunicaciones	<a href="mailto:miguelvera@adinet.com.uy">miguelvera@adinet.com.uy</a>	(5982) 6040408, Ext. 4520	Aeropuerto Internacional de Carrasco Av. Wilson Ferreira Aldunate 253 Paso Carrasco, Canelones
	Ricardo Clavijo, DINACIA	Director de Electrónica	<a href="mailto:rclavijo@dinacia.gub.uy">rclavijo@dinacia.gub.uy</a>		
VEN	Jarumy Castillo, SNA, INAC	Gerente SNA	<a href="mailto:ja.castillo@inac.gob.ve">ja.castillo@inac.gob.ve</a>	(58212) 355-2143; (58424) 354-99.24	Edificio ATC, 2do piso, Gerencia de Mantenimiento SNA, Maiquetía, Edo. Vargas, Venezuela.
	Juan Carlos Aparicio, INAC.	Coordinador CNS	<a href="mailto:Juan.aparicio@inac.gob.ve">Juan.aparicio@inac.gob.ve</a>	(58426) 433-24.03	Edificio ATC, 2do piso, Gerencia de Mantenimiento SNA, Maiquetía, Edo. Vargas, Venezuela.
COCESNA	Roger Perez	Gerente Senior ACNA (Agencia Centroamericana de Navegación Aérea)	<a href="mailto:roger.perez@cocesna.org">roger.perez@cocesna.org</a>	(504) 22757090 (504) 99266191	COCESNA, 150 metros al sur aeropuerto Toncontin, Tegucigalpa, Honduras.
	Jose Manuel Flores	Gestor Tecnico Supervisor	<a href="mailto:manuel.flores@cocesna.org">manuel.flores@cocesna.org</a>	(504) 22757090 (504) 22757150 (504) 94877702	COCESNA, 150 metros al sur aeropuerto Toncontin, Tegucigalpa, Honduras.

APÉNDICE F / APPENDIX F

DISPONIBILIDAD DE LUMEN DURANTE EL AÑO 2021 / AVAILABILITY Lumen DURING THE YEAR 2021

	jan#21		feb#21		mar#21		abr#21		mai#21		jun#21		jul#21		ago#21		set#21		oct#21		nov#21		dez#21		TOTAL					
	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit	Availabili ty	USD Credit		
SAEZ	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		1,145	99,96%
SBBR	98,538%	12,20	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		98,844%	6,762	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		18,962	99,78%
SBCT	100,000%		99,525%	1,38	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		1,382	99,96%
SBMN	100,000%		100,000%		100,000%		99,604%	0,80	98,930%	6,43	100,000%		96,078%	30,24	97,681%	16,86	98,611%	9,09	100,000%		100,000%		100,000%		100,000%		100,000%		63,427	99,24%
SBRF	100,000%		96,922%	21,95	98,798%	7,12	92,740%	54,98	98,864%	6,60	100,000%		97,521%	17,21	100,000%		100,000%		100,000%		100,000%		98,980%	5,69	100,000%		113,556	98,65%		
SCEL	100,000%		93,349%	52,08	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		52,078	99,45%
SEGU	100,000%		100,000%		100,000%		98,985%	5,863	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		5,863	99,92%
SGAS	100,000%		100,000%		99,518%	3,413	100,000%		100,000%		100,000%		100,000%		100,000%		93,688%	112,725	97,201%	46,856	100,000%		100,000%		100,000%		100,000%		162,994	99,20%
SKED	100,000%		100,000%		100,000%		97,982%	13,572	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		13,572	99,83%
SLLP	100,000%		100,000%		100,000%		99,585%	3,047	100,000%		99,175%	13,912	97,348%	62,328	100,000%		100,000%		100,000%		100,000%		97,860%	48,76	100,000%		128,047	99,50%		
SLCB												97,348%	53,39	100,000%		72,571%	615,828	100,000%		100,000%		100,000%		100,000%		100,000%		669,218	94,99%	
SMPM	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		96,131%	140,619	100,000%		100,000%		99,628%	2,837	143,456	99,65%		
SOCA	100,000%		100,000%		100,000%		100,000%		94,510%	138,054	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		138,054	99,54%
SPIM	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		0	100,00%
SLUMJ	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		0	100,00%
SVMJ	100,000%		100,000%		99,678%	0,629	100,000%		100,000%		100,000%		100,000%		99,392%	8,809	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		9,438	99,92%
SYGC	100,000%		100,000%		100,000%		100,000%		98,934%	36,323	96,983%	128,514	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		164,837	99,66%
TTZP	100,000%		100,000%		95,800%	34,71	100,000%		100,000%		100,000%		100,000%		100,000%		96,711%	26,602	100,000%		100,000%		100,000%		100,000%		100,000%		61,312	99,38%
SBRJ																	100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		0	100,00%
ICAO													100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		100,000%		0	100,00%
	94,363%	12,20	93,878%	75,41	94,100%	45,87	93,828%	78,27	93,958%	187,41	94,231%	142,43	104,905%	163,18	105,329%	32,43	108,977%	764,25	110,716%	188,62	110,936%	54,448	111,09%	2,84	1747,341	1988,62%	1747,34	99,43%		

Note: SLA-Availability for all nodes: 99.70%  
 Nodo Cochabamba, 21 Jun 2021  
 Nodo Rio de Janeiro, 31 Aug 2021  
 Nodo Oficina Regional OACI, 14 Jun 2021

