



Agenda Item 4: Conclusions and subsequent actions of the SAM/IG - Plenary

CONCLUSIONS OF THE INTEROP TF AND PROPOSED ACTIVITIES FOR 2023

(Presented by the Secretariat)

SUMMARY	
<p>This working paper presents the deliberations of the activated subgroups of the Interoperability Task Force (INTEROP TF), carried out during the SAM/IG/28 Workshop/Meeting, and the planning of activities for the year 2023.</p>	
References:	
<ul style="list-style-type: none">- Summary of the Discussions of the Third Workshop/Meeting of Supervisors/Operators of AMHS COM Centers of the SAM Region (Virtual, 21 to 24 February, 2022);- Summary of the Discussions of the First NAM/CAR/SAM Meeting/Workshop on Planning of the Implementation of Automatic Dependent Surveillance – Broadcast (Virtual, 2 to 4 March, 2022);- Summary of the Discussions of the Third Workshop/Meeting of the Interop TF Subgroups (Virtual, 14 to 17 March, 2022); and- Final Report of the SAM/IG/27 Workshop/Meeting (Virtual, 31 May to 3 June, 2022)-	
ICAO strategic objectives:	<p><i>A - Safety</i> <i>B – Air navigation capacity and efficiency</i></p> <p><i>ASBU: AMET-B0/4 (IWXXM), COMI-B0/7 (AMHS), FICE-B0/1 (AIDC), ASUR-B0/1 (ADS-B), ASUR-B1/1 (SB ADS-B)</i></p>

1. INTRODUCTION

1.1 The SAM Region Interoperability Task Force (GT INTEROP) was created at the SAM/IG/22 Workshop/Meeting (Lima-Peru, 19 to 23 November, 2018) to support and promote initiatives for the modernization of air navigation services and ensure interoperability between automated systems used by AIM, ATM, ATFM, CNS and MET users.

1.2 Until the SAM/IG/28 Workshop/Meeting, the following subgroups were activated: ATM/AIDC, ATM/FPL, CNS/AMHS, CNS/ANP, CNS/SUR and MET/IWXXM.

2. DISCUSSION

DELIBERATIONS DURING THE WORKSHOP/MEETING SAM/IG/28

ATM/AIDC Subgroup

2.1 The main objective of the ATM/AIDC Subgroup is to establish the 76 connections for the ATS Interfacility Data Communication (AIDC) by the States of the SAM Region.

2.2 The Meeting took note that, to date, 16 intra-regional AIDC communications and 2 inter-regional AIDC communications had been established.

2.3 From the SAM/IG/27 Workshop/Meeting (Virtual, 31 May to 3 June, 2022), the following progress has been made in AIDC implementation:

- **Brazil:** the updates in the SAGITARIO systems of the Amazonian, Curitiba and Recife ACCs were carried out and ready to resume the pre-operational tests with the adjacent centers;
- **Colombia:** the AIDC between the Barranquilla ACC – CENAMER ACC is close to signing the Letter of Agreement. In relation to the operational tests of the AIDC between ACC Barranquilla – ACC Maiquetia, errors were found in the configuration of the Barranquilla COPs and some details in the ATECH system, pending the adjustments of the INDRA system to schedule a new operational test. Once the tests with Barranquilla have concluded, the pre-operational tests will be carried out between the Bogotá ACC – Maiquetia ACC. Regarding the AIDC between Barranquilla ACC – Kingston ACC, there is no information from Jamaica to start operational tests;
- **Paraguay:** has updated the SAGITARIO system of the Asunción ACC and is already in coordination with Brazil to start tests with the Curitiba ACC;
- **Peru:** the Coordinator of the ATM/AIDC Subgroup has held a meeting with the participation of representatives from Peru, SAM Office, EASA and INDRA on September 23, 2022, to discuss the necessary updates in the Lima ACC system. It was informed that, after the renewal of the support/maintenance contract, the necessary adjustments identified will be implemented; and
- **Venezuela:** ATECH has reported that coordinated with the Venezuelan ATM Management to update the Maiquetía ACC system in the second half of October 2022.

ATM/FPL Subgroup

Methodology to quantify FPL errors

2.4 The Rapporteur of the ATM/FPL Subgroup presented the methodology developed for data collection to quantify errors in flight plans and associated messages, in order to obtain indicators to measure the level of mitigation achieved with the adoption of the orientations indicated in the ATM/FPL Roadmap.

2.5 The Methodology consists of collecting flight plan data in the ATS control center systems, which must be carried out by personnel from the States that constitute the **FPL Monitoring Group**. The States must assign the representatives of the FPL Monitoring Group. (**Action SAM/IG/28-09**)

2.6 The collected data must fill the **Daily Record** table, which will be carried out for a period of 7 days to determine the day with the highest percentage of errors. The day with the highest percentage of errors will be broken down, filling **the Duplicate FPL Report** and **Error FPL Record** tables.

