



REDDIG RCC/24

INTERNATIONAL CIVIL AVIATION ORGANIZATION

RLA/03/901

**TWENTY FOURTH MEETING OF THE
COORDINATION COMMITTEE
(RCC/24)**

FINAL REPORT

(Lima, Peru, 3 to 6 March 2020)

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HISTORY OF THE MEETING

ii-1. PLACE AND DURATION OF THE MEETING

The Twenty Fourth Meeting of the Coordination Committee of Project RLA/03/901 - *REDDIG Management System and Satellite Segment Administration*, was carried out in the ICAO South American Regional Office, in Lima, Peru, from 3 to 6 March 2020.

ii-2. OPENING

Mr. Oscar Quesada, Deputy 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. Javier Vittor, REDDIG Administrator and Mr. Francisco Almeida, CNS Regional Officer welcomed, highlighted the work done by the States during the year 2019 and the challenges that arise for the future of REDDIG.

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 24 participants of 10 member States (Bolivia, Brazil, Colombia, Chile, France, Guyana, Paraguay, Peru, Uruguay and Venezuela), 1 State observer from the North American and Caribbean Region (United States) and 1 international organization (COCESNA) and 1 company from the industry (CENTURYLINK PERU) including ICAO specialists. The list of participants is being presented in page iii-1.

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

ii-5. LIST OF CONCLUSIONS

No.	Title	Page
RCC/24-1	PROCEDURE FOR SENDING DAMAGED EQUIPMENT FOR REPAIR WITHIN A REASONABLE PERIOD OF TIME	4-1
RCC/24-2	ESTABLISHMENT OF THE REDDIG III AD-HOC GROUP	4-2
RCC/24-3	INTERCONNECTION OF REGIONAL IP NETWORKS	4-4
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RCC/24-6	APPROVAL OF THE BUDGET FOR PROJECT RLA/03/901 REV “U”	5-3

LISTA DE PARTICIPANTES / LIST OF PARTICIPANTS**BOLIVIA, ESTADO PLURINACIONAL DE**

1. Javier Campos

BRASIL / BRAZIL

2. Renata Rodrigues Frias
3. Bruno Pacheco Santos Azevedo Costa

COLOMBIA

4. Jorge Saltarín

CHILE

5. Christian Vergara Leyton

FRANCIA (Guyana Francesa)

6. Serge Cupoli

GUYANA

7. Mortimer Salisbury

PARAGUAY

8. Aldo Omar Pereira
9. Ronald Benítez

PERÚ

10. Luis Silva Gárate
11. José Rubira Chauca
12. Yunnior Lévano Palomino

URUGUAY

13. Miguel E. Vera
14. Ricardo Clavijo

VENEZUELA, REP. BOLIVARIANA DE

15. Jarumy Castillo
16. Willy Rojas

CENTURYLINK

17. Luis Ladera
18. Jorge Nano

COCESNA

19. Roger Alberto Pérez

**FEDERAL AVIATION ADMINISTRATION
(FAA)**

20. Al O'Neill
21. Will Turner

OACI / ICAO

22. Francisco Almeida
23. Verónica Chávez
24. 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 of the meeting schedule
- Agenda Item 2: Review of the report of the Twenty Second Meeting of the Coordination Committee (RCC/22) and the report of the Twenty Third (extraordinary) Meeting of the Coordination Committee (RCC/23)
- 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 2020
- 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

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

The Coordination Committee will consider and approve the provisional agenda and meeting schedule proposed by the Secretariat for its Twenty Second Meeting.

Agenda Item 2: Review of the report of the Twenty Second Meeting of the Coordination Committee (RCC/22) and the report of the Twenty Third (extraordinary) Meeting of the Coordination Committee (RCC/23)

The Committee will review, for approval, the report of its Twenty Second Meeting (RCC/22) held in Lima from 5 to 7 March 2019 and the report of the Twenty Third (extraordinary) Meeting of the REDDIG Coordination Committee (RCC/23) carried out by means of a teleconference (GoToMeeting), on 21 August 2019. 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

The Committee will analyze the activities carried out since its last meeting regarding:

- a) Follow-up to REDDIG II performance;
- b) REDDIG II training programme; and
- c) New REDDIG II services and activities.

Agenda Item 4: Work plan for 2020

The Committee will analyze the work programme for 2020:

- a) New REDDIG II activities and services;
- b) New MEVAIII / REDDIG II activities and interconnection services; and,
- c) Training programme for 2020

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 2019, as well as the project budget for 2020 for approval.

Agenda Item 6: Annual project evaluation

The Committee will take note of the project's situation at the end of the 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 2019, 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 matters

Under this agenda item, the Committee could analyze any other related issues deemed appropriate.

APPENDIX B

PROVISIONAL TIMETABLE

HOUR	Tuesday 3 March 2020	HOUR	Wednesday 4 March 2020	HOUR	Thursday 5 March 2020	HOUR	Friday 6 March 2020
08:30 09:00	Register of participants	09:00 10:30	Agenda Item 3	09:00 10:30	Agenda Item 5	10:00	Review of the Report
09:00 09:15	Opening						
09:15 09:30	<i>Coffee Break</i>	10:30 10:45	<i>Coffee Break</i>	10:30 10:45	<i>Coffee Break</i>	10:30 10:45	<i>Coffee Break</i>
09:30 12:30	Agenda Items 1 & 2	10:45 12:15	Agenda Item 4	10:45 12:15	Agenda Item 6	11:00	Closing Session
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 4	13:00 14:00	Agenda Item 7		

Agenda Item 2: Review of the reports of the last meetings of the Coordination Committee

- 2.1 Under this agenda item, the Meeting reviewed the following working paper:
- *WP/02 – Review of the reports of the last meetings of the REDDIG Coordination Committee* (presented by the Secretariat).
- 2.2 The Meeting reviewed and approved the report of the Twenty-second meeting of the REDDIG Coordination Committee (RCC/22), held in Lima, Peru, on 5-7 March 2019, with the participation of 9 member States (Bolivia, Brazil, Chile, Guyana, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela), totaling 16 participants, including ICAO experts.
- 2.3 The RCC/22 meeting reviewed the report of the Twenty-first meeting of the REDDIG Coordination Committee (RCC/21), the report on the activities carried out since the last meeting of the Coordination Committee, the 2019 work plan, the financial situation of the project, the approval of the 2020 budget, the annual project assessment, and other matters.
- 2.4 The RCC/22 meeting formulated the following conclusions:
- RCC/22-1 Technical visits by the REDDIG Administrator to the network nodes*
 - RCC/22-2 Training in technological tools for analyzing voice and data applications carried over the REDDIG*
 - RCC/22-3 Study for replacing REDDIG II connectivity equipment and updating the IOS of network routers*
 - RCC/22-4 Acquisition of firewall equipment for REDDIG II*
 - RCC/22-5 Delays in cost-sharing contributions to Project RLA/03/901 – Argentina and Suriname*
- 2.5 The RCC/22 meeting reviewed the list of valid conclusions and, in this respect, considered that Conclusions 8-8 and 19-1 remained valid and Conclusions 19-3, 20-1, 21-1 and 21-2 had been completed. The Meeting formulated four conclusions, Conclusions 24-1, 24-2, 24-3 and 24-4.
- 2.6 The RCC/23 (extraordinary) meeting was held on 21 August 2019 via teleconference, with the participation of 12 member States (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, France, Guyana, Paraguay, Peru, Uruguay, and Venezuela), 2 no member States (United States and Panama), 1 organization (COCESNA), the REDDIG MPLS provider (CenturyLink), and ICAO officers, totaling 39 persons.
- 2.7 The RCC/23 meeting addressed the following topics: Proposal of additional nodes in the REDDIG II MPLS network; administrative arrangements; technical aspects; and other matters.

- 2.8 The RCC/23 (extraordinary) meeting formulated the following conclusion:
- RCC/23-1 Implementation of additional nodes of the REDDIG II ground network (MPLS)*
- 2.9 Upon reviewing Conclusions 22-6 and 22-8, the Meeting considered them as finalized.
- 2.10 Conclusions 8-8, 19/1, 22-1, 22-2, 22-3, 22-4, 22-5, 22-7 and 23-1 were considered as valid; and 6 conclusions were added in the RCC/24. The **Appendix** to this part of the report contains the valid conclusions.

APPENDIX

CONCLUSIONS ADOPTED BY THE REDDIG COORDINATION MEETINGS THAT REMAIN VALID 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 capacity to manage the REDDIG, continues undefined, the RCC/20 meeting (Lima, Peru, 21-23 March 2017) approved Project RLA/03/901 S revision document, extending the management of REDDIG until 2023.
19-1	Suriname cost-sharing contributions payment schedule	That, Suriname, with the aim of complying with full payment of its 2012 to 2016 cost-sharing contributions, present a payment schedule in this regard, in order to avoid the application of the payment delay procedure defined by the ICAO SAM Regional Office in letters SA5033 and SA5192 of 21 January and 7 March 2016, respectively.	Valid	Suriname presented a payment schedule and made the following payments: July 2016: USD 80,000 March 2017: USD 80,000 No payment was made in 2018. Therefore, its debt amounts to USD 185,174.00, aside from the 2019 fee.
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.	Valid	Planning for 2020: TBD
22-2	Training in technological tools for analysing voice and data applications carried over REDDIG	That the Secretariat: a) At the request of REDDIG member States, organise training courses on the use of tools for analysing information (voice and data) carried over REDDIG.	Valid	A first training course was offered during the RTO/8 meeting (Santiago, Chile), and will be repeated at the RTO/9 meeting.