**APÉNDICE G / APPENDIX G**

**Prioridad de utilización de los segmentos de red (2021) / Network segments priority of utilization (2021)**

Prioridad FEB 2022

	Argentina	Bolivia	Brasil Recife	Brasil Manaus	Brasil Brasilia	Brasil Curitiba	Chile	Colombia	Ecuador	Francia	Guyana	Paraguay	Perú	Suriname	Trinidad & Tobago	Uruguay	Venezuela	Terrestre	Satelital
Argentina		Terr	Terr	Terr	Terr	Terr	Terr	Sat	Terr	Sat	Sat	Terr/Sat	Terr	Terr	Sat	Terr	Terr	68,75%	31,25%
Bolivia	Terr		Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	100,00%	0,00%
Brasil Recife	Terr	Sat		Terr	Terr	Sat	Sat	Sat	Sat	Terr	Sat	Sat	Sat	Sat	Sat	Terr	Sat	31,25%	68,75%
Brasil Manaus	Sat	Sat	Sat		Sat	Sat	Sat	Terr	Sat	Terr	Sat	Sat	Sat	Sat	Sat	Sat	Sat	12,50%	87,50%
Brasil Brasilia	Terr	Terr	Terr	Terr		Terr	Sat	Terr	Sat	Terr	Sat	Terr	Terr	Terr	Sat	Sat	Terr	68,75%	31,25%
Brasil Curitiba	Terr	Sat	Sat	Terr	Sat		Sat	Sat	Sat	Sat	Sat	Terr	Sat	Sat	Sat	Terr	Sat	25,00%	75,00%
Chile	Terr	Sat	Sat	Terr	Sat	Sat		Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	12,50%	87,50%
Colombia	Sat	Sat	Sat	Sat	Terr	Sat	Sat		Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	93,75%	6,25%
Ecuador	Sat	Sat	Sat	Terr	Terr	Sat	Sat	Terr		Sat	Sat	Sat	Terr	Sat	Sat	Sat	Sat	25,00%	75,00%
Francia	Terr	Sat	Sat	Sat	Terr	Sat	Sat	Sat	Sat		Sat	Sat	Sat	Sat	Sat	Sat	Sat	12,50%	87,50%
Guyana	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat		Sat	Sat	Sat	Sat	Sat	Sat	0,00%	100,00%
Paraguay	Terr/Sat	Sat	Sat	Sat	Terr	Terr	Sat	Sat	Sat	Sat	Sat		Sat	Sat	Sat	Sat	Sat	18,75%	81,25%
Perú	Sat	Terr	Sat	Sat	Terr	Sat	Terr	Terr	Sat	Sat	Sat	Sat		Sat	Sat	Sat	Terr	31,25%	68,75%
Suriname	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr		Terr	Terr	Terr	100,00%	0,00%
Trinidad & Tobago	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Terr		Sat	Sat	6,25%	93,75%
Uruguay	Terr	Sat	Terr	Terr	Terr	Terr	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat		Terr	37,50%	62,50%
Venezuela	Sat	Sat	Sat	Sat	Terr	Sat	Terr	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Sat	Terr		18,75%	81,25%
																		38,97%	61,03%
																		100,00%	

**Agenda Item 4: 2022 Work Plan**

4.1 Under this agenda item, the following working paper was presented:

- WP/04 – *Activities foreseen for 2022* (presented by the Secretariat)

4.2 The Meeting reviewed the following activities scheduled for 2022:

- a) Operation of REDDIG II and analysis of the implementation of new services;
- b) Activities and new services on the MEVA III/ REDDIG II interconnection;
- c) 2022 training programme.

**OPERATION OF REDDIG II AND ANALYSIS OF THE IMPLEMENTATION OF NEW SERVICES***Requirements to delegates*

4.3 Like every year, the REDDIG Administration requested the following from the delegates:

- a) verify that stations are registered in the frequency spectrum regulatory bodies and report on the status. Remember that carrier frequencies were modified;
- b) update information on the focal points of the Project through an official written communication addressed to the Regional Office; and
- c) check the status of electrical facilities and the UPS of each node, and of the grounding system.

4.4 States were also urged to make the necessary efforts to improve logistics, in order to avoid the problems that have been emerging. These problems threaten the availability of the network, disrupt other nodes, and may affect the safety of air operations.

4.5 The Meeting took note that the REDDIG Administration was making every effort to complete the repair of the items sent for factory maintenance and expected to return the equipment to the respective nodes in the course of 2022. The **Appendix** to this part of the report lists the equipment in the process of factory repair.

4.6 The representatives of Paraguay surrendered a damaged MODEM from the Asuncion station, which would be sent for repair to the factory.

*REDDIG III*

4.7 The Secretariat noted that new solutions, new technologies, and in particular the future needs would continue to be considered this year in order to define a network that is more geared to service management and free of the logistical problems that had emerged in the two previous versions of REDDIG. (Conclusion RCC/24-2 – Establishment of the REDDIG III *ad hoc* Group).

*Nodes in Johannesburg and Madrid*

4.8 Lumen representatives reported that the node in Johannesburg had been installed in a unit at the airport, but not in the appropriate premises of the air navigation service provider (ANSP). It was estimated that the node would be installed in the correct premises at the Johannesburg airport during the first half of May 2022.

4.9 The Madrid node was expected to be in place by the first half of June 2022.

4.10 **Appendix B** to this part of the Report presents the REDDIG II topology

#### *CRV-REDDIG II interconnection*

4.11 The Meeting took note that several meetings had been held with CRV and REDDIG participating States, CNS officers of the APAC and SAM Offices, and the telecommunication providers of the two networks (PCCW Global and Lumen).

4.12 A representative of Lumen reported that they were going to propose to PCCW Global a new, simpler interconnection scheme, using a Lumen data centre in Santiago, Chile, where PCCW Global uses infrastructure as a Lumen customer.

4.13 According to the Lumen representative, the proposal was more economical and faster to implement, and would be discussed with PCCW Global representatives for approval and implementation.

4.14 The Secretariat requested the representatives of Lumen to contact the representatives of PCCW Global as soon as possible to make possible the interconnection of the networks, informing the REDDIG Administration of the progress made.

#### *SITA "Additional Nodes"*

4.15 The Meeting took note that the SITA has contacted the SAM Regional Office expressing interest in contracting services directly from Lumen, with the aim of connecting to REDDIG II.

4.16 Participating virtually, a SITA representative reiterated the interest in implementing "additional nodes" and that he is already in contact with Lumen for a quote for the services of the necessary technical infrastructure.

4.17 The SITA Company must send a formal letter to the SAM Office requesting authorization to connect to REDDIG II, through the additional nodes that will be implemented, contracted directly with the REDDIG II network provider (Lumen).

#### *Installation of firewalls*

4.18 The Meeting was informed that there was a shortage of electronic components (integrated circuits, chips, etc.) on the market, which was making it difficult for electronic equipment manufacturers to deliver.

4.19 Consequently, the delivery of the firewall equipment that had been purchased would be delayed, according to a representative of Lumen. In this regard, Lumen had requested the manufacturer of the firewall equipment to send a letter informing TCB that, due to force majeure, the delivery of the equipment would be postponed.

#### *Ninth Technical-Operational Meeting of REDDIG II (RTO/9)*

4.20 The participants took note that, due to the pandemic, RTO/9 could not be held in 2020 and 2021. Accordingly, the meeting had been scheduled to be held virtually, on 13-14 October 2022.

4.21 The Secretariat indicated that even though there had been savings from not conducting training and RTOs in 2020 and 201, a significant amount of resources had been used to cover the two-year contract for the ground network, as well as for the procurement of firewall equipment. Therefore, the only face-to-face training event scheduled for 2022, using RLA/03/901 resources, would be the training course on firewall equipment to be held in Lima.

