



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

FOLLOW UP TO THE IMPLEMENTATION OF THE AMHS INTERCONNECTION

(Presented by the Secretariat)

SUMMARY	
This working paper presents information on the activities carried out since the SAM/IG/23 meeting for the implementation of the AMHS interconnection.	
References: <ul style="list-style-type: none">- Twenty-Third Workshop/Meeting of the SAM Implementation Group (SAM/IG/23) Lima, Peru, 20-24 May 2019.- Final report of the Thirteenth Coordination Meeting of Project RLA/06/901 (RCC/13) (Lima, Peru, 27-28 June 2019).	
ICAO strategic objectives:	<i>A – Safety</i> <i>B – Air navigation capacity and efficiency</i>

1 Background

1.1 The implementation of the AMHS interconnection is one of the air navigation implementation priorities contemplated in the Declaration of Bogotá for the period 2014-2016. Consideration has been given to the implementation of 27 interconnections. All AMHS interconnections required for the SAM Region are listed in Table CNS II-1, Volume II, of the CAR/SAM Regional Air Navigation Plan (Doc 8733 eANP).

1.2 The status of implementation of all AMHS interconnections of the SAM Region and their operational implementation date are shown in **Appendix A** to this working paper.

2 Discussion

2.1 The progress reported and the actions foreseen for the implementation of the AMHS interconnection in each SAM State are shown below.

Argentina

2.2 On 25 April 2019, Argentina reported that interoperability tests (IOT) between the AMHS COM centre of Ezeiza and the SITA Type X gateway in Atlanta had been completed.

2.3 On 18 July 2019, Argentina has established an operational interconnection between the AMHS COM Center of Ezeiza and the SITA Type X Gateway in Atlanta.

- Ezeiza MTA – Asunción MTA (operational)
- Ezeiza MTA – Brasilia MTA (operational)
- Ezeiza MTA – La Paz MTA (estimated to be operational by November of 2019)
- Ezeiza MTA – Lima MTA (operational)
- Ezeiza MTA – Montevideo MTA (awaiting update of the system in Uruguay)
- Ezeiza MTA – Santiago MTA (awaiting update of the system in Chile)
- Ezeiza MTA – Johannesburg MTA (coordination not started yet)
- Ezeiza MTA – Caracas MTA (extra-plan – estimated to 2020)
- Ezeiza MTA – SITA gateway (operational)

Bolivia

2.4 The La Paz COM Center has established AMHS interconnections with the Brasilia COM Center and Lima COM Center. At present, the AMHS interconnection between the La Paz COM Center and Ezeiza COM Center is still pending.

- La Paz MTA – Brasilia MTA (operational since 30 September 2019)
- La Paz MTA – Ezeiza MTA (estimated to be operational by November of 2019)
- La Paz MTA – Lima MTA (operational)

Brazil

2.5 On 06 August 2019 and 30 September 2019, the Brasilia COM Center has established AMHS interconnections with Atlanta COM Center and La Paz COM Center, respectively.

- Brasilia MTA – Asunción MTA (operational)
- Brasilia MTA – Bogotá MTA (operational)
- Brasilia MTA – Caracas MTA (operational)
- Brasilia MTA – Cayenne MTA (pre-operational)
- Brasilia MTA – Ezeiza MTA (operational)
- Brasilia MTA – Georgetown MTA (operational)
- Brasilia MTA – La Paz MTA (operational since 30 September 2019)
- Brasilia MTA – Lima MTA (operational)
- Brasilia MTA – Montevideo MTA (awaiting update of the system in Uruguay)
- Brasilia MTA – Paramaribo MTA (operational)
- Brasilia MTA – Atlanta MTA (operational since 06 August 2019)
- Brasilia MTA – Dakar MTA (coordination underway)
- Brasilia MTA – Madrid MTA (operational)
- Brasilia MTA – SITA gateway (operational)

Chile

2.6 AMHS operational implementation between the Santiago MTA and the Ezeiza MTA still pending, estimating that it will become operational in June 2019.

- Santiago MTA – Ezeiza MTA (awaiting update of the system in Chile)

- Santiago MTA – Lima MTA (operational)

Colombia

2.7 AMHS interconnection operational tests were successfully conducted between the Bogotá MTA and the Panama MTA through the MEVAIII/REDDIG II interconnection. For the operational implementation of this circuit, administrative arrangements need to be completed with the MEVA III service provider. The circuit goes through the MEVAIII/REDDIG II interconnection in Bogotá. The interconnection with the AMHS centre of Quito is still pending.

- Bogota MTA – Caracas MTA (operational)
- Bogota MTA – Lima MTA (operational)
- Bogota MTA – Panama MTA (pre-operational)
- Bogota MTA – Quito MTA (estimated to be operational by November 2019)

Ecuador

2.8 The operational implementation between the Quito MTA and the Bogotá MTA is still pending, expected for November 2019.