No.	Title	Content	Status	Remarks
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	Specifications for hiring the service (MPLS) were drafted and submitted to TCB on 10 February 2020, for the conduction of the bidding process.
22-5	Delays in cost-sharing contributions to Project RLA/03/901 – Argentina and Suriname	That the Secretariat: a) Take action as necessary to inform Argentina and Suriname on the need to comply with the payment of the REDDIG quotas, so that the Project may have the necessary funds network management; and b) Among the actions to carry out, consider sending a letter to this effect, or making a high-level visit to the State.	Valid	Letters have been sent to Argentina (SA5064 dated 24/01/19 and SA5724 dated 03/11/2019) and Suriname (SA5182 dated 13/03/19 and SA5730 dated 04/11/19). Argentina has communicated with ANAC and EANA by e-mail and teleconference regarding REDDIG management, still undefined by Argentina. Regarding Suriname, the Director of the CAD of Suriname was contacted in February 2020, and a reply is being awaited for.
22-6	Approval of the budget for Project RLA/03/901 Rev T	That the Secretariat: a) Take relevant action to allow for the approval by ICAO Headquarters of RLA/03/901 Revision T, shown in Appendix B to this part of the report, for its subsequent submission to REDDIG member States.	Completed	Rev T was duly signed by the ICAO Secretary General

No.	Title	Content	Status	Remarks
22-7	Budget proposal for Project RLA/03/901 Rev U for approval by the States	<p>That the Secretariat:</p> <p>a) Develop a budget proposal Rev U for Project RLA/03/901 that includes:</p> <p>a. The acquisition of firewall equipment in the amount of USD 375,000; and</p> <p>b. An increase in the fellowship budget in the amount of USD 30,000 from 2020 to 2023.</p> <p>b) Conduct a round of consultations with the States for comments and approval of the proposed budget U. Subsequently, hold a virtual meeting of the Coordination Committee to report on the results of the round of consultations and approve the steps for its approval by ICAO.</p>	Valid	Budget proposal Rev U has been prepared, as shown in WP/05.
22-8	Approval of 100 KHZ bandwidth increments in MEVA III	<p>That the Secretariat:</p> <p>a) Take relevant action to amend the contract for the MEVA-REDDIG interconnection as follows:</p> <p>a. As of March 2019, include payment of a monthly amount of USD 100.00 for bandwidth increments (covering Upgrade Stages 1, 2, and 3 of 100 kHz bandwidth increments in MEVA III); and</p> <p>b. As of July 2019 (or when implemented), increase the monthly amount by an additional USD 33.33 (covering Upgrade Stage 4).</p> <p>b) Take relevant action to coordinate with MEVA so that subsequent bandwidth increases or any other REDDIG related services are promptly communicated for prior approval by the RCC.</p>	Completed	<p>Amendment II to Contract 22501528 addresses Upgrade Stages 1, 2 and 3.</p> <p>Future amendments may address Upgrade Stage 4, as necessary.</p>

No.	Title	Content	Status	Remarks
23-1	Implementation of additional nodes of the REDDIG II ground network (MPLS)	<p>That the Secretariat:</p> <p>a) Make the necessary arrangements for implementation of additional nodes in the REDDIG II ground network as requested by United States (FAA), at no cost for Project RLA/03/901 participants.</p> <p>b) Analyse requests of other States/organisations interested in implementing additional nodes in REDDIG II and submit to the Coordination Committee for approval.</p>	Valid	<p>The United States, Panama and COCESNA have formally expressed their interest in implementing nodes in the REDDIG II ground network.</p> <p>United states and Panama will contract directly with the telecommunication provider (CenturyLink). Bolivia and COCESNA as participants of the RLA/03/901 Project will implement the nodes with the new MPLS service contract.</p>
24-1	Procedure for sending for repair broken equipment within a reasonable time	<p>That:</p> <p>With regard to the replacement of spare parts stored in the SAM Regional Office, the Project Management shall:</p> <p>a) After the shipment of the spare part is taken care of and its receipt has been confirmed, the receiving State has a period of 60 days to send the equipment for repair at the factory;</p> <p>b) If the deadline set out in the previous item is not met, the Project Management will not respond to another request for spare part from that State;</p> <p>c) States which are currently with broken equipment held shall apply as set out in this conclusion.</p>	Valid	
24-2	REDDIG III Ad-hoc Group creation	<p>That:</p> <p>The participating States of the Regional Project RLA/03/901 form an Ad-hoc Group to study technological proposals, for employment in the future REDDIG III, to be implemented from 2022.</p>	Valid	<p>During the RCC/24, the following States expressed interest in participating in the Ad-hoc Group: Brazil, Chile, France and Paraguay.</p>

No.	Title	Content	Status	Remarks
24-3	Interconnection of regional IP networks	<p>That:</p> <p>a) The Secretariat proceeds with the necessary administrative procedures for carrying out a meeting in Lima, with the participation of ICAO Officers and telecommunication providers of the Regional IP networks of APAC, EUR and SAM.</p> <p>b) The participation of the Secretary of the Communications Panel (CP) is coordinated with the use of resources of the RLA/03/901 Regional Project (air tickets and DSA).</p>	Valid	The meeting is scheduled to take place in the second half of 2020.
24-4	Contract No 22501528 extension Interconnection MEVA III – REDDIG II	<p>That:</p> <p>The Secretariat proceeds with the administrative procedures for the extension of Contract No 22501528, as previously signed in Amendment II, excluding the costs of the AFTN circuits in Brazil and Peru.</p>	Valid	

<p>24-5</p>	<p>Late payment procedure in cost-sharing contributions to Regional Project RLA/03/901</p>	<p>That the Secretariat: a) Update the procedure for late payment of cost-sharing contributions to project RLA03901 under the following guidelines: i. The procedure applies to those States that presents two unpaid contributions, ii. Instruction will be requested to the RCC to authorize if the following steps are followed, iii. The Secretary will send a letter to the State requesting information on the in claim of payment of outstanding contributions and the notification of following actions: 1. After two months of forwarding the letter, support shall be suspended in training activities and in REDDIG meetings, as well attending the RCCs meetings only as observers. 2. After 4 months, an extraordinary cTE call shall be made in which the High Authorities of the Member States are located, defining the actions to be taken for the maintenance/suspension of the services. iv. Meanwhile, the REDDIG Administrator will prepare a report on the technical impact</p>	<p>Valid</p>	
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No.	Title	Content	Status	Remarks
		of the cessation of State activity through REDDIG b) Take the appropriate actions to proceed in accordance to item (a) (iii) for the States of Suriname and Argentina.		
24-6	Approval of the budget for Regional Project RLA/03/901 Rev "U"	That the Secretariat: 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.	Valid	

Agenda Item 3: Report of the activities carried out since the last meetings of the Coordination Committee (RCC/22 and RCC/23)

3.1 Under this Agenda Item, the Meeting reviewed the following working paper:

- WP/03 - *Report of the activities carried out since the last meetings of the Coordination Committee* (presented by the Secretariat).

Report of the activities carried out since the last meeting of the Coordination Committee

3.2 The Meeting reviewed the following activities agreed upon at the Twenty Second meeting of the Coordination Committee (RCC/22):

- a) REDDIG II training programme;
- b) Preventive maintenance programme; and
- c) REDDIG II operation and analysis of the implementation of new services

REDDIG II training programme

3.3 The Meeting took note of the conduction of the following training activities:

- a) Recurrent training on REDDIG II operation and maintenance;
- b) Seminar/workshop on the basic concepts of the services carried over REDDIG;
- c) On-the-job training in Cayenne and Ezeiza; and
- d) Workshop on RF equipment measurement tools for the Manaus NCC staff.

Recurrent training on REDDIG II operation and maintenance

3.4 A regular task of the REDDIG Administrator is to provide this training during his annual visits to the nodes. On this occasion, the recurrent training was provided during the visit to the Ezeiza alternate NCC. Technical personnel from EANA (*Empresa Argentina de Navegación Aérea Sociedad del Estado* - service provider) and CNS inspectors from ANAC (National Administration of Civil Aviation – civil aviation authority) participated.

Seminar/workshop on basic concepts of services carried over REDDIG

3.5 This event took place during the RTO/8 meeting. Due to the short time available, only the basic content was delivered.

On-the-job training in Cayenne and Ezeiza

3.6 Taking advantage of the REDDIG Administrator's visit to Cayenne and Ezeiza, OJT was provided to local staff on the fundamentals regarding network operation and maintenance.

Workshop on RF equipment measurement tools for the Manaus NCC staff

3.7 Training was provided to the technicians of the Manaus NCC on tools for measuring the RF equipment used at the REDDIG II VSAT station of Manaus.

Preventive training programme

3.8 The Meeting took note that preventive maintenance had been provided to all the nodes throughout 2019, which made it possible to identify problems and solve them. Likewise, a procedure was established for keeping photographic records of all node components, in order to generate a database at the NCC and make this information available through the web.

