



Agenda Item 3: Other matters

ADDITIONAL REDDIG NODE OF AIREON

(Information Paper presented by the Secretariat)

SUMMARY	
This information paper presents information related to the implementation of an additional node of REDDIG II (MPLS), requested by the company Aireon	
References	
<ul style="list-style-type: none"> - Report of the Twenty-fourth Meeting of the REDDIG Coordination Committee (RCC/24) (Lima, Peru, March 03 to 06, 2020); and - Report of the Twenty-third (Extraordinary) Meeting of the REDDIG Coordination Committee (RCC/23) (Teleconference, August 21, 2019). 	
ICAO Strategic Objectives:	<i>A - Safety; and B - Air navigation capacity and efficiency</i>

1. Background

1.1 At the Twenty-third (Extraordinary) Meeting of the REDDIG Coordination Committee (RCC/23), held by teleconference on August 21, 2019, the following conclusion was approved:

Conclusion	
RCC/23-1 IMPLEMENTATION OF ADDITIONAL NODES OF THE REDDIG II TERRESTRIAL NETWORK (MPLS)	
That the Secretariat:	Impacto esperado:
<ul style="list-style-type: none"> a) Make the necessary arrangements for implementation of the REDDIG II terrestrial network additional nodes requested by United States (FAA), with no cost for the RLA/03/901 Project participants. b) Analyze requests of other States/Organizations interested to implement REDDIG II additional 	<ul style="list-style-type: none"> <input type="checkbox"/> Politician / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/Operational

nodes and propose to the Coordination Committee for approval.	
Why: To provide better communications for the air navigation services, especially with States/Organizations of other regions.	
When: <p style="text-align: center;">Immediately</p>	Status: <p style="text-align: center;">Ongoing</p>

1.2 In accordance with the procedure established in Conclusion RCC / 23-1, the Secretariat has received letters from the United States (FAA) and COCESNA, expressing interest in implementing additional nodes of the REDDIG II terrestrial network (MPLS).

1.3 The FAA has contracted the MPLS provider for REDDIG II and has implemented two additional nodes in Atlanta and Salt Lake City, which were installed on September 30, 2020.

2. **Description**

2.1 Through the letter presented in Attachment A of this informative note, the Aireon company has requested the implementation of an additional node of the REDDIG II terrestrial network (MPLS).

2.2 In compliance with the established procedures, the Secretariat has circulated a letter to the participating States of the Regional Project RLA / 03/901, which is presented in Attachment B of this informative note, consulting the interest in the implementation of an additional REDDIG II node by Aireon.

2.3 Until the date of elaboration of this information paper, the following States participating in the Regional Project RLA/03/901 expressed interest in the implementation of an additional node by Aireon: Chile and Trinidad & Tobago.

2.4 Based on the procedures established in the RCC/23 Meeting, the REDDIG II Administration will proceed with the necessary configuration to make possible the connection of the additional nodes implemented by Aireon with the nodes of the participating States of the RLA/03/901 Regional Project, who expressed interest in said communication.

3. **Suggested action**

3.1 The Coordination Committee is invited:

- a) To take note of the information contained in this information paper.



Washington, September 4th, 2020

Mr. Fabio Faizi Rahnemay Rabbani
Regional Director, South America
International Civil Aviation Organization

CC: Mr. Francisco Almeida, CNS Officer

Dear Mr. Rabbani,

I hope the present finds you and the Lima office personnel well.

As we all know, the impact of the COVID-19 virus has been significant to our industry. States in the region are facing one of the biggest challenges in our history in keeping their operations continuity, while managing the large decrease in air traffic operations.

It is paramount during this time for the industry to come together and find innovative solutions to accomplish the objectives for the region in a safe, efficient, and flexible way. Aireon has committed to supporting States in providing state-of-the-art, EASA-certified, and cost-effective air traffic surveillance data services, via "space-based ADS-B".

During this COVID-19 crisis, space-based ADS-B has demonstrated to be the most cost-effective surveillance technology that exists, as our business model is based on paying for flight hours actually flown, making it very flexible to manage from a service stand point by any ANSP. This represents an opportunity to have a surveillance capability that covers all the airspace or those areas where there are gaps on the terrestrial infrastructure, paying only for the traffic that crosses such airspace.

States in the region have acknowledged the benefits that this system can bring into the airspace and it was upon request from States at the SAM/IG 19 meeting held in Lima from May 22nd-26th, 2017, that ICAO developed a convenience and feasibility study for the regional implementation of space-based ADS-B with the use of the regional network REDDIG as a means for data distribution.

The study concluded that it was feasible and convenient to have this system implemented at a regional level, given its safety, operational and economic benefits.