*Preventive maintenance scheduling*

4.22 In 2022, the REDDIG Administration would resume the preventive maintenance programme for the equipment in all REDDIG nodes. The preventive maintenance schedule was the same as the one presented since the RCC/22 of 2019.

*Visit to the REDDIG II nodes*

4.23 Conditions permitting, the Piarco and Guayaquil nodes had been scheduled for 2022, in addition to the assistance to be provided during the transfer of the Bogota node, and the visit to Cayenne for personnel training and on-site maintenance.

4.24 In the case of the transfer of the Bogota node and the training planned for Cayenne, the Colombian and French Administrations would bear the costs of the Administrator's presence during this process, which would be charged to the annual fees of these States.

ACTIVITIES AND NEW SERVICES ON THE MEVA III/ REDDIG II INTERCONNECTION

*Proposed communications in the interface between the CAR and SAM Regions*

4.25 The Meeting noted that the Second MEVA III - REDDIG II Interconnection Meeting (MIII-RII/INTERCON/02) would be held on 5-6 May 2022, to address the implementation of a new interconnection scheme, through the implementation of REDDIG II (MPLS) nodes in some States of the Region, as established in Conclusion RCC/27-1.

4.26 The Secretariat informed that this event would be held in a hybrid manner, with participants physically present and others connected through the Zoom teleconferencing platform. All REDDIG II members were invited to participate in the meeting.

4.27 In this regard, the Secretariat requested REDDIG II members to review the working papers to be presented at the MIII-RII/INTERCON/02 meeting, available at:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2022-REDDIG-MIII-RII-INTERCON02>

REDDIG II TRAINING PROGRAMME

4.28 The Meeting took note of two training activities scheduled for 2022:

- Course on security policies and firewall configuration: this course is to be held in Lima, pending delivery of the purchased equipment.

- Advanced course on firewall management and monitoring: on-line course to be delivered by 5 participants (SAM CNS Officer, REDDIG II Administrator, 2 members of the Manaus NCC, and 1 member of the Ezeiza NCC).

-----

**APPENDIX A****EQUIPMENT BEING REPAIRED IN FACTORY**

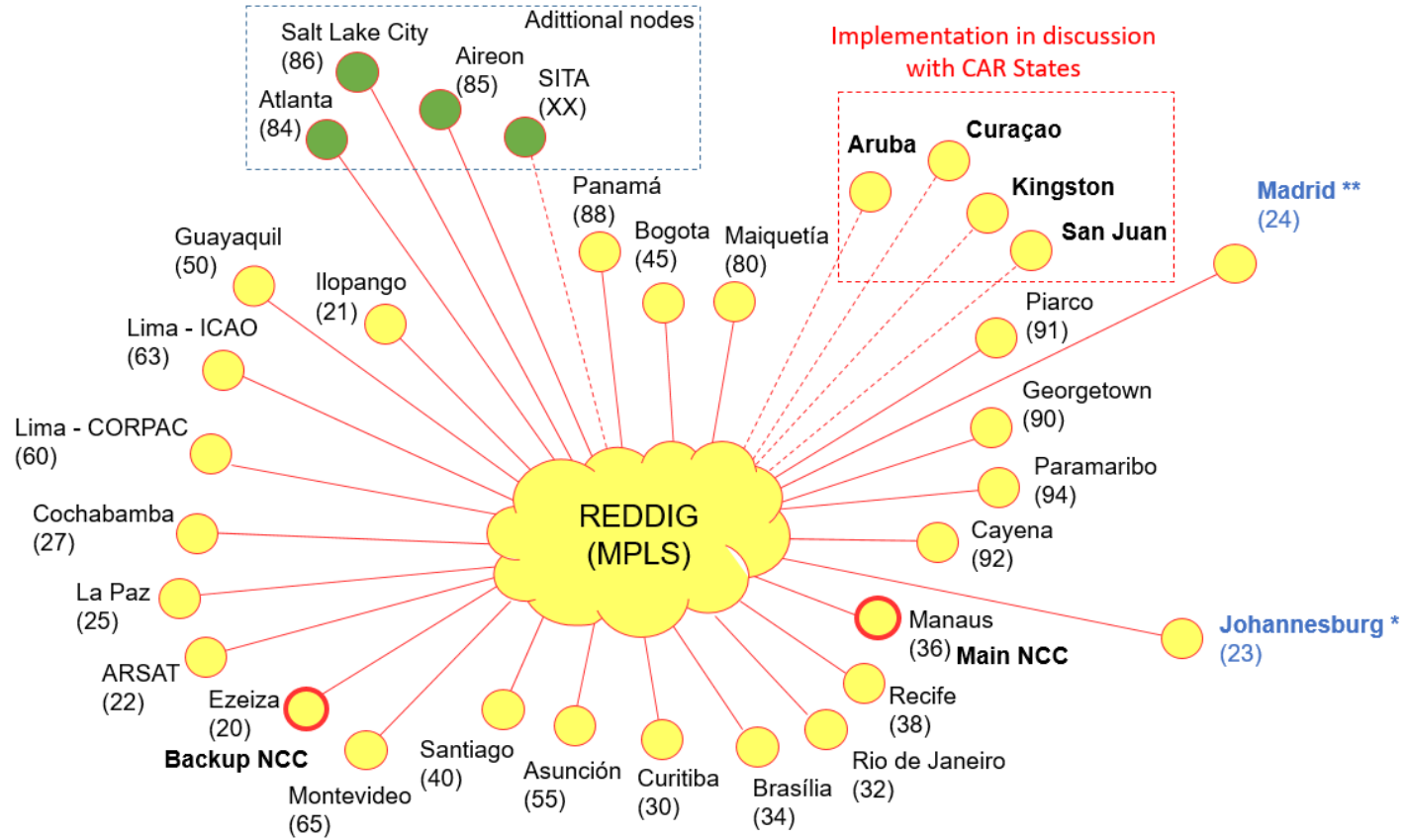
SKYWAN 1070 MODEM		
EQUIPMENT	S.N.	STATION
IDU 1070B	#00:40:71:F0:51:02	Cayenne (France)
IDU 1070B	#00:40:71:F0:52:22	Maiquetia (Venezuela)
IDU 1070B	#00:40:71:F0:51:C2	Recife (Brazil)
IDU 1070B	#00:40:71:F0:50:F6	spare (ICAO)
IDU 1070B	#00:40:71:F0:50:C6	La Paz (Bolivia)
IDU 1070B	#00:40:71:F0:2C:3C	La Paz (Bolivia)

TERRASAT RF EQUIPMENT		
IBUC 80W	TE 5022353	Bogota (Colombia)
IBUC 80W	TE 5022357	Cayenne (France)
IBUC 80W	TE 5022342	Recife (Brazil)
RX 1+1	TE 6010447	Cayenne (France)
RX 1+1	TE 6010441	La Paz (Bolivia)

- There is a Skywan IDU 1070B modem SN# 00:40:71:F0:50:AE of the Curitiba node at the Regional Office ready to be sent for repair.