3.9 Cleaning activities were carried out on the IBUCs, as well as on antennae, RF components, and different outdoor parts of some stations, as established in the preventive maintenance programme.

Visit to the Cayenne and Ezeiza nodes

3.10 The Meeting took note that the REDDIG II Administrator had conducted two missions in 2019, one to Cayenne, French Guiana, to solve various failures, check the facilities and the condition of the station, and to provide on-the-job training to the staff working at the node. The node of Ezeiza (alternate NCC) in Argentina was also visited to conduct corrective and preventive maintenance and for a general inspection of the station. Recurrent training was also provided on the REDDIG and on the operation of the regional NCC.

Operation of REDDIG II and analysis of the implementation of new services

3.11 The Meeting took note of the availability of REDDIG II, as shown in **Appendix A**¹ to this part of the report.

Implementation of new AMHS interconnections

3.12 The Meeting took note of the AMHS (P1) interconnections that had been implemented and had become operational in REDDIG II since the RCC/22 meeting. **Appendix B**² to this part of the report contains a table with AMHS interconnections in the SAM Region.

Exchange of surveillance data

3.13 The Meeting took note of the circuits that had been established through REDDIG II for the exchange of surveillance data, as shown in **Appendix C**³ to this part of the report.

Technical-operational meeting of REDDIG II (RTO/8)

3.14 The Meeting took note of the eighth technical-operational meeting of REDDIG II (RTO/8) held on 14-16 October 2019, and of training sessions conducted on 17 and 18 October 2019. Both events were held at the facilities of the *Escuela Técnica Aeronáutica* (ETA), at San Pablo 8411, Pudahuel, Santiago, Chile.

¹ See RCC/24-WP/3, Appendix A

² See RCC/24-WP/3, Appendix B

³ See RCC/24-WP/3, Appendix C

3.15 The main issues addressed at the RTO/8 meeting were the following:

- Upgrading of router IOS and replacement of NETGEAR switches;
- Logistics
- Status of nodes and failure statistics;
- Review and upgrading for REDDIG II maintenance and operation;
- Renewal of antennae;
- Coordination improvements;
- Support to the coordination of extra-regional interconnections (AMHS); and
- Solar interference and explosions.

3.16 The RTO/8 meeting report (English and Spanish) is available on the website of the SAM Regional Office.

<https://www.icao.int/SAM/Documents/2019-REDDIG-RTO8/REDDIG%20RTO8%20Final%20Report.pdf> (English)

<https://www.icao.int/SAM/Documents/2019-REDDIG-RTO8/REDDIG%20RTO8%20Informe%20Final.pdf> (Spanish)

New REDDIG node in Ezeiza

3.17 The Meeting took note that, although the processes had been started and were underway, they had been temporarily suspended at the request of EANA SE (*Empresa Argentina de Navegación Aérea Sociedad del Estado*), the civil aviation service provider of Argentina.

Transfer of the REDDIG node of Bogota

3.18 The Meeting took note that in December 2019, the Administration of Colombia informed of difficulties for the import and clearance of the material to be sent by INEO for the transfer of the REDDIG node of Bogota. Accordingly, at the request of the Administration of Colombia, ICAO (exceptionally) was carrying out the bidding process to hire a company to carry out the importation and clearance of all the material to be sent by INEO from the United States and France. Due to the delays, the material was in storage at both of these States. Storage costs would be covered by Colombia through its annual fee under the Project.

Acquisition of spare parts for REDDIG

3.19 The Secretariat informed the Meeting that the process for the acquisition of spare parts for REDDIG by the TCB had been completed and that the material had been received and stored in the spare part storage room of the ICAO Regional Office in Lima.

REDDIG logistics

3.20 The Meeting also took note that equipment remained for extended periods of time in the respective customs office and that it was important for focal points to expedite logistics to avoid this situation. This issue was analysed in more detail under agenda item 4.

3.21 The Secretariat will revise the Maintenance Manual, in order to attend the RCC/24 deliberations and conclusions.

3.22 **Appendix D** to this part of the report contains statistics of support provided to network nodes since the RCC/21 meeting, as well as its distribution by type of equipment that generated the request for support.

Additional ground network nodes (MPLS)

3.23 The Meeting took note that, on 21 August 2019, the twenty-third (extraordinary) meeting of the Coordination Committee of Regional Project RLA/03/901 (REDDIG) was held via teleconference, to address the request of the FAA (Federal Aviation Administration) to implement additional REDDIG II ground network (MPLS) nodes, by directly hiring the provider, CenturyLink, to access REDDIG, at no additional cost for the participants of Regional Project RLA/03/901.

3.24 It was also noted that, subsequently, requests had been received from Panama (by e-mail) and COCESNA to access the network through the REDDIG II MPLS service. In turn, Bolivia expressed its intention to implement an “additional node” of REDDIG II in Cochabamba.

3.25 The Secretariat requested the representative of Panama that a letter be sent by the civil aviation administration to formalise the request.

3.26 The FAA representative informed the estimation to implement the Atlanta and Salt Lake City nodes for June of 2020.

New process for hiring the MPLS service

3.27 The Meeting took note that the REDDIG II MPLS ground network services were being paid through contract No 22501200 signed by ICAO, INEO/ENGIE and Level 3 (now CenturyLink). With the conclusion of this contract, a specific contract must be signed with the REDDIG II ground network telecommunication (MPLS) provider. In this sense, the TCB had stated that it would extend the current contract until 30 June 2020, but that a new process should be started for hiring the service as of 1 July 2020, for a period of 30 months.

3.28 The Secretariat had developed, together with the REDDIG focal points, the technical specifications for the new REDDIG II MPLS service contract, which were delivered to the TCB on 10 February 2020. It is estimated that, by late March 2020, the TCB would announce the bidding process for hiring the MPLS service for the REDDIG II ground network. **Appendix E**⁴ to this working paper lists the nodes to be implemented under the new contract.

Donation of REDDIG I cards and equipment to CORPAC

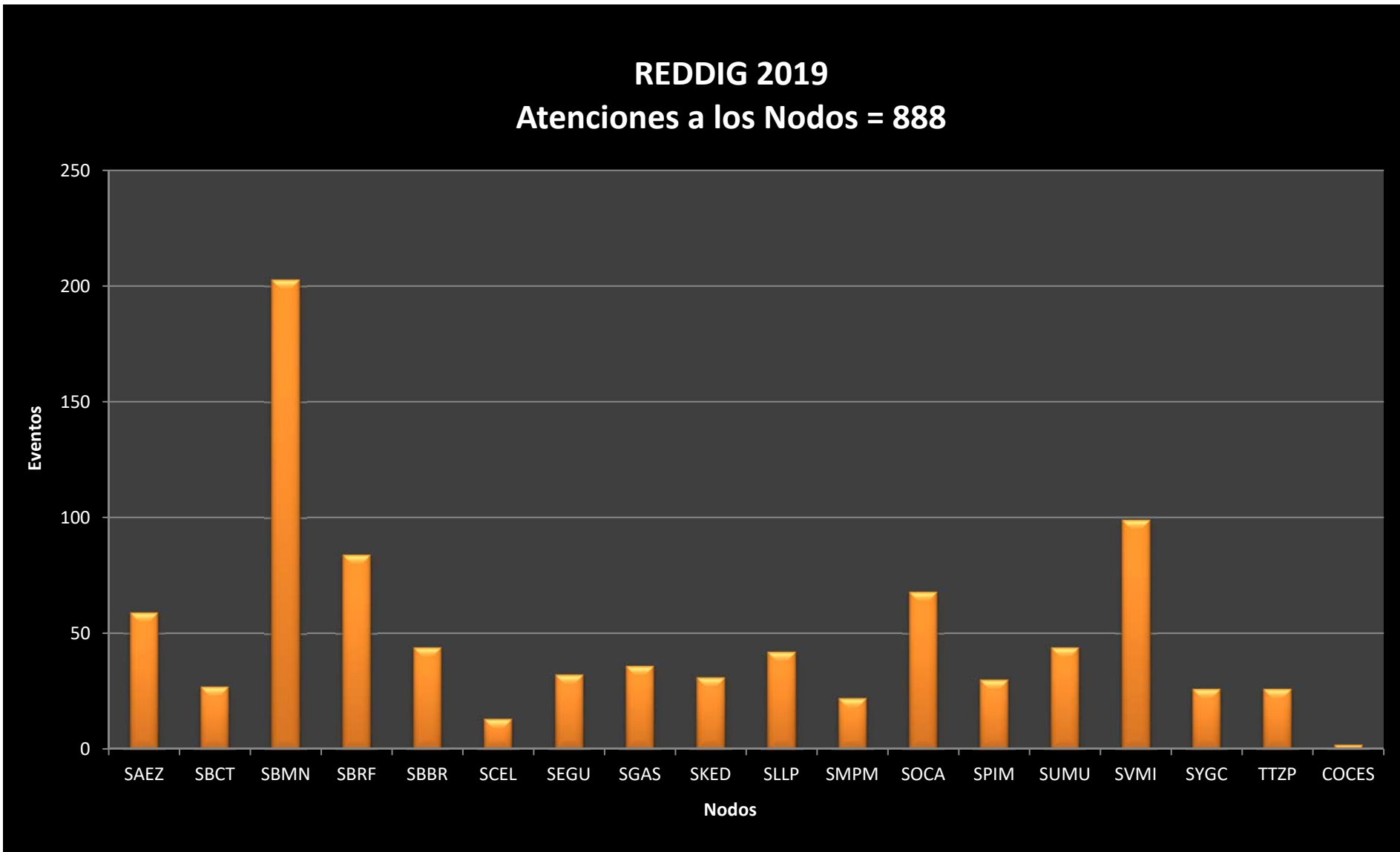
3.29 The Meeting took note that, during the nineteenth meeting of the REDDIG Coordination Committee (RCC/19) (Lima, Peru, 7-9 March 2016), CORPAC had requested the donation of REDDIG I MEMOTEC cards and equipment, which had been approved by the member States.

