



COM AMHS/1

INTERNATIONAL CIVIL AVIATION ORGANIZATION

RLA/06/901

**FIRST WORKSHOP/MEETING OF THE
SUPERVISORS/OPERATORS OF
COM AMHS CENTERS OF
THE SAM REGION**

(COM AMHS/1)

SUMMARY OF THE DISCUSSIONS

(Teleconference, 23 to 25 September 2020)

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HISTORY OF THE WORKSHOP/MEETING

ii-1 WORKSHOP/MEETING DETAILS

The First Workshop/Meeting (Virtual) of Supervisors/Operators of AMHS Centers of the SAM Region, was held through teleconferences (Zoom), from 23 to 25 September 2020.

ii-2 OPENING

Mr. Francisco Almeida, CNS Regional Officer of the ICAO South American Regional Office, welcomed the participants, highlighted the topics to be addressed and desired success in the deliberations. He then opened the workshop/meeting.

ii-3 LANGUAGES

The working languages of the workshop/meeting were Spanish and English (simultaneous interpretation). The documentation was presented in both languages.

ii-4 PARTICIPANTS AND ORGANIZATION

The Meeting was attended by representatives of the 14 States of the Region (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, France, Guyana, Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela) and ICAO Officers, totaling 51 people. The list of participants appears on page iii-1.

Mr. Francisco Almeida, CNS Regional Officer, acted as Secretary of the Meeting.

LIST OF PARTICIPANTS**ARGENTINA**

1. Antonio González
2. Gisela Agüero
3. Jorge Ramos
4. Marcos Lemos
5. Andrés Paolini

BOLIVIA

6. Fernando Quispe
7. Favio Pérez
8. Guillermo Conde
9. Hernán Tito
10. Iver Vargas
11. Javier Campos
12. Marco Soria
13. Pablo Zárate

BRAZIL

14. Lucio Cavalcante
15. Francisco Heladio

CHILE

16. Jorge Poblete
17. Juan Brito

COLOMBIA

18. Claudia Sepúlveda
19. Milton Zamudio
20. John Torres
21. Luis Ramírez
22. Oscar Alfonso
23. Pilar Serrano

ECUADOR

24. Darwin Yazbeck
25. Winsor Dávalos

FRANCE (French Guiana)

26. Samuel Freckhaus

GUYANA

27. Sewchan Hemchan
28. Matthew Maycock

PANAMA

29. Daniel de Ávila
30. Daniel Jules
31. Nimio Álvarez

PARAGUAY

32. Melissa Villar
33. Luz Ferreira

PERU

34. Gabriela Mogollón
35. Giuliano Guzmán
36. Jorge García
37. Henry Loza
38. Hugo Cruz
39. José Yataco
40. Raúl Anastacio Granda
41. René Retamozo
42. Sara Siles
43. Wilfredo Meza

SURINAME

44. Jurgen Cicilson
45. Orlando Kofi

URUGUAY

46. Alicia Padilla
47. Mary Casaña

VENEZUELA

48. Maricel Berroteran
49. Sabrina Rodríguez

ICAO

50. Francisco Almeida
51. Javier Vittor

Agenda Item 1: Approval of the agenda and meeting schedule

1.1 Under this agenda item, the Meeting adopted the agenda and schedule of the meeting, which are included as **Appendixes A and B** of this part of the Summary of Discussions.

APPENDIX A**REGIONAL PROJECT RLA/06/901****FIRST WORKSHOP/MEETING OF THE SUPERVISORS/OPERATORS OF COM
AMHS CENTERS OF THE SAM REGION (COM AMHS/1)**

(Teleconference, 23 – 25 September 2020)

TENTATIVE AGENDA

Agenda

Item 1: Approval of the agenda and meeting schedule

Agenda

Item 2: Definition of the SAM Region Contingency Plan for the message service

Agenda

Item 3: Review of the routing tables and exchange of the updated information of the AMHS addresses attributed in each State

Agenda

Item 4: Update of information in the AMHS Address Management Center (AMC) of EUROCONTROL

Agenda

Item 5: Other business

EXPLANATORY NOTES OF THE PROVISIONAL AGENDA

Agenda

Item 1: Approval of the agenda and meeting schedule

The provisional Agenda and Schedule proposed by the Secretariat for the Workshop / Meeting will be submitted for the consideration and approval of the participants.