APPENDIX B

REDDIG II Topology



\* Node implemented by Argentina  
\*\* Node implemented by Argentina, Brazil and Venezuela

**Agenda Item 5: Financial situation of the project and approval of the budget**

5.1 Under this item of the agenda, the meeting received on the finances of the project and the review of the project budget in WP/05 – Financial situation of the project and approval of the budget for the year 2022 presented by the Secretariat.

***Financial situation***

5.2 The Project spent **USD 673,928 in 2021, and a total of 18,200,044 from 2003 to 2021**, the detailed breakdown of expenses as of December 2021 is shown in Table # 1; and in Table # 2 of NE05.

5.3 In relation to contributions, the Meeting took note that the total contributions amounted to USD 19,424,637 (including interest and other contributions) subtracting the expenses of USD 18,200,044 gives a balance of USD 1,224,593. This positive balance is committed to service payments, separate amounts for the nodes in Argentina and Bogotá once they are installed, and other administrative expenses.

5.4 Regarding pending contributions, it was reported that Suriname had reported that they were in the process of paying their committed quota for this year according to the schedule. On the other hand, the Meeting was informed that Bolivia had changed its service provider since the end of last year, in this sense the project was pending new indications from Bolivia regarding the new contacts and those responsible for the RLA03901 project. , among the pending issues was, in addition to the designation of the Focal Point, the treatment of REDDIG payments, equipment maintenance payments, the Cochabamba node, among other things.

5.5 On the other hand, it was noted that Venezuela had made the deposit of its contribution for 2021. France and Trinidad and Tobago had already made the payment of their quotas for the year 2022 and Chile had an advanced amount of its quota for this year.

***Project review***

5.6 Next, the Meeting was informed about the steps followed for the accession of Panama to the project. On October 22, 2021, letter No. AAC-NOTA-2021-4043 was received from the Civil Aviation Authority (AAC) of Panama, where the formal request to join the Regional Project RLA/03/901 - Management System was submitted. of the REDDIG and Administration of the Satellite Segment, specifically to participate in the terrestrial network.

5.7 After carrying out the consultations with the States, revision W (attached) was prepared, where the participation of Panama is incorporated based on the expenses of Personnel, Training and MPLS Ground Service that are shared among the member States, and reduces a little the contribution of the States. This revision has been signed by the ICAO Secretary General on April 20, 2022, and has been sent to Panama for its evaluation and signature.

5.8 As a result of this situation, the Secretariat requested that the next budget revision with an update of the expenses for the year 2021 be carried out once the accession process of Panama is concluded and thus avoid confusion about the revisions; In this sense, the Meeting approved the following conclusion:

<b>Conclusion</b> <b>RCC/28-1</b>		<b>APPROVAL OF THE BUDGET OF PROJECT RLA/03/901 REV “X”</b>	
<b>That the Secretariat:</b>  After completing the accession process of Panama or before August 1, 2021, prepare the proposal for revision X of Project RLA/03/901 that includes the review and update of expenses and fees. This proposal must be circulated to the member States for their corresponding acceptance and subsequently start the approval process by the ICAO headquarters, for its subsequent presentation to the REDDIG member States.		<b>Expected impact:</b>  <input type="checkbox"/> Political / Global <input type="checkbox"/> Interregional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/Operational	
<b>Why:</b> To fulfil REDDIG management activities.			
<b>When:</b> Starting in 2022		<b>Status:</b> Ongoing	
<b>Who:</b> Secretariat.			

**Agenda Item 6: Annual project evaluation**

6.1 Under this agenda item, the Meeting took note of the information presented in WP/06 regarding the project evaluation documents, namely:

- a) Project status as of 31 December of each year, and management indicators and results (WP/6, Appendix A);
- b) Project monitoring and control, 2022 work plan (WP/06, Appendix B); and
- c) Survey on management indicators and results (WP/06, Appendix C).

6.2 The Survey on management indicator and results, was completed by 12 States (Argentina, Brazil, Chile, Colombia, Ecuador, Guiana, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay and Venezuela) whose comments and ratings show an average of 4.58 points out of a maximum of 5 established in the rating scale, which indicates that this score means that it "exceeds the requirements", with respect to the program of activities carried out in 2021. The consolidated information is presented as an **Appendix** to this item on the agenda.

6.3 Among the comments on the fulfillment of the project's objectives and the Project's management, the need to incorporate objectives or actions based on the implementation problems of the project's activities caused by the Pandemic was observed.

6.4 Finally, among the lessons learned, the need to improve interconnections and services based on the possibilities provided by the network was observed. In addition, it was suggested that in the ad hoc group for the implementation of REDDIG III, it is necessary to analyze the possibility of contracting the satellite communication service instead of maintaining the stations. It is also necessary for NCC technicians to have better knowledge of cybersecurity.

-----

**APPENDIX**

**SURVEY ON MANAGEMENT AND OUTCOME INDICATORS**

**Section I: Evaluation of current project**

**Section II: Assessment of attainment of objectives**

**Section III: Evaluation of implementation and delivery of services by ICAO**

**Section IV: Lessons learned**

5.0	Exceptional results that exceed project requirements
4.5	Exceeds requirements
4.0	Project objectives were achieved in all cases
3.5	Most of the project objectives were achieved
3.0	Some quality results were achieved and implemented
2.5	Some quality results were achieved but are not implementable
2.0	Some low-impact, low-quality results were achieved
1.5	Below the expected results
1.0	Well below the expected results

<b>Total</b>	<b>4.58</b>
--------------	-------------

**SURVEY ON MANAGEMENT AND OUTCOME INDICATORS**  
**I. EVALUATION OF CURRENT PROJECT**

<b>1.-Project objectives</b>		<b>Evaluation</b>
<b>Do you think that project objectives are properly set, in accordance with the development priorities of your State in relation to the National Air Navigation Plan, to serve the reality of civil aviation?</b>		
ARG	The project coincides and is in line with the priorities established for aeronautical telecommunications	5
BOL		
BRA		5
CHI	Yes, the objectives of the project are in accordance with the priorities of the national navigation plan of our State	4.5
COL		
ECU	Yes.	4
FRA		
GUY		4.5
PAR	The objectives of the Project are aligned according to the priorities of Our State in relation to the National Air Navigation Plan	4.5
PER	Goals are properly set	5
SUR	Yes they are.	4.5
T&T		4
URU	The objectives of the Project contemplate the priorities of our States in relation to the National Air Navigation Plan	4.5
VEN	Yes, they are in line with the objectives.	5
	<b>AVERAGE</b>	<b>4.6</b>