2.7 The information collected by each State should be forwarded to the Rapporteur of the ATM/FPL Subgroup, as soon as possible, in the following week. Once the share point is established in the MS Teams platform of the SAM Regional Office, the focal points of the FPL Monitoring Group will be responsible for updating the information in the respective repository. (**Action SAM/IG/28-10**)

CNS/AMHS Subgroup

2.8 The CNS/AMHS Subgroup is directed to establish the AMHS interconnections between the COM Centers of the Region and with the COM Centers of the other ICAO regions.

Extra CAR/SAM Regional Plan AMHS (P1) Interconnections

2.9 The Meeting took note that since the SAM/IG/27 Workshop/Meeting and with the implementation of the COCESNA REDDIG II node in Ilopongo, it was possible to establish the following extra-plan AMHS (P1) interconnections:

- Bogotá COM Center – CENAMER COM Center (SKED – MHTG);
- Caracas COM Center – CENAMER COM Center (SVCA – MHTG); and
- Lima COM Center – CENAMER COM Center (SPIM – MHTG).

2.10 It is estimated that by the end of October 2022 an interconnection plus extra plan will be established:

- Ezeiza COM Center – CENAMER COM Center (SAEZ – MHTG).

2.11 Likewise, it is estimated that the following interconnections will still be established in 2022:

- Brasilia COM Center – Madrid COM Center (SBBR – LEEE) – plan;
- Caracas COM Center – Madrid COM Center (SBBR – LEEE) – plan;
- Ezeiza COM Center – Johannesburg COM Center (SAEZ – FAOR) – plan;
- Ezeiza COM Center – Madrid COM Center (SAEZ – LEEE) – extra plan;
- Georgetown COM Center – Piarco COM Center (SYCJ – TTPP) – plan;
- Montevideo COM Center – Brasilia COM Center (SUMU – SBBR) – plan;
- Montevideo COM Center – Ezeiza COM Center (SUMU – SAEZ) – plan; and
- Montevideo COM Center – Lima COM Center (SUMU – SPIM) – extra plan.COM

CNS/ANP Subgroup

2.12 The CNS/ANP Subgroup was activated at the SAM/IG/26 Meeting (Virtual, 20 to 23 September, 2021) in order to support the review of the information contained in Volume II of the CAR/SAM

Air Navigation Plan , as well as provide support in the preparation of Volume III of the CAR/SAM ANP, on CNS issues.

2.13 The Rapporteur of the CNS/ANP Subgroup informed that the revision of the tables is being carried out with individualized meetings with each State. To date, the following States have completed the review: Argentina, Bolivia, Peru and Uruguay.

2.14 The Secretariat pointed out the importance of all States participating in the work of reviewing the information in Volume II of the CAR/SAM ANP. The following States will not designate representatives for the CNS/ANP Subgroup (Ecuador, France/French Guiana, Paraguay and Suriname).
(Action SAM/IG/28-11)

CNS/SUR Subgroup

2.15 The CNS/SUR Subgroup deals with aeronautical surveillance data exchange issues, likewise, it is in charge of studying and proposing the necessary activities for a regional implementation of Space-based ADS-B in the SAM Region, using REDDIG as a platform for distribution information, reducing the cost with the contracting of telecommunications services.

2.16 The Meeting took note that a Rapporteur should be assigned to the CNS/SUR Subgroup, which should be confirmed in the dissemination of the Final Report of the SAM/IG/28 Workshop/Meeting.
(Action SAM/IG/28-12)

2.17 Colombia has presented a working paper (WP/3.3) discussing the progress, challenges and benefits in the implementation of ADS-B in the SAM Region and encouraging other States to promote the work carried out by the CNS/SUR Subgroup of the GT INTEROP, with the purpose of developing an initiative that seeks to share information and surveillance data among the States that make up the Region, including ADS-B data, whether it is information from ground or satellite stations and in accordance with the system implemented by each Air Navigation Service Providers and the authorities in each State.

2.18 The Secretariat indicated that due to the modernization of their SSR surveillance systems, some States acquired solutions with integrated ADS-B systems, in accordance with the Global Air Navigation Plan (GANP). A considerable number of States already have several ADS-B stations in place with ADS-B surveillance information integrated into ATC automated systems, but do not use it as a primary means of surveillance.

2.19 The Meeting took note that there are several provisions and actions that must be taken to adopt ADS-B as the primary means of surveillance in controlled airspace. Several players in the aeronautical context must participate in the process, such as: aircraft operators, airlines, air navigation service providers (ANSPs), the regulatory body, representative entities of pilots and controllers; all of them under the leadership of the aviation authority (CAA) to develop implementation plans.

2.20 The Secretariat highlighted that the First NAM/CAR/SAM Meeting/Workshop on Planning for the Implementation of Automatic Dependent Surveillance – Broadcast (ADS-B) (ADS-B/ANP/1) was held from 22 to 24 March, 2022, with the objective of assisting States in the implementation of ADS-B OUT in accordance with the planning methodology applied in the new Volume III of the CAR/SAM ANP, based on the ASBU Threads and Modules/Elements recommended in the sixth edition of the Global Air Navigation Plan (GANP).