3.30 On 3 June 2019, CORPAC submitted its formal request to the South American Regional Office and, on 7 June 2019, the material listed in **Appendix F**⁵ to this working paper was delivered.

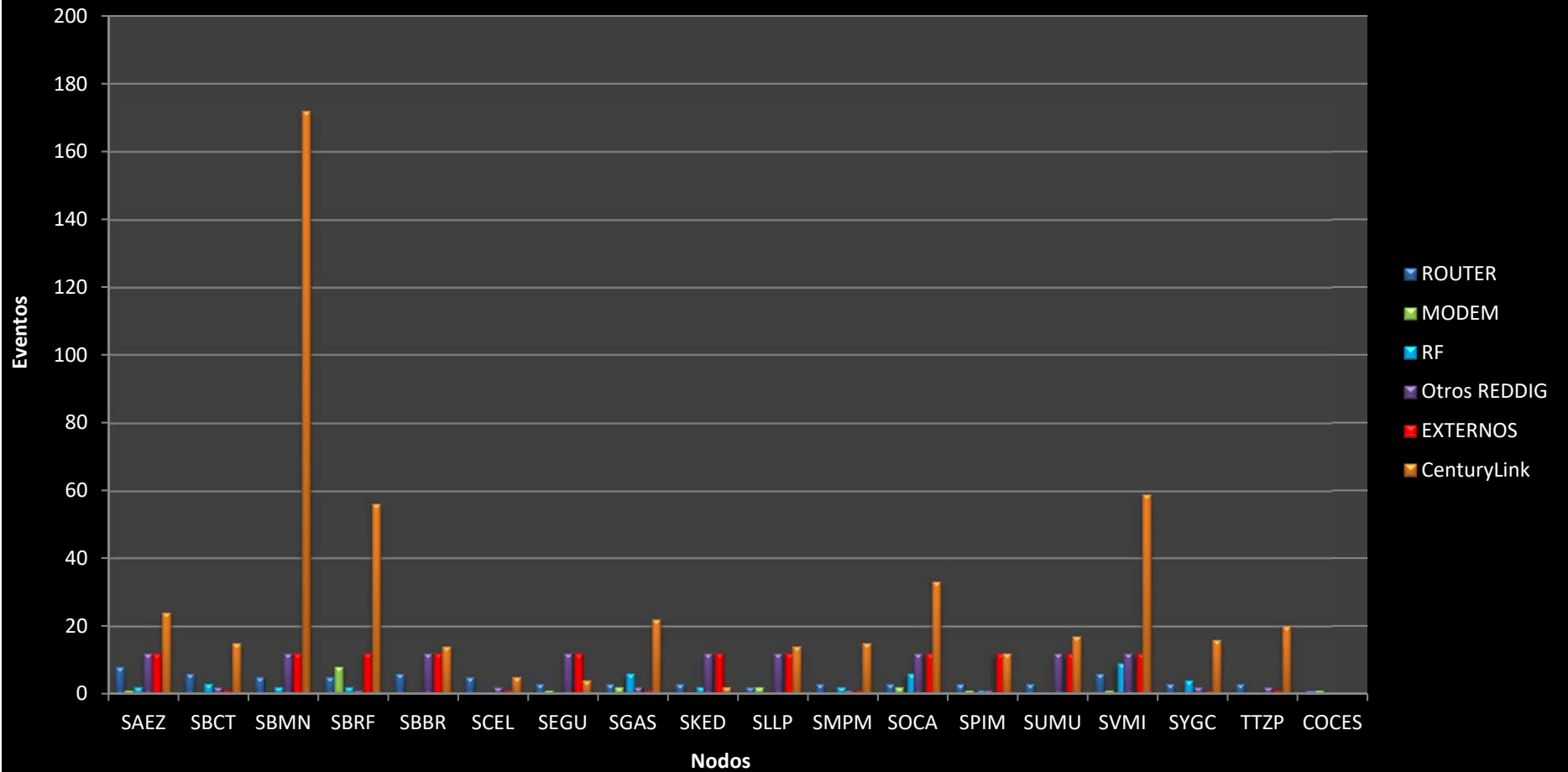
⁴ See RCC/24-WP/3, Appendix F

Focal Points

3.31 Finally, the Secretariat requested to the Meeting to update the list of focal points attached as **Appendix G** to this Agenda Item.



REDDIG 2019 Distribución de atenciones



REDDIG II FOCAL POINTS / PUNTOS FOCALES REDDIG II

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Agenda Item 4: Work plan for year 2020

4.1 Under this Agenda Item, the following working paper was presented:

- WP/04 – *Activities foreseen for 2020* (presented by the Secretariat).

4.2 The Meeting reviewed the following activities scheduled for 2020:

- a) REDDIG II operation and analysis of the implementation of new services
- b) Activities and new services in the MEVA III/REDDIG II interconnection
- c) 2020 training programme

Operation of REDDIG II and analysis of the implementation of new services***Maintenance of equipment (damaged equipment in the nodes)***

4.3 The Meeting discussed the difficulties encountered in the process for replacing the spare parts stored at the SAM Office, given the fact that some States were taking several months to send the damaged equipment for maintenance, leaving no operational spare part available in the storage room. In this regard, it is very important that the established procedures be followed, so that spare parts and the equipment to be repaired are sent as soon as possible.

4.4 After exchanging several comments on the impact of the operation of the project, given the delays in shipments of equipment with failures for repair, the Meeting formulated the following conclusion:

CONCLUSION RCC/24-1	PROCEDURE FOR SENDING DAMAGED EQUIPMENT FOR REPAIR WITHIN A REASONABLE PERIOD OF TIME
<p>That</p> <p>Regarding the replacement of spare material stored in the SAM Regional Office, the Project Administration:</p> <ol style="list-style-type: none"> a) Upon delivery of spare parts in response to a request, and after confirmation that they have been received, the receiving State will have 60 days to send the equipment for its repair at the factory; b) If the State does not comply with that established in the previous paragraph, the Project Administration will not fulfil any further request for spare parts from said State, till the equipment arrives in the Regional Office; c) This conclusion will apply to States that currently have damaged equipment retained. d) The Administration review the logistics procedure of the material / equipment for repair and restitution; to contain the above and clarify the scope and responsibilities of this procedure. 	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/operational

Why: To ensure that spare parts are available to meet the requests of as many participants of Regional Project RLA/03/901 as possible and as soon as possible.	
When: Immediately	Status: Definitive
Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO Secretariat <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Others: Users/industry	

4.5 Bolivia informed that on March of this year will be sending the 2 failed modems to the Regional Office for further shipment to the factory for repair. The current modem installed on La Paz node will be nationalized by the Bolivian Administration, and the cost of this modem will be charged to Bolivia's annual fee.

4.6 The representative of Colombia has delivered to the Regional Office the IBUC 80 W with failure, for the repair procedures.

4.7 Venezuela informed that it initiated the process of sending the damaged equipment (2 IBUC 80 W and 1 modem 1070) to the Regional Office, for the repair procedures

New network activities and services (REDDIG III)

4.8 The Meeting took note that, taking into account the service life of the network (ten years maximum) and the recurrent failures in some units in particular, which would become more frequent, it was necessary to start considering the design of a new network (REDDIG III).

4.9 In this sense, the Meeting deemed it advisable to create an *ad-hoc* group to analyse the options available in the market, invite companies to submit solutions, and review new technologies for use in the future REDDIG III. The following conclusion was formulated:

CONCLUSION RCC/24-2		ESTABLISHMENT OF THE REDDIG III AD-HOC GROUP	
That The States participating in Regional Project RLA/03/901 establish an <i>ad-hoc</i> group to study technological proposals for use in the future REDDIG III, to be implemented as of 2022.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/operational	
Why: Taking into account the service life of the network and the recurrent failures in some units in particular, as well as the projections for the current network, there is a need to start analysing the design of REDDIG III.			
When: Immediately		Status: Underway	
Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO Secretariat <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Others: Users/industry			

4.10 The following States have volunteered to conform the Ad-hoc Group: Brazil, Chile, France and Paraguay.

4.11 The current MPLS service provider for the ground network of REDDIG II (CenturyLink) made a presentation of a type of service that can be applied in the future REDDIG III.

4.12 Regarding the service life of REDDIG II equipment, the Meeting took note of the recommendations made by the RTO/8 meeting in the sense of leaving only one chain of the REDDIG II VSAT stations in operation to increase the service life of the equipment.