<b>2.-Support at regional and global level</b>		<b>Evaluation</b>
<b>Do you think that the project responds to, and supports, your administration in its commitments vis-a-vis the regional and global air navigation plans?</b>		
ARG	The project reaffirms the network as a multiservice regional platform, allowing it to meet the commitments assumed in the Regional and World Air Navigation Plan. It even leads to raising new discussions about the existing Plans.	5
BOL		
BRA		5
CHI	Yes, the project supports our administration's commitments to the PNA, both regionally and globally.	5
COL		
ECU	Yes.	4
FRA		
GUY		4.5
PAR	The Project firmly supports the commitments of our State in the Regional and World Air Navigation Plan	5
PER		5
SUR		4.5
T&T		4
URU	We consider that it responds to and supports the commitments of our Administration regarding the Regional and World Air Navigation Plan.	4.5
VEN	Yes, the response is quick and timely	5
	<b>AVERAGE</b>	<b>4.7</b>

<b>3.-Comments by the State(s)</b>		<b>Evaluation</b>
<b>Do you have any comments on project management?</b>		
ARG	The follow-up on the implementation and interconnection of the different systems of the States is highlighted.	5
BOL		
BRA	No comments.	
CHI	The management of the project satisfies and is consistent with the objectives set.	5
COL		
ECU	None.	4
FRA		
GUY	No comments.	4.5
PAR	The Project Management is fully committed to the objectives of the Project and encourages participation.	4.5
PER		5
SUR		4
T&T		
URU	The Project Management fulfills its objectives to the full satisfaction of our Administration.	5
VEN	Service is efficient and focused on needs.	5
	<b>AVERAGE</b>	<b>4.7</b>

<b>4.-Strategy and vision</b>		<b>Evaluation</b>
<b>Do you consider that the project responds to your institution's strategy and long-term vision?</b>		
ARG	The project responds to the strategy and vision, in particular, to promote technological innovation that allows the incorporation of new applications developed for aeronautical telecommunications services	5
BOL		
BRA		5
CHI	The project responds to the long-term strategy and vision of our administration.	4.5
COL		
ECU	Yes	4
FRA		
GUY		4.5
PAR	Fully responds to the requirements of our State	4.5
PER	That's right, the states have determined the activities of the Project and therefore supports the strategies of the states.	4.7
SUR		4.5
T&T		4
URU	The project responds to the long-term strategy and vision of our Administration.	4.5
VEN	Yes, since it adjusts to emerging needs, with good listening skills and focused on continuous improvement.	5
	<b>AVERAGE</b>	<b>4.6</b>

<b>5.- Project quality</b>		<b>Evaluation</b>
<b>What is your opinion about the content of this project for the achievement of its objectives?</b>		
ARG	Highlight the realization of an Evaluation of the project. Highlight the efforts to specify compliance with the requirements and seek to accompany the processes through permanent updating based on technological advances. This has facilitated the migration or replacement of systems acquired by the State with the drawbacks of each scenario.	5
BOL		
BRA		5
CHI	It is appropriate and covers what is required to achieve the objectives.	5
COL		
ECU	It meets the need of the States to distribute aeronautical information.	4
FRA		
GUY		4.5
PAR	The content of the Project is fully in accordance with the objectives.	4.5
PER		5
SUR		4.5
T&T		4
URU	The content of the Project is within what is expected for the desired objective.	4.5
VEN	Yes, the project not only focuses on the current but also on future needs without leaving aside the evolution and particular capacity of the state.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>6- Project resources</b>		<b>Evaluation</b>
<b>Do you consider that the financial, physical and human resources contemplated for the attainment of the objectives set forth in the project document are adequate?</b>		
ARG	At this time the resources are adequate.	4.5
BOL		
BRA		5
CHI	Yes, they are the right ones.	4.5
COL		
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes we agree	4.5
PER	It is important to update the financial resources allocated to the education and training of the technical personnel responsible for the operation of the REDDIG stations.	4.7
SUR		4.5
T&T		4
URU	The financial, physical and human resources established for the project are adequate.	4.5
VEN	They are adequate.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>7.-Project participants</b>		<b>Evaluation</b>
<b>Do you consider that all the parties that should be involved in the project are involved? If not, who should be participating?</b>		
ARG	Yes, all parts are considered to be present	4
BOL		
BRA	All States of the SAM region are involved in the project.	5
CHI	Yes.	4.5
COL		
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes, we consider that all those involved are in accordance with the necessary requirements	4.5
PER	There are all the parts	5
SUR		4.5
T&T		4
URU	All parties involved are the right ones.	5
VEN	All parties are involved.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>8.-Project effectiveness</b>		<b>Evaluation</b>
<b>Is the project cost-effective compared to similar programmes or projects?</b>		
ARG	The project is effective	5
BOL		
BRA		5
CHI	Yes.	4.5
COL		
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes.	4.5
PER	Very effective.	5
SUR		4.5
T&T		4
URU	This project complies adequately and effectively, like other similar projects.	5
VEN	The project is effective	5
<b>AVERAGE</b>		<b>4.6</b>

<b>9.-Modification of project objectives</b>	
<b>What modifications to project objectives and scope would you propose?</b>	
ARG	Update the terms of the immediate objectives, taking into account the activities completed
BOL	
BRA	The interconnection of Reddig with other Regions, already coordinated by the project, is very important.
CHI	None.
COL	
ECU	None.
FRA	
GUY	None for the moment.
PAR	None.
PER	
SUR	None for the moment.
T&T	
URU	The objectives and scope of the project are appropriate.
VEN	For now there are no dimensions or modifications that are necessary.