At the SAM/IG/22 meeting held in Lima from November 19th-23rd, States approved the creation of an interoperability group (Interop GT) and sub-working groups, with the objective to ensure the interoperability of all automated systems used in the areas of AIM, MET, ATM, ATFM and CNS. It was established that the CNS/SUR sub-group should analyze, recommend and collect all information about a regional implementation of space-based ADS-B, to be presented in the next SAM/IG/25 Meeting for a decision by the participating States.

Aireon was tasked to present a technical proposal to the CNS/SUR sub-group on August 27th, 2020. At this meeting, Aireon presented three potential architecture scenarios with the use of REDDIG, and our recommendation is the solution with the highest performance level and lowest implementation and operational costs.

This solution consists of the implementation of two MPLS telecommunication lines; one line connecting directly Aireon's processing and distribution center with any State within the SAM region and a second line via the implementation of a REDDIG additional node at Aireon's facilities, to distribute the ADS-B signal into the REDDIG network, so any State with interest in the system can deploy this solution and thus, decrease their telecommunication costs. In addition, this configuration is the technical base platform for implementing space-based ADS-B at a regional level, not only for surveillance services but potentially for a regional ATFM capability.

As per the conclusions and action items established in the Interop GT, CNS/SUR subgroup, we want to confirm our interest in pursuing that solution with States and thus, kindly request the approval and support from the ICAO SAM Regional Office for the implementation of a REDDIG additional node at Aireon's facilities, with the aim to conduct testing of such infrastructure to distribute space-based ADS-B data to SAM States and for it to be used by any State that contracts Aireon's service, either independently or under a regional project.

The implementation of the REDDIG additional node at Aireon's facilities will have no costs to SAM States or REDDIG member States and will be conducted in collaboration with the ICAO SAM Regional Office and the Interop GT group, CNS/SUR sub-group.

I remain at your disposal for any questions or comments.

Best regards,



Ana Persiani

Regional Director, Latin America and Caribbean

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国际民用
航空组织

Ref.: LN3/20.1 – SA5269

Lima, 18 September 2020

To: Mr. M. Thierry Buttin, Regional Director of Civil Aviation Authority (DSAC)
for French Antilles and French Guiana
Mr. Philippe Versi, Regional Director, West Indies and French Guiana
Lt. Col. Egbert Field, Guyana Civil Aviation Authority
Mr. V.J. Chotkan, Minister of Public Works, Transport and Communications, Suriname

Subject: **RLA03901 – Additional Node of the REDDIG II**

Required
action: Send response no later than **09 October 2020**

Dear Sir/Madam:

I have the honor to address you with reference to the aforementioned subject and conclusion RCC/23-1 (see Attachment 1). In this regard, I inform you that the Aireon company has informed us about its interest in implementing an additional node of the REDDIG II terrestrial network (MPLS) (see Attachment 2). This implementation would not represent additional costs for the REDDIG member states and it will be the responsibility of the applicant to contract, directly with the telecommunications provider (MPLS) Centurylink, the link necessary to interconnect to REDDIG II.

The analysis of a potential regional implementation of Satellite ADS-B, using the REDDIG as a platform for the distribution of surveillance information, is part of the collaborative work that the CNS/SUR Subgroup of the Interoperability Task Group (GT Interop) is carrying out with Aireon's involvement. The exchange of surveillance information could represent operational and efficiency benefits in the provision of air navigation services, in addition to taking advantage of economies of scale with a regional implementation.

In this regard, and in order to continue with the actions and coordination for the connection of the additional node for the implementation of this service, I will appreciate it if you confirm, no later than **October 09, 2020**, the interest of your Administration in the implementation of the additional node in the Aireon premises.

If you require more information, please contact Mr. Francisco Almeida da Silva, CNS Regional Officer of the ICAO SAM Regional Office by email falmeida@icao.int and/or by phone +51 977 814 722 (also WhatsApp).

Accept, Sir/Madam, the assurances of my highest consideration.



Fabio Faizi Rahnemay Rabbani
Regional Director
ICAO South American Office
Lima

cc: Mr. Patrick Pezzeta, Deputy Director, Antilles-Guyane, French Antilles
Mr. Frédéric Danloux, Head of French Guiana Air Control Centre Cayenne-Félix Eboué Airport, Head of the Aircraft Search and Rescue RCC
Mr. Jean-Jacques Deschamps, Directeur Adjoint, ANSP Martinique, French Antilles-Guyane
Dr. Joyce Blokland-Wijnstein, Permanent Secretary, Directorate of Transport and Communication, Suriname
Ms. Constance Karijodinomo, Director of Civil Aviation Department, Suriname
Mr. Anjulio R. Wolf, Director, CASAS, Suriname
ICAO NACC (*For retransmission to Trinidad and Tobago*)