4.13 Likewise, the REDDIG II Administration had expressed concern about corrosion of antennae and outdoor equipment/accessories in some REDDIG II nodes. It was highlighted that States were responsible for maintaining the nodes, especially the metallic structures, cables, atmospheric discharge protection systems and other outdoor equipment/accessories in REDDIG II nodes that did not have readily available spare parts.

Extension of the contract with the ground network provider and new bidding process

4.14 As reported under agenda item 3, in December 2019, taking into account that the contract with the ground network service provider was to expire, contract 22501220 was extended until 30 June 2020. Likewise, a new bidding process for the REDDIG ground network (MPLS) was started.

4.15 The same requirements as for the current network would apply for this new bidding process. Only three nodes have been added: Cochabamba (Bolivia), Honduras (COCESNA) and Lima (ICAO). The idea was to have an operational network with all the specified nodes starting on 1 July 2020.

Purchase of firewall equipment

4.16 The Meeting took note that, in mid-2019, arrangements were started with the TCB to develop the technical specifications for the purchase of 40 firewall units and 20 switches. The technical specifications were developed and the process was being led by the TCB. It was estimated that the bidding would be published in the following days and that it would be completed by the first semester of 2020.

4.17 According to this process, the equipment would be delivered in Lima, where training would be provided to the technical personnel of the network who would have to pre-configure the equipment for each node. Subsequently, the equipment would be sent from Lima to the corresponding node, to be installed by the previously trained technicians.

4.18 It was estimated that training would take place during the second semester of 2020.

Preventing maintenance programming

4.19 For the year 2020, the REDDIG Administration had established a preventive maintenance programme for all the equipment in all REDDIG II nodes. The preventive maintenance programme schedule was the same as that presented at the RCC/22 meeting in 2019.

Visit to REDDIG II

4.20 The Meeting took note that the Piarco and Guayaquil nodes were to be visited by the REDDIG Administrator in 2020, pursuant to Conclusion RCC/22-1.

4.21 Likewise, a visit to the Bogota node would need to be scheduled due to the transfer of the node to the facilities in the El Dorado airport. For this visit, the Administration of Colombia would cover the costs involved in having the Administrator present during this process; these costs would be charged in the annual fee.

Interconnection of regional IP networks (CRV, PENS and REDDIG)

4.22 The Meeting took note that there were three regional IP networks already implemented: CRV in the APAC Region, PENS in the EUR Region, and REDDIG II in the SAM Region. These networks used the services of telecommunication providers (MPLS), which could provide the interconnection among the various networks.

4.23 In general, the interconnection between Regions was done through dedicated circuits between States/organisations, usually using satellite circuits with limited bandwidth and services implemented.

4.24 The interconnection through telecommunication providers would offer the possibility of reducing the hiring of specific circuits, since the infrastructure would be used more efficiently with the Internet protocol suite (IPS).

4.25 In order to discuss and implement network interconnection, a meeting between ICAO officers (HQ, APAC, EUR and SAM) and the representatives of the three telecommunications companies (PCCW Global (APAC), British Telecom (PENS) and CenturyLink (REDDIG II) had been scheduled to be held in Lima during the course of this year.

4.26 The Meeting agreed that the presence of the secretary of the Communications Panel (CP) was important to provide guidance on the assignment of IP addresses, security aspects, and compliance with the provisions of Doc 9896, *Manual for ATN using IPS Standards and Protocols*. In this regard, the following conclusion was formulated:

CONCLUSION RCC/24-3		INTERCONNECTION OF REGIONAL IP NETWORKS	
That		Expected impact:	
a) The Secretariat take the necessary administrative steps to hold a meeting in Lima, with the participation of ICAO officers and the telecommunications providers of the regional IP networks of the APAC, EUR and SAM Regions.		<input type="checkbox"/> Political / Global	
		<input checked="" type="checkbox"/> Inter-regional	
		<input checked="" type="checkbox"/> Economic	
		<input type="checkbox"/> Environmental	
		<input checked="" type="checkbox"/> Technical/operational	
b) The participation of the secretary of the Communications Panel (CP) is ensured with resources of Regional Project RLA/03/901 (air tickets and daily allowance).			
Why: To start discussions for the interconnection of the implemented regional IP networks in order to create a global ATN, thus reducing the cost of leased circuits between regions.			
When: Immediately		Status: Definitive	
Who: <input type="checkbox"/> States <input checked="" type="checkbox"/> ICAO Secretariat <input checked="" type="checkbox"/> ICAO HQ <input type="checkbox"/> Others: Users/industry			

4.27 The FAA representative made a presentation on the state of implementation of interconnections of the United States with regional IP networks (CRV, PENS and REDDIG). The presentation will be available on the RCC/24 website.

Ninth technical-operational meeting of REDDIG II

4.28 Regarding the holding of the ninth technical-operational meeting of REDDIG II, Bolivia manifested the intention of holding the event in Cochabamba, during the second semester of 2020, due the implementation of a REDDIG node (MPLS) at this city.

Activities and new services in the MEVA III/ REDDIG II interconnection

Extension of contract N° 22501528 (MEVA III – REDDIG II interconnection)

4.29 The Meeting took note that, in March 2020, the contract N° 22501528, signed between ICAO (TCB), on behalf of the States participating in Project RLA/03/901, and Frequentis, for the provision of the interconnection between the MEVA III (NAM/CAR) and REDDIG II (SAM) networks, would be extended.

4.30 As a result of the AMHS (P1) interconnection between Atlanta-Brasilia and Atlanta-Lima, the contract could be extended under the same terms as in the last amendment, except for the AFTN circuits of Brazil and Peru (Network Access = USD 284.30 and AFTN circuit = USD 263.37), which should be excluded because they were no longer necessary.

4.31 In this sense, the following conclusion was formulated:

CONCLUSION RCC/24-4		EXTENSION OF CONTRACT N° 22501528 MEVA III – REDDIG II INTERCONNECTION	
That	The Secretariat take administrative steps to extend Contract N° 22501528, under the terms previously agreed in Amendment II, excluding the costs of AFTN circuits of Brazil and Peru.	Expected impact:	<input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/operational
Why:	To maintain the MEVA III – REDDIG II interconnection with the necessary circuits/services.		
When:	Immediately	Status:	Underway
Who:	<input type="checkbox"/> States <input checked="" type="checkbox"/> ICAO Secretariat <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Others: <input checked="" type="checkbox"/> Users/industry (Frequentis)		

2020 Training programme

4.32 The following training activities were foreseen for 2020:

- a) Recurrent training on REDDIG II operation and maintenance
- b) Course on security policies and firewall configuration
- c) Advanced course on firewall management and monitoring
- d) Training for Manaus NCC staff on the analysis of IP packages using sniffer (RADAR, AMHS, etc.)

Recurrent training on REDDIG II operation and maintenance

4.33 This activity is carried out every year, during scheduled visits to the nodes by the Administrator. This training is intended for the technical personnel responsible for the operation and maintenance of a REDDIG station, with emphasis on new implementations, preventive maintenance work plans, use of the WUG tool, troubleshooting of station components and with other stations, etc.

Course on security policies and firewall configuration

4.34 The Meeting took note that, depending on the purchase of firewall equipment, training would be provided to the technical staff of the REDDIG nodes, NCC staff, the REDDIG Administrator, and the SAM CNS Officer.

4.35 The course would have one participant per node, in addition to the REDDIG Administrator and the SAM CNS Officer. The vacancies corresponding to the Ezeiza and Manaus nodes would be assigned to NCC staff.

Advanced course on firewall management and monitoring

4.36 The Meeting took note that this course was directly related to the “*Course on security policies and firewall configuration*”. Accordingly, it would be subject to the holding of the former. The course was intended for NCC staff, the REDDIG Administrator and the SAM CNS Officer.

4.37 The costs involved in the provision of this course would be included in the purchase of the equipment, while fellowships were to be covered by Regional Project RLA/03/901.

Training for the Manaus NCC staff on the analysis of IP packages using sniffer

4.38 This training is intended for the Manaus NCC staff engaged in giving support to the network and ensuring data transport and integrity, and would be provided by the network Administrator.

4.39 Training would be provided throughout the year. It would consist of a theoretical segment and, then, using the tools provided, analyses for the assessment, identification and, finally, resolution of the various issues arising in data transport.

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

5.1 Under this Agenda Item, the Meeting received information on the financial situation of the Project, and of the review of the Project's budget in working paper WP/05 - *Financial situation of the project and approval of the budget for 2019*, presented by the Secretariat.

Summary of expenditures incurred by Project RLA/03/901 between 2003 and 2019

5.2 The Project spent **USD 1,087,534** in 2019, and a total of **USD 16,428,886** between 2003 and 2019. Table # 1 shows the breakdown of expenditures as of December 2019. Table # 2 contains the distribution of project expenditures by year, and a pie chart showing the percentage of implementation of each budget component.

Status of cost-sharing contributions

5.3 The Meeting took note of the status of cost-sharing contributions, as shown in Table # 3. To date, total contributions amounted to **USD 17,603,182**. Subtracting expenditures (**USD 16,428,886**) there is a positive balance of **USD 1,174,296**, still pending the collection of charges corresponding to the transfer of the Bogota and Buenos Aires nodes.