Agenda

Item 2: Definition of the SAM Region Contingency Plan for the message service

The Workshop/Meeting will work on the elaboration of the procedures of a contingency plan for the message service of the States of the SAM Region

Agenda

Item 3: Review of the routing tables and exchange of the updated information of the AMHS addresses attributed in each State

Under this agenda item, the routing tables between the COM Centers of the SAM Region and the COM Centers of other regions will be reviewed. Likewise, those responsible for the COM AMHS Centers must share the information of the valid addresses in each State, including the information of the distribution lists (DL), with a view to prepare a regional database.

Agenda

Item 4: Update of information in the AMHC Address Management Center (AMC) of EUROCONTROL

With the review of the routing tables, the participants will have the opportunity to update (online) the information in the Eurocontrol AMHS Address Management Center (AMC) and exchange experiences on the use of the resources available in the application of the AMC website.

Agenda

Item 5: Other business

Under this Agenda item, participants will be able to examine issues related to the message service, such as new message formats, the connection with the messaging context of aircraft operators (SITA) and the implementation of the Directory Service; Likewise, other matters deemed convenient.

APPENDIX B

PROYECTO REGIONAL RLA/06/901

**FIRST (VIRTUAL) WORKSHOP/MEETING OF THE SUPERVISORS/OPERATORS
OF COM AMHS CENTERS OF THE SAM REGION (COM AMHS/1)**

(Teleconference, 23 – 25 September 2020)

TENTATIVE SCHEDULE

HOUR	Wednesday 23 September 2020	HOUR	Thursday 24 September 2020	HOUR	Friday 25 September 2020
08:45 09:00	Register of participants	08:45 09:15	Agenda Item 2	08:45 09:15	Agenda Item 4
09:00 09:15	Opening				
09:15 10:00	Agenda Items 1 & 2	09:15 10:00	Agenda Item 2	09:15 10:00	Agenda Item 4
10:00 10:10	Break	10:00 10:10	Break	10:00 10:10	Break
10:10 11:10	Agenda Item 2	10:10 11:10	Agenda Item 3	10:10 11:10	Agenda Item 4
11:10 12:10	Lunch Break	11:10 12:10	Lunch Break	11:10 12:10	Lunch Break
12:10 13:00	Agenda Item 2	12:10 13:00	Agenda Item 3	12:10 13:00	Agenda Item 5
13:00 13:10	Break	13:00 13:10	Break	13:00 13:10	Break
13:10 14:00	Agenda Item 2	13:10 14:00	Agenda Item 3	13:10 13:20	Closing Sessions

Agenda Item 2: Definition of the SAM Region Contingency Plan for the message service

2.1 Under this agenda item, a draft of the contingency plan to be developed by AMHS COM centres of the Region was presented.

2.2 The participants of the workshop/meeting agreed that it was very difficult to foresee all contingency situations and, therefore, felt that the plans to be developed should be generic, defining clear procedures that could be tailored to each type of contingency.

2.3 Plans must be consistent with the regulations of each State and must have a clear objective. The contingency levels to be covered by the plan must also be defined.

2.4 Another point considered important is the scope of the document (adjacent centres, users, systems involved, etc.). It was highlighted that a contingency plan must be considered a dynamic document, which must be reviewed and updated frequently in order to improve the efficacy of the procedures adopted. Likewise, simulations must be carried out to test the effectiveness of the plan and identify opportunities for improvement.

2.5 A good initiative is to create a contingency unit/team to coordinate actions to mitigate the impact of the contingency. This team must be led by an experienced person, who would be responsible for coordinating the actions contemplated in the plan, and adapting the plan to unforeseen situations.