- Quito MTA – Bogotá MTA (estimated to be operational by November 2019)
- Quito MTA – Caracas MTA (operational)
- Quito MTA – Lima MTA (operational)

French Guiana

2.9 IOT and POT with the COM centres of Brasilia and Caracas still pending. These interconnections are expected to become operational by December 2019.

- Cayenne MTA – Brasilia MTA (pre-operational)
- Cayenne MTA – Caracas MTA (pre-operational)

Guyana

2.10 On 27 August 2019, the interconnection between the Georgetown COM centre and the Caracas COM centre was established. The operational implementation of the AMHS interconnections between the Georgetown MTA and Port-of-Spain MTA is pending of configuration in the MTA of Trinidad & Tobago.

- Georgetown MTA – Brasilia MTA (operational)
- Georgetown MTA – Caracas MTA (operational since 27 August 2019)
- Georgetown MTA – Paramaribo MTA (operational)
- Georgetown MTA – Port-of-Spain MTA (awaiting configuration in Trinidad & Tobago)

Panama

2.11 The interconnection with the Atlanta COM centre was completed in 2018. Regarding the status of implementation of the AMHS interconnection between the Panama MTA and the Bogotá MTA, see paragraph 2.7.

- Panama MTA – Atlanta MTA (operational)
- Panama MTA – Bogotá MTA (pre-operational)

Paraguay

2.12 Paraguay has established all planned AMHS interconnections.

- Asunción MTA – Brasilia MTA (operational)
- Asunción MTA – Ezeiza MTA (operational)

Peru

2.13 Peru has only one AMHS interconnection pending, between the Lima COM Center and Atlanta COM Center. The IOT testing was initiated on October 2019.

- Lima MTA – Atlanta MTA (IOT and POT being carried out)
- Lima MTA – Brasilia MTA (operational)
- Lima MTA – Bogotá MTA (operational)
- Lima MTA – Caracas MTA (operational)
- Lima MTA – Ezeiza MTA (operational)
- Lima MTA – La Paz MTA (operational)
- Lima MTA – Quito MTA (operational)
- Lima MTA – Santiago MTA (operational)

Suriname

2.14 Suriname has established all planned AMHS interconnections.

- Paramaribo MTA – Brasilia MTA (operational)
- Paramaribo MTA – Caracas MTA (operational)
- Paramaribo MTA – Georgetown MTA (operational)

Uruguay

2.15 The AMHS operational interconnections between the Montevideo MTA and the Brasilia MTA and between the Montevideo MTA and the Ezeiza MTA are foreseen for 2020.

- Montevideo MTA – Brasilia MTA (awaiting updating of the system in Uruguay)
- Montevideo MTA – Ezeiza MTA (awaiting updating of the system in Uruguay)

Venezuela

2.16 On 10 April 2019, IOT and POT were conducted with Cayenne. Awaiting arrangements by DSN and AMC for the interconnection to become operational.

2.17 The operational interconnection between the Caracas MTA and the Atlanta, Madrid and Port-of-Spain MTAs is expected for 2020.

- Caracas MTA – Atlanta MTA (being coordinated)
- Caracas MTA – Brasilia MTA (operational)

- Caracas MTA – Bogota MTA (operational)
- Caracas MTA – Cayenne MTA (pre-operational)
- Caracas MTA –Curaçao MTA (coordination not started yet)
- Caracas MTA – Ezeiza MTA (extra plan – being coordinated)
- Caracas MTA – Georgetown MTA (operational)
- Caracas MTA – Lima MTA (operational)
- Caracas MTA – Madrid MTA (coordination not started yet)
- Caracas MTA – Paramaribo MTA (pre-operational)
- Caracas MTA – Port-of-Spain MTA (awaiting configuration in Trinidad & Tobago)
- Caracas MTA – Quito MTA (operational)

Other AMHS considerations

2.18 The SAM Regional Office has sent a letter to all the States of the Region requesting information about the number of AFTN users remaining in each State and migration plans for these users to the AMHS environment. The States must plan and execute the migration of all users (human and automated) to the AMHS environment.

2.19 **Appendix B** contains an updated list of focal points for the implementation of AMHS interconnections. The Meeting is requested to update this list.

2.20 During the Thirteenth Coordination Committee Meeting of the Regional Project RLA/06/901, two activities related to AMHS implementation in the SAM Region were established for 2020: Workshop/Meeting of COM Center operators/supervisors (Lima, 23 to 26 March 2019) and AMHS Advanced Course (Lima, 15 to 19 June 2019).