<b>10.-Other information</b>	
<b>Please provide any other information to support or further clarify your perception of the scope of the current project</b>	
ARG	Issues such as a regional directory (AMHS), paradigm shifts in terms of traffic routing, continuing on the basis of achieving qualified and qualified technicians should be discussed in a timely manner. The presence and participation of suitable personnel, of the services that are provided by the network
BOL	
BRA	The management of the project by the ICAO Office facilitates the interaction between the States of the SAM Region and with the other Regions.
CHI	None.
COL	
ECU	None.
FRA	
GUY	No comments.
PAR	There are no comments or clarifications on our part
PER	
SUR	No comments.
T&T	
URU	The scope of this project meets expectations and will serve as the basis for other projects in the future.
VEN	

**SURVEY ON MANAGEMENT AND OUTCOME INDICATORS**  
**II. ASSESSMENT OF ATTAINMENT OF OBJECTIVES**

<b>1.-Project objectives</b>		<b>Evaluation</b>
<b>In terms of project management by ICAO, do you think that project objectives are being met?</b>		
ARG	It is considered that the objectives of the project are being met.	5
BOL		
BRA		5
CHI	Yes. They are being done with a lot of professionalism and excellent management	4.5
COL	We consider that the objectives have been met	5
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes, they are being fulfilled to the extent possible, limited by the pandemic produced by COVID-19	4.5
PER	Affirmative.	5
SUR	Yes.	4.5
T&T		4
URU	We believe that the ICAO management is fulfilling the objectives of the project, being successful in the current	4.5
VEN	Yes, despite the delays that may have existed due to the pandemic, the objectives have been met.	5
	<b>AVERAGE</b>	<b>4.6</b>

<b>2.- Project schedule</b>		<b>Evaluation</b>
<b>Do you consider that project objectives are being met or have been met on a timely basis in accordance with your expectations?</b>		
ARG	Are being fulfilled	5
BOL		
BRA		5
CHI	Yes, and the delays that have occurred in some activities are due to other factors external to the project.	4.5
COL	Despite the pandemic, the schedule has been met.	4.5
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes, they are being fulfilled to the extent possible, limited by the pandemic produced by COVID-19	4.5
PER	The pandemic did not allow meeting the training objectives	4.5
SUR	Yes they are.	4.5
T&T		4
URU	The objectives of the project are being met, successfully overcoming all the inconveniences that arise using all the technological tools to overcome non-attendance	5
VEN	Yes, they have fulfilled it. The support along with the time has been adequate to the requirements, coupled with an excellent service	5
	<b>AVERAGE</b>	<b>4.6</b>

<b>3.-Use of resources</b>		<b>Evaluation</b>
<b>Do you consider that resources are being, or have been, used efficiently to meet the objectives?</b>		
ARG	Resources have been used efficiently	5
BOL		
BRA		5
CHI	Yes.	4.5
COL		5
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes.	4.5
PER	The use of resources has been efficient	5
SUR		4.5
T&T		4
URU	To achieve the desired objectives, the resources have been used efficiently.	5
VEN	Yes, resources have been focused on existing or necessary requirements.	5
<b>AVERAGE</b>		<b>4.7</b>

<b>4.- Project cost</b>		<b>Evaluation</b>
<b>Do you consider that costs related to the attainment of the objectives are, or have been, adequate?</b>		
ARG	The costs are adequate	5
BOL		
BRA		5
CHI	Yes, they have been adequate.	4.5
COL		4.5
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes.	4.5
PER		4.7
SUR	Yes.	4.5
T&T		4
URU	The costs related to meeting the objectives have been adequate.	4.5
VEN	Yes, they are.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>5.-Major achievements</b>		<b>Evaluation</b>
<b>What are the main achievements of the project in relation to the expected results?</b>		
ARG	The project has made it possible to convert the network into a multi-service platform, generating a favorable and auspicious scenario for ATS services. In this sense, this project is allowing the integration of other regions of the world	5
BOL		
BRA	The interconnection with States that do not belong to the SAM Region, such as the United States, brought benefits to the project.	
CHI	International coordination for problem solving.	4.5
COL	It has been possible to implement new services in the network for the same costs.	5
ECU	The availability of the service	4
FRA		
GUY	Continuous communication with adjacent states. Minimum downtime.	4.5
PAR	Availability, qualified technical group and user satisfaction	4.5
PER		5
SUR	Continuous communication with adjacent states. Minimal downtime at low cost.	4.5
T&T		4
URU	The expected results have been achieved, effectively; with proper project management.	4.5
VEN	Installation and start-up of new nodes, improvements in connections, support and staff support at the time of a failure is very adjusted to the expected results	5
<b>AVERAGE</b>		<b>4.6</b>

6.-Major problems and their resolution		Evaluation
What are the main problems affecting the achievement of expected results and how should they be resolved?		
ARG	Although the objectives are met, logistical issues remain a challenge. (Customs formalities)	4
BOL		
BRA	Equipment replacement time is a problem for network operation. It is necessary to look for alternatives, such as buying more spare parts or hiring a company in Lima to provide maintenance. Another option, for REDDIG III, is to contract the satellite communication service, instead of maintaining its own station.	
CHI	The difference in time in the administrative and logistical processes of each country, as well as exceptional external factors.	4.5
COL		4
ECU	The logistics for the repair of equipment by state shutdown	4
FRA		
GUY	Guyana did not experience any major problems.	4.5
PAR	The delays that occur in customs handling by the different states for the provision / return of parts. This delay could be reduced by optimizing the efforts of the focal points. In addition to the pandemic caused by COVID-19	4
PER		5
SUR	Shipment of parts to be repaired. I believe that if a FEDEX account were attached to the REDDIG, this shipment of parts would be more convenient and faster, which would save the administrative process within the member	4.5
T&T		4
URU	The problems have been logistical due to delays in customs clearance and unexpected technical problems, as well as the negative effects of border closures caused by the pandemic.	4
VEN	The pandemic has prevented the achievement of the expected results.	5
	<b>AVERAGE</b>	<b>4.3</b>

7.- Other comments	
Please include other comments related to the attainment of project objectives	
ARG	No comments
BOL	
BRA	The main objective of the REDDIG, which is to provide a reliable network for voice and data traffic between the States of the SAM Region, was achieved. The next goals are to upgrade the network and improve cybersecurity.
CHI	The objectives have been achieved with professionalism and dedication by the staff of the States and the administration
COL	
ECU	None
FRA	
GUY	No comments
PAR	None
PER	
SUR	No comments
T&T	
URU	The objectives are being met due to the excellent management of the administrator and the attention of the maintenance personnel of the administrations, despite the impediments of the pandemic.
VEN	Even the support and work mysticism of the staff that is in the project has been exceptional.

<b>8.- Risks</b>	
<b>What new events could affect the achievement of project outcomes? What do you recommend to respond to these events?</b>	
ARG	No comments
BOL	
BRA	The difficulty of maintaining satellite communication stations may represent a risk for the REDDIG operation. An alternative is to contract the communication service instead of maintaining the stations. There is also the cyber risk and for that it is necessary to complete the process of acquiring firewall equipment and training the administration people.
CHI	Renewal of suitable personnel to work in the REDDIG, covering those who have retired.
COL	New outbreaks of Covid or one of its variants
ECU	None.
FRA	
GUY	No comments
PAR	The exposure of the Network in terms of security. We recommend speeding up the firewall implementation process. Make a detailed schedule of the moment of the transition between the firewalls and the current service routers.
PER	
SUR	No comments
T&T	Cyber attacks - implement cybersecurity measures and equipment.
URU	Absences due to the withdrawal of ICAO personnel specialized in communications will surely affect the results of the project. We recommend looking for committed and suitable people to take their places.
VEN	Study options for distance training.