2.21 The event was aimed at air navigation services implementation planners specialized in the area of surveillance at the operational and technical level (ATM, ATFM, CNS, Information Technology, etc.), mainly the members of the CNS/ANP and CNS/SUR of the Interoperability Task Force (INTEROP TF), in the case of SAM States; and of the Surveillance Task Force of the NAM/CAR Region, SURV/TF.

2.22 The information that was imparted can be accessed through the following link:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2022-RLA06901-ADSBYADSBANP1>

MET/IWXXM Subgroup

2.23 The Meeting took note of the progress of the interoperability tests with the Regional OPMET Data Bank (RODB) of Brasilia, via the Aeronautical Messaging Handling System (AMHS). So far, the following States have carried out tests with the Brasilia RODB: Argentina, Cuba, Guyana, Paraguay and Venezuela. Likewise, complete and successful tests have already been carried out between the RODB of Brasilia and the RODBs of Brussels and Vienna.

2.24 The Rapporteur of the MET/IWXXM Subgroup informed that connection tests (via AMHS) are being coordinated with the London and Washington RODBs.

2.25 Likewise, the Subgroup Rapporteur informed that after the letter that the SAM Regional Office sent to the SAM States, communicating the guidelines for the exchange of information via web service, together with the *System Interface Control Document (SICD)* of the system implemented in Brasilia, no request for interconnection, via web service, was received by the Brazilian administration.

2.26 In July 2022, Brazil made a presentation, through the company Atech, to the States of the CAR/SAM Region with the aim of encouraging these States to develop integration with the Brasilia RODB via web service.

2.27 An application developed as an example to integrate meteorological systems to the Brasilia RODB was presented at the event. The purpose of this application is to show in practice the steps that must be followed when developing the integration between data banks (system to system) using the web service facility.

2.28 The source code was made available in the repository below, emphasizing that it is a public source code and can be used by States as an example to consult the OPMET Data Bank:

https://github.com/antonioidiasabc/OPMET_search

2.29 The Secretariat encouraged the SAM States to present the ICD circulated by the SAM Office, to professionals of the Information Technology area and discuss with them the possibility of using the example application, for the development of integration, via web service, of States' meteorological systems with the RODB of Brasilia. (**Action SAM/IG/28-13**)

WORK PLAN 2023

2.30 The Meeting approved the activities listed in the **Appendix** to this working paper, which presents the 2023 Work Plan of the Interoperability Task Force (GT INTEROP).

3. SUGGESTED ACTION

3.1 The Meeting is invited to:

- a) Take note of the deliverables provided by the activated subgroups of the INTEROP TF; and
- b) Approve the 2023 proposal of activities, as deemed pertinent.

– END –

Appendix

Work Plan 2023

Activities	Objetives / Deliverables	Tentative dates
<p>SAM/IG/29</p> <p>Air navigation implementation priorities considered in GREPECAS programs, VOL III Regional ANP and Regional initiatives.</p>	<p>Continue with the implementation, execution and optimization activities under the studies of GESEA and GT Interop. (5 days)</p>	<p>Lima, 15 to 19 May 2023</p>
<p>SAM/IG/30</p> <p>Air navigation implementation priorities considered in GREPECAS programs, VOL III Regional ANP and Regional initiatives.</p>	<p>Continue with the implementation, execution and optimization activities under the studies of GESEA and GT Interop. (5 days)</p>	<p>Virtual, 23 to 27 October 2023</p>
<p>GT INTEROP/4</p> <p>Fourth Workshop/Meeting of the GT Interop Subgroups.</p>	<p>Provide a meeting of the participants of the Interop TF Subgroups, to consolidate the previous work carried out, with the aim of finalizing the products and deliverables that will be presented to the SAM Region Implementation Group (SAM/IG). (4 days)</p>	<p>Virtual, TBD</p>
<p>COM AMHS/4</p> <p>Fourth Workshop/Meeting of Supervisors/Operators of AMHS COM Centers of the SAM Region</p>	<p>This is an event for the exchange of information and experiences among the supervisors/operators of the AMHS COM Centers of the SAM Region. Review of routing tables. Review of Contingency Plans. (4 days)</p>	<p>Lima, TBD (hybrid)</p>
<p>ATM/FPL WORKSHOP</p>	<p>Event aimed at developing a common methodology to quantify errors in flight plans and associated messages; definition of a standardized format for the inclusion of information in the Aeronautical Information Publication (AIP) of the States that adopt the measures recommended in the ATM/FPL Roadmap; and review of the routes syntax by coordinates, to verify if it is accepted by the automated systems used, in order to provide more direct flights to aircraft operators, for fuel savings. (5 days)</p>	<p>Lima, TBD (hybrid)</p>

Activities	Objetives / Deliverables	Tentative dates
Frequency Finder App Training	Training directed to the members of the CNS/ANP Subgroup in charge of updating the COM Lists of frequency assignments used in the aeronautical context. (5 days)	Lima, TBD
AIDC Training	Training aimed at the members of the AIDC Implementation teams of the States of the Region. (5 days)	TBD