2.21 It is expected, during the workshop with operators/supervisors, the revision of the AMHS regional plan, addressing tables of each State, the data registered in the AMC application and establishment of contingency procedures for the Region.

2.22 States are reminded that any change made to AMHS addressing must be reported to the EUROCONTROL ATS messaging management centre (AMC), in accordance with the procedure established in ICAO State letter AN 7/49.1-09/34 dated 14 April 2009. According to this procedure, the information must be sent to AMC by an external operator designated by the State.

3. Suggested action

3.1 The Meeting is invited to:

- a) Take note of the information presented herein; and
- b) review the activities carried out, as described in section 2 and the respective appendices.

APÉNDICE A / APPENDIX A

Interconexiones AMHS – Región SAM / AMHS Interconnections – SAM Region

(23 Octubre 2019 / 23 October 2019)

	Conexión P1 / P1 Connection	Situación / Situation	Operativa en / Operational in	Observaciones / Notes
1	SAEZ – SBBR	Operativa / Operational	04/04/2018	
2	SAEZ – SCSC	Pre operativa / Pre-operational		Reiniciar pruebas en 2019 / Restart testing in 2019
3	SAEZ – SGAS	Operativa / Operational	30/11/2018	
4	SAEZ – SLLP			
5	SAEZ – SPIM	Operativa / Operational	10/05/2019	
6	SAEZ – SUMU			
7	SBBR – SGAS	Operativa / Operational	30/11/2018	
8	SBBR – SLLP	Operativa / Operational	30/07/2019	
9	SBBR – SKBO	Operativa / Operational	22/05/2017	
10	SBBR – SMJP	Operativa / Operational	06/09/2018	
11	SBBR – SOCA	Pre operativa / Pre-operational		IOT y POT concluidos / IOT and POT concluded
12	SBBR – SPIM	Operativa / Operational	14/12/2015	
13	SBBR – SUMU			
14	SBBR – SVCA	Operativa / Operational	28/02/2018	
15	SBBR – SYCJ	Operativa / Operational	06/07/2017	
16	SCSC – SPIM	Operativa / Operational	14/12/2015	
17	SEQU – SKBO	Pre operativa / Pre-operational		IOT y POT concluidos / IOT and POT concluded
18	SEQU – SPIM	Operativa / Operational	14/07/2012	
19	SEQU – SVCA	Operativa / Operational	11/10/2018	
20	SKBO – SPIM	Operativa / Operational	15/11/2010	
21	SKBO – SVCA	Operativa / Operational	01/12/2017	
22	SLLP – SPIM	Operativa / Operational	10/05/2019	
23	SMJP – SVCA	Operativa / Operational	31/03/2019	
24	SMJP – SYCJ	Operativa / Operational	11/10/2018	
25	SOCA – SVCA	Pre operativa / Pre-operational		IOT y POT concluidos / IOT and POT concluded
26	SPIM – SVCA	Operativa / Operational	01/12/2017	
27	SVCA – SYCJ	Operativa / Operational	27/08/2019	

	Conexión P1 / P1 Connection	Situación / Situation	Operativa en / Operational in	Observaciones / Notes
28	SAEZ – FAOR			
29	SAEZ – SITA	Operativa / Operational	18/07/2019	
30	SAEZ – SVCA			Extra plan
31	SBBR – GOOO	En coordinación / In coordination		
32	SBBR – KATL	Operativa / Operational	06/08/2019	
33	SBBR – LEEE	Operativa / Operational	11/10/2018	
34	SBBR – SITA	Operativa / Operational	16/08/2018	
35	SKBO – MPPA	En coordinación / In coordination		
36	SPIM – KATL	En coordinación / In coordination		
37	SVCA – KATL	En coordinación / In coordination		
38	SVCA – LEEE			
39	SVCA – TNCC			
40	SVCA – TTPP			
41	MPPA – KATL	Operativa / Operational		

APÉNDICE B / APPENDIX B

**PUNTOS FOCALES NACIONALES / NATIONAL FOCAL POINTS
 IMPLANTACIÓN INTERCONEXIÓN DE SISTEMAS AMHS / IMPLEMENTATION OF INTERCONNECTION OF AMHS SYSTEM**

ESTADO/ STATE	ADMINISTRACIÓN / ADMINISTRATION	NOMBRE/NAME	CARGO/POST	TELÉFONO / TELEPHONE	CORREO-E /E-MAIL
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ESTADO/ STATE	ADMINISTRACIÓN / ADMINISTRATION	NOMBRE/NAME	CARGO/POST	TELÉFONO / TELEPHONE	CORREO-E /E-MAIL
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PANAMÁ / PANAMA	Autoridad Aeronáutica Civil (AAC)	Daniel de Ávila	Supervisor Dep. de COM	(507) 315 9877	deavila@aeronautica.gob.pa
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