5.4 With regard to the outstanding contributions of Argentina and Suriname, the Meeting was informed on the actions taken by the Secretariat to comply with Conclusion RCC22/5 – *Delay in cost-sharing contributions to project RLA03901 – Argentina and Suriname*. While the situation of both States was different, uncertainty about the payment of their contributions remained, which have increased with the contribution of 2019 and if the situation remains it would add the contribution of 2020.

5.5 Subsequently, the situation of Suriname and the possible application of the procedure approved in RCC/8-11 *Procedure in cases of payment delay* were discussed. After a discussion on the actions to be taken, including the need for updating the *Procedure in cases of payment delay* and considering the impact on safety, it was decided that this procedure needed to be changed to implement gradual actions, to ensure continuity of operations and maintain the levels of safety in the Region.

5.6 The first action would be the suspension of support in the participation of REDDIG courses, seminars, and meetings, together with the restriction of attending the RCCs meetings only as observers. Subsequent actions and decisions on the maintenance/suspension of service would have to be dealt with in an extraordinary RCC, to be undertaken in conjunction with a high-level meeting for the high level authorities of the Project Member States to approve the steps to be taken. In that regard, the following conclusion was agreed:

CONCLUSION RCC/24-5		LATE PAYMENT PROCEDURE IN COST-SHARING CONTRIBUTIONS TO PROJECT RLA/03/901	
That the Secretariat:		Expected impact:	
a) Update the procedure for late payment of cost-sharing contributions to project RLA03901 under the following guidelines: <ol style="list-style-type: none"> i. The procedure applies to those States that presents two unpaid contributions, ii. Instruction will be requested to the RCC to authorize if the following steps are followed, iii. The Secretary will send a letter to the State requesting information on the in claim of payment of outstanding contributions and the notification of following actions: <ol style="list-style-type: none"> 1. After two months of forwarding the letter, support shall be suspended in training activities and in REDDIG meetings, as well attending the RCCs meetings only as observers. 2. After 4 months, an extraordinary cTE call shall be made in which the High Authorities of the Member States are located, defining the actions to be taken for the maintenance/suspension of the services. iv. Meanwhile, the REDDIG Administrator will prepare a report on the technical impact of the cessation of State activity through REDDIG b) Take the appropriate actions to proceed in accordance to item (a) (iii) for the States of Suriname and Argentina.		<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/Operational	
Why:			
To ensure the normal operation of REDDIG.			
When:		Status:	
As of 2020		Pending	
Who:			
Secretariat			

5.7 It was then informed that Brazil's 2019 delay in contributions was due to a new administrative procedure of the State that they were implementing to secure contributions for five years, which had been completed and that it was proceeding with the final payment procedures, which were expected to be completed with the transfer in May.

5.8 **Appendix A¹** to this part of the Report contains the aforementioned Tables 1, 2 and 3.

¹ Refer to RCC/22-WP/5, Rev. 1

5.9 The Meeting was then informed that, pursuant to conclusion RCC/22-7 *Budget proposal for Project RLA/03/901 Rev U for approval by the States*, the budget of the project had been revised to include the purchase of REDDIG spare parts, the antivirus licence for all REDDIG nodes, the extension of the MPLS service to 2022, the extension of MEVA REDDIG interconnection costs to 2023, adjustments in administrative charges, and the updating of 2019 expenditures in accordance with the financial statements. Accordingly, the following conclusion was adopted:

CONCLUSION RCC/24-6		APPROVAL OF THE BUDGET FOR PROJECT RLA/03/901 REV “U”	
That the Secretariat: 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.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Financial <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/Operational	
Why: To carry out REDDIG management activities.			
When: As of 2020		Status: On-going	
Who: Secretariat			

Agenda Item 6: Annual project evaluation

6.1 Under this Agenda Item, the Meeting took note of the information provided in WP/06 regarding Project evaluation documents, namely:

- a) Status of the project as of 31 December of each year and management and outcome indicators (WP/06, **Appendix A**);
- b) Project monitoring and control, work plan for 2020 (WP/06, **Appendix B**); and,
- c) Survey on management and outcome indicators.

6.2 The 2019 survey on management and outcome indicators was responded by Bolivia, Brazil, Chile, Ecuador, France, Guyana, Paraguay, Peru, Uruguay, and Venezuela. Their comments and ratings gave an average of 4.5 points out of a maximum of 5 (“exceeds requirements”) in the rating scale, with respect to the 2019 programme of activities. The consolidated information is shown in the **Appendix** to this agenda item.

6.3 Within the comments on the achievement of the project objectives and the management of the Project, the need to improve the services provided on the terrestrial network in some of the States, including French Guyana (France), was noted, although it was already in process of change was still pending. It was also emphasized that is still remaining the need to improve spare parts shipping times, as well as improving the logistics management of spare parts by States; this issue has been addressed in Agenda Item 4 and it is hoped that the revision of administrative manuals and the will of States, could improve logistics issues.

6.4 Regarding the lessons learned, it was emphasized as good practices the teamwork, the generation of the photographic registration process for the components of the nodes in order to create a database hosted in the NCC, the creation of new AMHS connections, among others. On the other hand, it was informed on the need to support States in the logistics of transporting and receiving spare parts. In this regard, the Secretariat informed that it could be supported according to the need of each State and administrative possibilities.

APPENDIX

3. 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

Total	4.5
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3. SURVEY ON MANAGEMENT AND OUTCOME INDICATORS
I. EVALUATION OF CURRENT PROJECT

1.-Project objectives		Evaluation
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?		
ARG		
BOL	Project objectives are in line with the priorities of our State	4.5
BRA	The objectives of project RLA/03/901 are in line with the SIRIUS project of the Brazilian Airspace Control Department, which is based on strategic solutions for a permanent evolution of Brazilian air traffic management, associated with environmental needs.	4.5
CHI	Yes, the objectives of the project are in line with the priorities of the national navigation plan of our State.	5
COL		
ECU	Yes	5
FRA	Yes, the project fits our objectives	4
GUY		4.5
PAR	The objectives of the project are aligned with our State priorities with regard to the national air navigation plan.	4.5
PER		4.5
SUR		
T&T		
URU	The objectives of the project take into account our State's priorities with regard to the national air navigation plan and the reality of civil aviation.	4.5
VEN		4.5
AVERAGE		4.6

2.-Support at regional and global level		Evaluation
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?		
ARG		
BOL	Yes, it is of great assistance for air operations in our country	5
BRA	The project responds to, and supports, DECEA regarding speech and data communications between Brazil and South American countries.	4.5
CHI	Yes, the project supports our Administration's commitments regarding the national ANP, both regionally and globally.	5
COL		
ECU	Yes	5
FRA	Yes	4.5
GUY		4.5
PAR	The project firmly supports our State's commitments as regards the regional and global air navigation plans.	4.5
PER	Yes, the project supports the Administration as regards air navigation plans.	5
SUR		
T&T		
URU	We consider that it responds to, and supports, our Administration's commitments with respect to the regional and global air navigation plans.	4.5
VEN	Yes, it responds to, and supports, our requirements and commitments with regard to the regional and global air	4.5
AVERAGE		4.7

3.- Comments by the State(s)		Evaluation
Do you have any comments on project management?		
ARG		
BOL	Project management is consistent with the established objectives.	4.5
BRA	Project management has sustained the objective agreed under RLA/03/901, Revision A, of 2003, and is aligned with the new technologies available in global markets, through revisions to the agreement, equipment renewal, inclusion of new equipment, and training.	5
CHI	Project management is satisfactory and is in accordance with planned objectives.	5
COL		
ECU	Project management is in line with the GANP, keeping all technological platforms up-to-date to enhance safety.	5
FRA	No	4
GUY	Right direction.	4.5
PAR	Project management is fully committed with the objectives of the project, and encourages participation.	4.5
PER		
SUR		
T&T		
URU	Project management meets its objectives to the entire satisfaction of our Administration.	5
VEN	In terms of equipment and spare part replacement.	4
AVERAGE		4.6

4.-Strategy and vision		Evaluation
Do you consider that the project responds to your institution's strategy and long-term vision?		
ARG		
BOL	Yes, it responds to our requirements	4
BRA	Project RLA/03/901- REDDIG meets DECEA requirements as air navigation services provider (ANSP), and since the project meets the requirement for new technologies, by keeping abreast of provier needs and market technologies, it will continue being the communications network between DECEA and South American countries.	5
CHI	The Project responds to the strategy and long-term vision of our Administration.	5
COL		
ECU	Yes	5
FRA	Yes, because with this network we could consider sharing our radar or ADS-B images, for example, with another ANSP	4.5
GUY		4.5
PAR	It fully responds to the requirements of our State.	4.5
PER	Yes	4.5
SUR		
T&T		
URU	The project responds to the strategy and long-term vision of our Administration.	5
VEN	Yes	4.5
AVERAGE		4.7

