



**Agenda Item 3: Report of activities and deliverables of the INTEROP TF and Subgroups
b) CNS Implementation. Progress of the Subgroups.**

TRANSPORT OF SPACE-BASED ADS-B INFORMATION VIA REDDIG II

(Presented by Aireon)

SUMMARY	
This information paper presents the situation for the transmission of Aireon's Space-based ADS-B data for COCESNA with the use of REDDIG II.	
References	
<ul style="list-style-type: none">- Letter from AIREON to ICAO (September 4, 2020).- ICAO letter to AIREON (December 14, 2020).- Report of the Twenty-Eighth Meeting of the Coordination Committee of Project RLA/03/901 (RCC/28) - Lima, Peru, May 2 – 4, 2022).	
ICAO Strategic Objectives:	<i>A – Safety</i> <i>B – Air Navigation Capacity and Efficiency</i>

1. Background

1.1 Considering that part of the process of delivering ADS-B messages to users through AIREON requires an adequate telecommunications network, and that the SAM Region has REDDIG, which provides to the States of the SAM Region with the best of services through an ICAO Regional Technical Cooperation Project, AIREON has concluded that it was an advantage to have a REDDIG MPLS node.

1.2 Based on conclusion RCC/23-1 – Implementation of Additional Terrestrial Network Nodes (MPLS) of REDDIG II, the Secretariat of the Regional Project Coordination Committee RLA/03/901 should analyze the requests of States/Organizations not participating in the project, requiring connection to the network through "additional nodes", not involving additional costs for the participants of Project RLA/03/901.

1.3 To comply with the Conclusion of RCC/23-1, AIREON sent a letter to ICAO with the request to join the REDDIG MPLS network.

1.4 After consulting with REDDIG members, ICAO responded to AIREON authorizing the company to coordinate actions with CIRION (formerly Lumen LATAM), the MPLS Network Provider for REDDIG, for the installation of the node.

1.5 With the support of the REDDIG Administrator and the ICAO Lima Regional Office, AIREON coordinated with Lumen the installation of the node, which has been active since August 2021.

1.6 At Meeting REDDIG RCC/28, COCESNA reported that at the end of March 2022, the MPLS node was installed in Ilopango (El Salvador), and that it was ready to connect voice and data services with the other nodes of the network.

1.7 COCESNA presented a work paper (RCC/28-NE/07), indicating the services it intended to provide through the terrestrial node implemented in Ilopango, including the ADS-B Satellite data transmitted by AIREON.

2. Analysis

Transport of Space-based ADS-B information via REDDIG

2.1 Since 2020, COCESNA receives Space-based ADS-B data from AIREON. During the implementation, two MPLS lines were contracted to the Telecommunications Service Providers AT&T and PCCW.

2.2 As the REDDIG MPLS network has adequate availability for the transmission of ATS applications, coordination was initiated involving the ICAO Office in Lima (which manages REDDIG through the Regional Technical Cooperation Project RLA03/901), COCESNA, AIREON and the REDDIG MPLS Provider CIRION (formerly Lumen LATAM), for arrangements to transfer the MPLS line provided by AT&T to REDDIG.

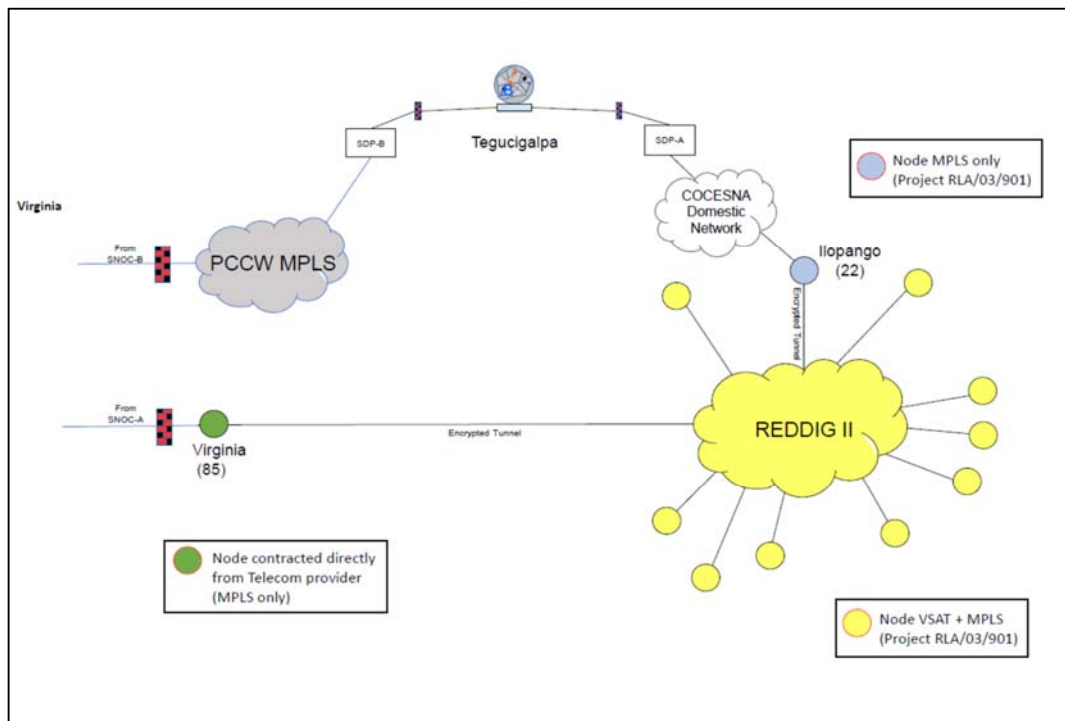


Figure 1 – MPLS Network Architecture between COCESNA and AIREON

2.3 All technical configurations as well as initial tests have already been carried out. Figure 1 shows the current topology between COCESNA and AIREON for Space-based ADS-B service.

2.4 COCESNA and AIREON are currently monitoring the performance and availability of the configured line and the prospect is for AIREON to transition the Ilopango node to operational status by the end of May 2023.

2.5 It should be noted that the use of REDDIG for the transmission of Space-based ADS-B data will represent a saving of 50% on the initial costs of communication links, for the contracted service.

2.6 Taking into account that AIREON is also part of the REDDIG MPLS Network, any other member of that network that contracts AIREON's services will also be able to benefit from the savings in telecommunications costs.

3. Suggested actions

3.1 The Meeting is invited to take note of the information provided.