



**Twenty -Third Workshop/Meeting of the SAM Implementation Group (SAM/IG/23) - Regional Project RLA/06/901**  
(Lima, Peru, 20 to 24 May 2019)

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**Agenda Item 4: Assessment of operational requirements to determine the implementation of improvements in communications, navigation and surveillance (CNS) capabilities for operations in route and terminal area**

**FOLLOW-UP OF THE IMPLEMENTATION OF AMHS INTERCONNECTION**

(Presented by Uruguay)

**SUMMARY**

This working paper presents the progress on the implementation activities for the interconnection between adjacent and non adjacent MTAs of the CAR – SAM Region for the exchange of AMHS aeronautical messaging.

**References:**

- Twenty-Second Workshop/Meeting of the SAM Implementation Group (SAM/IG/22) Regional Project RLA/06/901 (Lima, Peru, November 19 to 23, 2018).

**1. Background**

1.1 According to the Bogota declaration of establishing a 100% interconnection in AMHS, the liaison work between SUMU SAEZ and SUMU SBBR was carried out.

1.2 Uruguay installed the Frequentis System in February 2014, trying to connect MTAs with both adjacent countries, without obtaining a positive result.

1.3 In December 2016 P1 connection was achieved with SAEZ, exchange of AMHS messages was achieved with some problems arising with the outgoing messages from SAEZ, not being able to overcome the tests of the EURO 020-400 manual.

1.4 Between November 12 and 16, 2018, a technical meeting was held in Montevideo, where it was agreed to seek a solution to the existing problems. A response is expected from Argentina.

1.5 In October 2016, interconnection work with SBBR was initiated, achieving in November 2016 P1 connection between both MTA's. In December 2016, messaging exchange was carried out on the X400 platform. All the tests in the EURO 020-400 manual are passed. It is necessary to clarify that Uruguay does not have a traffic simulator as Brazil does, so all Uruguay tests must be performed in the system with real traffic, a situation that exposes the system to a possible failure due to saturation of messaging, whereby, all security criteria must be reinforced in case of possible inconveniences.

1.6 Once the exchange between the SUMU - SBBR MTAs is established, the high traffic from Brazil causes saturation in the SUMU MTA. It is decided to wait to have full triangular connection, among Brazil - Argentina and Uruguay to guarantee or validate the traffic between these countries.

1.7 Given the present scenario and the non-connection between Uruguay and Argentina, the interest of having a third MTA arises in order to form double triangulation for redundancy and traffic safety, thinking of achieving connection with the LIMA MTA.

## **2. Analysis**

2.1 According to the aforementioned background, work is still ongoing on making full AMHS connection in the Region. According to the last technical meeting held in November 2018, a response is awaited from Argentinian authorities to solve the traffic from SAEZ.

2.2 Achieved the other branch of the triangle, it remains on hold to enable full traffic from Brasilia, according to the requirements of alternatives or necessary deviations of the AFTN/AMHS network.

2.3 Uruguay receives the visit of the Frequentis specialist in the months of June and/or July in order to solve and evaluate the possible saturation of traffic. At the same time, it intends to certify by saturation test, the connection of the respective channels to the MTAs connected to this country, SAEZ-SBBR-SPIM.

## **3. Suggested actions**

3.1 To continue work for SUMU - SAEZ coordination and interconnection.

3.2 Make arrangements to include connection with Lima Peru by reinforcing the structure of the regional exchange network. This allows having two triangles formed of messaging exchange and was consulted at the SAM/IG/22 Meeting, there being no technical obstacles to do so, which only requires coordination between the aeronautical authorities of Peru and Uruguay.

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