5.- Project quality		Evaluation
What is your opinion about the content of this project for the achievement of its objectives?		
ARG		
BOL	Project quality is as expected and allows for the achievement of the objectives	4.5
BRA	The implementation of safety equipment and policy, the planned updating of equipment and technical staff will contribute to the achievement of the objectives contemplated for the next two years.	4.5
CHI	It is appropriate and allows for the achievement of the objectives	5
COL		
ECU	The content of the project is well defined, the administration is committed to good planning of objectives, even beyond	5
FRA	Continue our very good cooperation especially on the failures	4
GUY		4.5
PAR	The contents of the project are fully in line with the objectives.	4.5
PER		5
SUR		
T&T		
URU	The contents of the Project are within expectations for the desired objectives.	4.5
VEN	The project is on track and must continue like that in order to achieve and maintain the expected objectives.	4.5
AVERAGE		4.6

6- Project resources		Evaluation
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?		
ARG		
BOL	Yes, they are adequate; the staff in each REDDIG node must be in constant training.	4
BRA	The financial resources estimated for the Project are being adjusted since 2003. The physical resources meet the needs of all participants. And human resources employed by the participants and by ICAO show commitment to project objectives.	4.5
CHI	Yes, they are adequate.	4.5
COL		
ECU	Yes	4.5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	They are adequate	5
SUR		
T&T		
URU	The financial, physical and human resources established for the project are adequate and appropriate.	4.5
VEN	Yes, but I suggest the creation of a support fund in case additional equipment and spare parts need to be delivered and received.	4.5
AVERAGE		4.5

7.-Project participants		Evaluation
Do you consider that all the parties that should be involved in the project are involved? If not, who should be participating?		
ARG		
BOL	All those involved must participate actively.	4
BRA	All those that need to participate are participating in the Project.	5
CHI	Yes	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	They are all participating.	5
SUR		
T&T		
URU	All parties involved are as necessary, and actively participate.	5
VEN		4.5
AVERAGE		4.6

8.-Project effectiveness		Evaluation
Is the project cost-effective compared to similar programmes or projects?		
ARG		
BOL	The project meets its objectives	4
BRA	RLA/03/901 project has proven cost-effective, compared to the various contracts that would be needed for communications, taking into account telecommunication operators and the time required for the hiring of personnel.	5
CHI	Yes	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Yes, it is effective	5
SUR		
T&T		
URU	Regarding costs, this project is adequate and effective, like other similar projects	5
VEN	Yes	4.5
AVERAGE		4.6

9.-Modification of project objectives	
What modifications to project objectives and scope would you propose?	
ARG	
BOL	None
BRA	The objectives and scope of the Project meet current and planned needs.
CHI	None
COL	
ECU	None
FRA	Change MPLS provider to OBS
GUY	No comments. Satisfied.
PAR	Ninguno.
PER	
SUR	
T&T	
URU	The objectives and scope of the project are appropriate.
VEN	The proposal to create a fund to support member States, only when requesting spare parts and for administrative formalities for delivery and reception of equipment and spare parts

10.-Other information	
Please provide any other information to support or further clarify your perception of the scope of the current project	
ARG	
BOL	More in-depth training of the staff in charge of the nodes
BRA	
CHI	None
COL	
ECU	
FRA	
GUY	No comments.
PAR	
PER	
SUR	
T&T	
URU	The excellent completion of this project will serve as a basis for other future projects.
VEN	

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

1.-Project objectives		Evaluation
In terms of project management by ICAO, do you think that project objectives are being met?		
ARG		
BOL	Yes	4.5
BRA	Project objectives are being met by the Administration of the ICAO Regional Office in Lima.	4
CHI	Yes, they are being met with a high level of professionalism and excellent management.	4.5
COL		
ECU	Yes	5
FRA	Yes	4.5
GUY		4.5
PAR	Yes	4.5
PER	Yes, objectives are being met.	5
SUR		
T&T		
URU	We believe that project management by ICAO is achieving project objectives, and current results are successful.	5
VEN		4.5
	AVERAGE	4.6

2.- Project schedule		Evaluation
Do you consider that project objectives are being met or have been met on a timely basis in accordance with your expectations?		
ARG		
BOL	On a regular basis	4
BRA	All project objectives are being met as planned at Coordination Committee meetings (RCC).	4
CHI	Yes, and the delays in certain activities have been due to other factors.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Yes, they are being met.	4.5
SUR		
T&T		
URU	Project objectives are being met, beyond expectations.	5
VEN		4.5
	AVERAGE	4.5

3.--Use of resources		Evaluation
Do you consider that resources are being, or have been, used efficiently to meet the objectives?		
ARG		
BOL	Resources are managed efficiently.	4.5
BRA	All resources are being used efficiently, maintaining the high availability indexes of the Project.	4.5
CHI	Yes	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Resources have been efficiently used.	
SUR		
T&T		
URU	Resources have been efficiently used, meeting the objectives.	5
VEN		4.5
AVERAGE		4.6

4.- Project cost		Evaluation
Do you consider that costs related to the attainment of the objectives are, or have been, adequate?		
ARG		
BOL	Yes	4
BRA	Project costs are being very well managed, so as to meet expected objectives.	4
CHI	Yes, they have been adequate.	4.5
COL		
ECU	Yes	4.5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Costs are adequate.	
SUR		
T&T		
URU	Costs related to the achievement of objectives have been adequate.	5
VEN		4.5
AVERAGE		4.4

5.-Major achievements		Evaluation
What are the main achievements of the project in relation to the expected results?		
ARG		
BOL	Coordination with other States for the solution of problems.	5
BRA	The high availability of REDDIG and the REDDIG administration, which permit excellent coordination among States, as well as the existence of new safer and faster services.	4.5
CHI	International coordination and collaboration for the solution of problems.	4.5
COL		
ECU	All the results are as expected.	5
FRA	The availability of the network.	4
GUY		4.5
PAR	Availability, the skilled technical group, and user satisfaction.	4.5
PER		
SUR		
T&T		
URU	The expected results have been obtained, through an adequate administration of the project.	5
VEN	The establishment of AMHS circuits with REDDIG and MEVA member States.	4.5
AVERAGE		4.6

6.-PMajor problems and their resolution		Evaluation
What are the main problems affecting the achievement of expected results and how should they be resolved?		
ARG		
BOL	The time that administrative formalities take in each State.	4
BRA	Protection should not generate problems that jeopardise the objective.	4.5
CHI	Different lengths of time for administrative processes in each State.	4
COL		
ECU	Mainly related to the administration in each State, which affect the attainment of the goals.	4.5
FRA	Improve the delivery time for sending spare equipment	3.5
GUY		4.5
PAR	Delays in customs in the various States for the provision/return of spare parts. This delay could be reduced through better management by focal points.	4
PER		
SUR		
T&T		
URU	The problems have been logistics-related, due to delays in customs, and unexpected technical issues unrelated to maintenance, such as atmospheric problems, which have been successfully overcome. We insist that administrative issues should be solved locally with the excellent support of the REDDIG Administrator.	4.5
VEN	The replacement of equipment and spare parts, and create a fund to expedite administrative formalities for delivery and reception.	4
AVERAGE		4.2

7.- Other comments	
Please include other comments related to the attainment of project objectives.	
ARG	
BOL	Objectives are being achieved with professionalism and dedication.
BRA	
CHI	The objectives have been achieved with professionalism and dedication by State staff and the Administration.
COL	
ECU	
FRA	We had a satellite failure that lasted a long time because we had no spare
GUY	No comments
PAR	None
PER	
SUR	
T&T	
URU	The objective is being achieved through the excellent management of the Administrator, and the attention paid by maintenance personnel of the administrations.
VEN	

8.- Risks	
What new events could affect the achievement of project outcomes? What do you recommend to respond to these events?	
ARG	
BOL	Lack of spare parts; more spare parts should be available.
BRA	Currently, the main risk would be an information security incident originating in a participating State. However, it could be mitigated with the tools currently available to the network Administrator and NCC technicians, and with the firewall acquisition for REDDIG stations.
CHI	Hiring of suitable personnel to work in the REDDIG, to replace those who retire.
COL	
ECU	Mainly risks unrelated to project management: natural and political risks, basically
FRA	Spare equipment need to be sending faster
GUY	No comments.
PAR	Security exposure of the network. We recommend accelerating the firewall implementation process. Develop a detailed timetable for the transition between firewalls to the existing service routers.
PER	
SUR	
T&T	
URU	The retirement and replacement of REDDIG technical personnel will probably affect the results of the project. We recommend searching for committed and suitable people to take these positions, and provide them with adequate training courses.
VEN	Possible interference that could threaten the operation of the network. We suggest to seek alternatives to prevent interference or the use of another frequency band.