<b>9.-Other information</b>	
<b>Please provide any other information to support or further clarify your assessment regarding attainment of project objectives</b>	
ARG	No comments
BOL	
BRA	The REDDIG has high availability at a lower cost than it would be if the states had to contract point-to-point circuits among
CHI	None.
COL	
ECU	None.
FRA	
GUY	NCC's support was exceptional despite the pandemic.
PAR	None.
PER	
SUR	NCC's support was exceptional despite the pandemic.
T&T	
URU	Our Evaluation of the fulfillment of the project is based on the excellent communication between all the actors, the dedication and professionalism of each administration and its delegates.
VEN	We are just waiting for the connection with Madrid.

**SURVEY ON MANAGEMENT AND OUTCOME INDICATORS**  
**III. EVALUATION OF PROJECT IMPLEMENTATION AND PROVISION OF SERVICES BY ICAO**

<b>1.-Decision making</b>		<b>Evaluation</b>
<b>Do you think that the decision-making process within the project is appropriate?</b>		
ARG	It is appropriate	5
BOL		
BRA		5
CHI	Yes, it is appropriate.	4.5
COL	Coordination meetings facilitate decision making.	5
ECU	Yes	4
FRA		
GUY		4.5
PAR	Yes.	4.5
PER	They are decisions made by the states and they are appropriate	5
SUR		4
T&T		4
URU	The decisions made, especially in unforeseen situations or emergencies, have been appropriate.	5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>2.-Product quality</b>		<b>Evaluation</b>
<b>Do you think that the quality of the products obtained is appropriate?</b>		
ARG	It is appropriate	5
BOL		
BRA		5
CHI	Yes, it is appropriate.	4.5
COL		4.5
ECU	Yes.	4
FRA		
GUY		4.5
PAR	Yes.	4.5
PER		5
SUR		4
T&T		4
URU	Yes, the quality of the products has been the product of an excellent study and analysis of each of them.	5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>3.-Orientation</b>		<b>Evaluation</b>
<b>Do you think that the orientation for the attainment of project outcomes is being followed?</b>		
ARG	Obtaining the results of the project is being fulfilled	5
BOL		
BRA		5
CHI	Yes, is being accomplished.	4.5
COL	We have always seen significant improvements to the proposed goals and objectives, including new nodes in the network.	5
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	Yes, the orientation towards obtaining results is being fulfilled	5
SUR		4
T&T		4
URU	Yes, it is being fulfilled and they are oriented towards excellent results.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>4.-Organization and prioritization</b>		<b>Evaluation</b>
<b>Do you think the organization and prioritization within the project are appropriate?</b>		
ARG	Is the appropriate one	5
BOL		
BRA		5
CHI	Yes, it is the appropriate one.	4.5
COL		4.5
ECU	Yes.	4
FRA		
GUY	Yes.	5
PAR	Yes.	4.5
PER	Is the appropriate one	5
SUR	Yes.	4.5
T&T		4
URU	We believe that the agenda and prioritization is adequate and prudent.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>5.-Change management</b>		<b>Evaluation</b>
<b>Do you think that change management and the degree of flexibility in managing the project are appropriate?</b>		
ARG	They are appropriate.	5
BOL		
BRA		5
CHI	Yes, they are appropriate.	4.5
COL		
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	They are appropriate.	5
SUR	Yes.	5
T&T		4
URU	Change management and flexibility is very good and appropriate.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>6.-Service to the State</b>		<b>Evaluation</b>
<b>Do you think that the service provided to your State is appropriate?</b>		
ARG	Is appropriate.	5
BOL		
BRA		5
CHI	Yes, it is appropriate.	4.5
COL		5
ECU	Yes.	4
FRA		
GUY	Yes.	5
PAR	Yes.	4.5
PER	The service received is appropriate.	5
SUR	Yes.	5
T&T		4
URU	Yes, it is appropriate and we believe that it is equitable to all States	5
VEN	Yes, excelent.	5
<b>AVERAGE</b>		<b>4.8</b>

<b>7.-Communication</b>		<b>Evaluation</b>
<b>Do you think that the level of communication within and outside the project is adequate?</b>		
ARG	Is adequate.	5
BOL		
BRA		5
CHI	Yes, it is adequate.	4.5
COL	The use of different channels makes communication more fluid.	5
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	Yes, it is adequate.	4.7
SUR	Yes.	4
T&T		4
URU	Communication has been one of the strengths, causing the success obtained.	5
VEN	Yes, the support is 24/7 and always with the best disposition to help, provide support and guidance.	5
<b>AVERAGE</b>		<b>4.6</b>

<b>8.-Conflicts</b>		<b>Evaluation</b>
<b>Do you believe that conflict management is adequate?</b>		
ARG	Is adequate.	4.5
BOL		
BRA		5
CHI	Yes, is adequate.	4.5
COL		4
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	They are properly treated.	5
SUR	Yes.	4
T&T		4
URU	Conflicts are resolved appropriately due to their importance and priority.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>9.-Use of resources</b>		<b>Evaluation</b>
<b>Do you think that project resources are being used efficiently to produce the expected results?</b>		
ARG	Yes, resources are being used efficiently	4.5
BOL		
BRA		5
CHI	Yes, they are used efficiently.	4.5
COL		5
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	The use of resources is efficient	5
SUR	Yes.	4
T&T		4
URU	Yes, the resources are being used efficiently and in moderation.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>10.-Relevance of mechanisms</b>		<b>Evaluation</b>
<b>Do you think that project management mechanisms are relevant?</b>		
ARG	Yes, they are relevant.	4.5
BOL		
BRA		5
CHI	Yes, they are relevant.	4.5
COL	As the project grows, the management staff should grow.	5
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	The results obtained are satisfactory, therefore the mechanisms are relevant	5
SUR	Yes.	4
T&T		4
URU	Yes, they are relevant and adequate.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>11.-Opportunity of work plans</b>		<b>Evaluation</b>
<b>On the basis of its work plan, how would you rate the degree of opportunity of the project as regards the achievement of outputs, outcomes, and delivery of inputs?</b>		
ARG	This project allows all the members of the Region to participate actively and be able to materialize the proposals or ideas that improve the services. It is essential to highlight the support of all States	4.5
BOL		
BRA		5
CHI	Good, both in delivery time, products and results.	4.5
COL		5
ECU	Good.	4
FRA		
GUY		4.5
PAR	Very good.	4.5
PER		4.6
SUR		4
T&T		4
URU	The level of opportunity has been excellent due to good management of resources, time and technical follow-up.	4.5
VEN	Due to the pandemic.	4.5
<b>AVERAGE</b>		<b>4.5</b>