9.-Other information	
Please provide any other information to support or further clarify your assessment regarding attainment of project objectives.	
ARG	
BOL	None
BRA	Project RLA/03/901 is very important for air navigation in South America, in addition to being a successful undertaking, which maintains a high level of availability and efficiency. It helps States, maintaining the means required for communications with the required high level of availability.
CHI	None
COL	
ECU	
FRA	
GUY	No comments.
PAR	None
PER	
SUR	
T&T	
URU	Our project compliance assessment is based on excellent communication among all parties, as well on their dedication and professionalism.
VEN	

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

1.-Decision making		Evaluation
Do you think that the decision-making process within the project is appropriate?		
ARG		
BOL	Yes, it is adequate.	4.5
BRA	Decision-taking is consistent with the meetings of the Coordination Committee (RCC) of Project RLA/03/901-REDDIG.	4
CHI	Yes, it is appropriate	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	It is appropriate	5
SUR		
T&T		
URU	The decisions made by ICAO and States through coordination meetings, especially in unforeseen or emergency cases, have been appropriate.	5
VEN		4.5
AVERAGE		4.6

2.-Product quality		Evaluation
Do you think that the quality of the products obtained is appropriate?		
ARG		
BOL	Yes	4
BRA	All products, services, equipment and human resources serving the Project are of excellent quality.	5
CHI	Yes, it is appropriate.	4.5
COL		
ECU	Yes	5
FRA	Yes	4.5
GUY		4.5
PAR	Yes	4.5
PER	Quality is adequate.	
SUR		
T&T		
URU	Yes, the quality of the products is appropriate, as a result of an excellent study and analysis.	5
VEN		4.5
AVERAGE		4.6

3.-Orientation		Evaluation
Do you think that the orientation for the attainment of project outcomes is being followed?		
ARG		
BOL	Yes, it points to the required outcomes.	4.5
BRA	Participating States and the ICAO SAM Regional Office follow the orientation in order to preserve the excellent results obtained over the years.	4.5
CHI	Yes, it is being followed	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Yes, it is being followed	
SUR		
T&T		
URU	Yes, it is being followed, and we believe we are headed to obtaining excellent results.	4.5
VEN		4.5
AVERAGE		4.5

4.-Organization and prioritization		Evaluation
Do you think the organization and prioritization within the project are appropriate?		
ARG		
BOL	Yes, they are appropriate and cautious	4.5
BRA	The organization and priorities of the Project are appropriate for the objectives.	4.5
CHI	Yes, they are appropriate.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Yes, they are appropriate.	
SUR		
T&T		
URU	We believe that the organization and prioritization of the project are adequate.	5
VEN		4
AVERAGE		4.5

5.-Change management		Evaluation
Do you think that change management and the degree of flexibility in managing the project are appropriate?		
ARG		
BOL	Appropriate	4
BRA	Change management and degree of flexibility in the management of the project are within expectations.	4
CHI	Yes, they are appropriate.	4.5
COL		
ECU	Yes, definitely	5
FRA	Yes	4
GUY		
PAR	Yes	4.5
PER	Quite appropriate	
SUR		
T&T		
URU	Change management and flexibility are good and appropriate.	5
VEN		4.5
AVERAGE		4.4

6.-Service to the State		Evaluation
Do you think that the service provided to your State is appropriate?		
ARG		
BOL	Yes	5
BRA	The service provided to DECEA meets the requirements for the maintenance of the project.	4.5
CHI	Yes, it is appropriate.	4.5
COL		
ECU	Yes, definitely	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	The service received in Peru is appropriate.	5
SUR		
T&T		
URU	Yes, it is appropriate and equitable for all States.	5
VEN		4.5
AVERAGE		4.7

7.-Communication		Evaluation
Do you think that the level of communication within and outside the project is adequate?		
ARG		
BOL	Communication must be strengthened.	4
BRA	Administrative-related communications within the Project are within expectations.	4
CHI	Yes, it is appropriate.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	It is appropriate and effective.	
SUR		
T&T		
URU	Communication has been one of its strengths, the reason for the success obtained so far.	5
VEN		5
AVERAGE		4.5

8.-Conflicts		Evaluation
Do you believe that conflict management is adequate?		
ARG		
BOL	Coordination between States is appropriate.	4.5
BRA	The measures taken by the Regional Office and the REDDIG Administrator are efficient and facilitate the activation of new services.	4
CHI	Yes, it is adequate.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Conflicts are addressed properly.	
SUR		
T&T		
URU	Conflicts are solved appropriately, based on their importance and priority.	4.5
VEN		4
AVERAGE		4.4

9.-Use of resources		Evaluation
Do you think that project resources are being used efficiently to produce the expected results?		
ARG		
BOL	Yes, they are being properly used.	4.5
BRA	Resources are used efficiently and produce the expected results.	4.5
CHI	Yes, they are used efficiently.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER	Yes	
SUR		
T&T		
URU	Yes, they are being used efficiently and cautiously.	5
VEN		4.5
AVERAGE		4.6

10.-Relevance of mechanisms		Evaluation
Do you think that project management mechanisms are relevant?		
ARG		
BOL	Yes	4
BRA	The mechanism is necessary to maintain the high availability of the project.	5
CHI	Yes, they are relevant.	4.5
COL		
ECU	Yes	5
FRA	Yes	4
GUY		4.5
PAR	Yes	4.5
PER		5
SUR		
T&T		
URU	They are relevant and adequate.	4.5
VEN		4.5
AVERAGE		4.6

11.-Opportunity of work plans		Evaluation
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?		
ARG		
BOL	Good	4.5
BRA	The work plans submitted have achieved satisfactory results and contribute to the high availability of the network.	5
CHI	Good, in terms of delivery times, products and results.	4.5
COL		
ECU	The assessment is positive	5
FRA	Very good	4.5
GUY		4.5
PAR	Excellent	4.5
PER		4.5
SUR		
T&T		
URU	The degree of opportunity has been appropriate, with a good management of resources and timeframes to obtain good results.	5
VEN		4
AVERAGE		4.6

12.-Orientation		Evaluation
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?		
ARG		
BOL	They are aligned.	4.5
BRA	All project activities and products are aligned with the objectives of the project and of all the participants.	5
CHI	Yes, they are	4.5
COL		
ECU	Yes	5
FRA	Yes	4.5
GUY		4.5
PAR	Yes	4.5
PER	It has been possible through the effort made; they are aligned.	
SUR		
T&T		
URU	Yes, the activities and products are aligned with ICAO air navigation plans, Regional Offices, and guidelines.	5
VEN		4.5
AVERAGE		4.7

13.-Other information	
Please provide any other information to support or further clarify your assessment of the products and services provided through the project.	
ARG	
BOL	None
BRA	
CHI	The products and services obtained through the project have been appropriate, but note should be taken of state-of-the art technology and growth in air operations.
COL	
ECU	
FRA	
GUY	No comments
PAR	None
PER	
SUR	
T&T	
URU	The management of the products and services provided by REDDIG has been appropriate.
VEN	Create a fund to cover administrative formalities for the delivery and reception of equipment and spare parts. Assess interference in the main nodes that could jeopardise the operation of the network.

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

1.-Positive lessons learned from the project	
Provide a brief description of the positive lessons learned from project implementation	
ARG	
BOL	Team work, with active participation of the technical staff of the States and the Regional Office
BRA	The team spirit among the States and the network Administrator facilitate the resolution of problems and failures at the stations The meetings, courses and teleconferences have improved the knowledge of the technical staff that perform maintenance tasks at the stations.
CHI	Team work, with active participation of State and Regional Office staff, through the available technological tools.
COL	
ECU	Generation of a node component photographic recording procedure in order to create a database at the NCC, and have the information available through web access
FRA	A very good cooperation between States and the REDDIG Administrators
GUY	Successful communication with adjacent States.
PAR	Good communication through teleconferences for addressing issues and coordinating the resolution of problems.
PER	
SUR	
T&T	
URU	Without the active mediation of ICAO, as well as close and responsible technical collaboration among all, it would not have been possible to create and implement the project among so many States.
VEN	
2.-Opportunities for improvement	
Provide a brief description of the improvement opportunities identified during project implementation.	
ARG	
BOL	None
BRA	Continuous annual training of the technical staff in charge of REDDIG maintenance and continuity of technical-operational meetings.
CHI	Turnover of personnel that thereafter do not continue in the Project.
COL	
ECU	Prepare a compilation of node reports of the most frequent failures in order to develop a basic procedures manual, with pictures, for node support personnel
FRA	Create new AMHS connections with Suriname and Guyana
GUY	No comments.
PAR	Constant training, in order to have an efficient technical team to address the problems.
PER	
SUR	
T&T	
URU	Opportunities or improvement start with close communication and support between the technical areas and the Project administration.
VEN	

3.- Strategy for the implementation of the identified opportunities for improvement.	
Provide a brief description of the strategy that you would propose to implement the identified opportunities for improvement.	
ARG	
BOL	Generate a work plan that ensures the sustainability of the project in each State.
BRA	Keep meetings and training plans in the annual work programme.
CHI	Keep State working groups to provide for process continuity, and start a process for the renewal of personnel.
COL	
ECU	Develop a basic equipment maintenance procedures manual.
FRA	Change MPLS provider to OBS
GUY	No comments.
PAR	Continue applying the same strategy, since it has been enhanced through the experience gained during the course of the Project and implement it for REDDIG III
PER	
SUR	
T&T	
URU	Without any doubt, maintain and improve the links among stakeholders, and support REDDIG II management and administration.
VEN	Create a fund to cover administrative formalities for the delivery and reception of equipment and spare parts. Assess interference to the main nodes that could jeopardise network operation.

Agenda Item 7: Other matters

7.1 The REDDIG II Administrator has indicated that States should take the necessary steps to mitigate the impact on services, due to potential interference caused by solar explosions.

7.2 The Secretariat recommended the States to review the SAM Regional Office's website to become aware of the meetings scheduled for 2020.

7.3 The French, Guyana and Suriname Administrations are invited to participate in the meetings of the SAM Region Implementation Group (SAM/IG), more specifically in the Subgroups of the Interoperability Task Group (GT Interop).