<b>12.-Orientation</b>		<b>Evaluation</b>
<b>Do you consider that the activities and products developed through the project are in line with the directives of ICAO, the Regional Offices and air navigation plans?</b>		
ARG	Yes, they are in line with ICAO directives.	4.5
BOL		
BRA		5
CHI	Yes, they are.	4.5
COL		5
ECU	Yes.	4
FRA		
GUY	Yes.	4.5
PAR	Yes.	4.5
PER	ICAO directives have always been respected.	5
SUR	Yes.	4
T&T		4
URU	The activities and products are aligned with the Air Navigation Plans, Regional Offices and ICAO directives.	4.5
VEN	Yes.	5
<b>AVERAGE</b>		<b>4.5</b>

<b>13.-Other information</b>	
<b>Please provide any other information to support or further clarify your assessment of the products and services provided through the project.</b>	
ARG	The potential of the current network, as a multiservice platform, and technological change, allow us to affirm that it is possible to continue growing in the exchange of services between States and other Regions of the World.
BOL	
BRA	The administration of project RLA/03/901 by the Lima Office is quite efficient and capable of coordinating the interests of the two participating States.
CHI	The products and services through the project have been adequate, but the state of the art of technologies, the increase in air operations and the external factors that may affect it.
COL	
ECU	None.
FRA	
GUY	No comments.
PAR	No observation.
PER	
SUR	No comments.
T&T	
URU	The products and services provided by the Project through REDDIG have been excellent.
VEN	No comments.

**SURVEY ON MANAGEMENT AND OUTCOME INDICATORS**  
**IV. LESSONS LEARNED**

<b>1.-Positive lessons learned from the project</b>	
<b>Provide a brief description of the positive lessons learned from project implementation</b>	
ARG	The possibility of working with personnel from other States continues to be highlighted, achieving more than satisfactory integration results. The possibility of exchanging experiences that has contributed to solving problems of services between States. The experiences acquired and the possibility of continuing to integrate different systems between States and Regions
BOL	
BRA	Coordination between the participating States is very important for the success of the project. And the Lima workshop, as an impartial entity, was able to understand everyone's interests and coordinate integration with other regions.
CHI	Teamwork, with the active participation of staff from the States and the Regional Office, through technological tools available, in times of pandemic.
COL	The affectations that arise in the CNS management by the States.
ECU	The organization of technical aspects through continuous communication.
FRA	
GUY	REDDIG II has allowed GUY and the other members to continue operating safely and with all the adjacent states. All expectations fulfilled.
PAR	Good communication through the use of teleconferences for managing situations and coordination for problem solving. The human capital formed by each of the member states of the project.
PER	
SUR	REDDIG II has allowed Suriname and the other members to continue operating safely and with all the adjacent states. All expectations fulfilled.
T&T	Managing the project is very challenging, but by working together, all states benefit based on the goals of the project.
URU	It would have been difficult to create and execute the project without the active mediation of ICAO, generating close technical collaboration among all States using technology to overcome the inconveniences of the pandemic.
VEN	The approach of a teamwork through the integration of the states to improve and solve faults, being approached from a criteria of solutions and improvements, understanding the availabilities and limitations of each state.  The evaluation of the faults not only for a momentary resolution, but also the work to locate the root and the origin of the failure, by doing this it has been possible to detect the problems and then be corrected.
<b>2.-Opportunities for improvement</b>	
<b>Provide a brief description of the improvement opportunities identified during project implementation.</b>	
ARG	The previous consideration is reiterated in that the REDDIG has several pieces of equipment that are, eventually, easily accessible in the local media when it comes to requiring spare parts or replacements. This taking into account the logistical difficulties that have had to be faced.
BOL	
BRA	There are no non-positive lessons.
CHI	Staff turnover that then does not continue in the project.
COL	The affectations that arise in the CNS management by the States. Update of the list of focal points for information transfer.
ECU	On the logistics for the internment of equipment and parts, it represents an obstacle in the management of service
FRA	
GUY	No comments.
PAR	Constant training to have a technical team effectively prepared to deal with problems. The implementation of training tools. The constant innovation in the implementation of training in face-to-face and virtual format. Propose laboratories with link and connectivity simulation tools
PER	
SUR	No comments.
T&T	Improved interconnections and services.
URU	All difficulties have always been overcome with close communication and support between the technical areas and the project administration using computer tools.
VEN	No comments.

<b>3.- Strategy for the implementation of the identified opportunities for improvement.</b>	
<b>Provide a brief description of the strategy that you would propose to implement the identified opportunities for improvement.</b>	
ARG	No comments
BOL	
BRA	In the ad hoc group for the implementation of REDDIG III, it is necessary to analyze the possibility of contracting the satellite communication service instead of maintaining the stations. It is also necessary for NCC technicians to have better knowledge of cybersecurity.
CHI	Keep the working groups of the States, giving continuity to the tasks and initiating processes for the renewal of personnel.
COL	
ECU	None
FRA	
GUY	No comments
PAR	Keep the strategy used, since it was perfected with the experience gained during the course of the project and implement it for the REDDIG III project.
PER	
SUR	No comments
T&T	Assist States with processes required to complete tasks.
URU	As an imperative strategy, maintain and increase the links between the participating Administrations and support the management and administration of REDDIG II by applying the lessons learned in the execution of a REDDIG III, taking into account that the global geopolitical situation can cause interruptions in attendance.
VEN	No comments

**Agenda Item 7: Other business**

*Workshop of the ICAO Panel on Frequency Spectrum Management (FSMP) and the World Radiocommunication Conference 2023 (WRC-23)*

7.1 The Secretariat reported that, from February 21 to 22, 2022, the ICAO Frequency Spectrum Management Panel (FSMP) Workshop and the 2023 World Radiocommunication Conference (WRC-23) were held, with the objective of providing background and information to the NAM/CAR/SAM States, in preparation for their delegations that will participate in WRC-23.

7.2 During the workshop, other topics were also discussed, not constant on the WRC-23 Agenda, but of relevant interest to the aeronautical community, such as the potential interference in radio altimeter systems with the installation of 5G technology.

7.3 The Secretariat requested the participants of the Meeting to disseminate as much as possible the information given during the workshop, which can be accessed through the link below:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2022-CMR-WRC23>

-----