2.6 Another important aspect is to have updated information for quick contact with the main parties involved in the contingency. In this regard, emphasis was made on the importance of maintaining the currency of the information contained in the AMHS Messaging Management Centre (AMC) database, which is the responsibility of the designated external AMC operators of each AMHS COM centre of the Region.

2.7 The participants of the workshop/meeting noted the convenience of using electronic messaging applications such as WhatsApp, Messenger and Telegram for dynamic and fast communications, offering the possibility of exchanging text, images, audio and other files. In this regard, it was noted that some States were already coordinating actions through a group initially created for purposes other than dealing with contingencies ("AMHS Course" WhatsApp group), which could be adapted for specifically coordinating contingency issues. Likewise, there were virtual tools such as Zoom or Cisco Webex Meetings that could be used for coordination, training and contingencies.

2.8 The implementation of a contingency plan for the AMHS COM centres of the SAM Region should be a priority within the management efforts of aeronautical authorities of SAM States through the GREPECAS Implementation Group (SAM/IG).

2.9 The AMHS COM centres of the SAM Region should seek uniform regional integration of their basic organisational, operational and functional structure to ensure continued regional interoperability in the ATM/AIM/MET/CNS areas in order to meet the operational requirements of users in a timely and reliable manner.

2.10 The participants noted that existing best practices provide for a concentration of all IT systems in facilities equipped with stabilised energy systems, redundant air conditioning and communications, access control and electronic surveillance, known as data centres.

2.11 The servers of AMHS COM centres, being components of a critical system for the air navigation service (aeronautical messaging), must be hosted in facilities with these characteristics to ensure service continuity and security.

2.12 In this regard, AMHS COM staff must be trained in management and IT systems to support the operational and strategic processes of their AMHS communication centre.

water**CONTINGENCY PLAN OF THE XXXXX AMHS COM CENTRE**

(City, date)

1. OBJECTIVE

1.1 Establish the coordination and procedures to be applied in the event of contingencies leading to a significant disruption or degradation of the services provided by the XXXXXXXX AMHS COM centre, based on rules and methods set out in the manuals and regulations of the (civil aviation authority), in order to establish measures to ensure the continuity of air operations.

1.2 Two levels of contingencies are considered:

- Moderate contingency: means that the degradation of services still allows for the operation of the XXXXX AMHS COM centre; and
- Severe contingency: means that the disruption and/or degradation of services does not permit the operation of the XXXXX AMHS COM centre.

2. SCOPE

2.1 Applicable to the operational activities of the XXXXX AMHS COM centre, its (direct and indirect) users of the aeronautical messaging service, the adjacent AMHS COM centres, as well as the operational personnel working in these positions when a contingency situation occurs.

3. REFERENCE DOCUMENTS

- Manual XX
- Regulation XX
- Standard XX

4. GENERAL

4.1 For the activation and execution of the contingency plan of the XXXXX AMHS COM centre, the AMHS/COM contingency unit authorised by the (civil aviation authority) is made up by the following personnel responsible for the unit:

XXXX AMHS COM CENTRE	
Name / Function	Contact information
Name/ Head of the centre	REDDIG phone: Commercial phone: +XX XXXX-XXXX Mobile phone: +XX XXX XXX XXX Email: fulanodetal@organizacion.com.xx
Name/ Operator - AMC 1	REDDIG phone: Commercial phone: +XX XXXX-XXXX

	Mobile phone: +XX XXX XXX XXX Email: sicranodetal@organizacion.com.xx
Name/ Operator - AMC 2	REDDIG phone: Commercial phone: +XX XXXX-XXXX Mobile phone: +XX XXX XXX XXX Email: sultanodetal@organizacion.com.xx
Operator - 24 h	REDDIG phone: Commercial phone: +XX XXXX-XXXX Mobile phone: +XX XXX XXX XXX Email: operador@organizacion.com.xx
Technical support - 24 h	REDDIG phone: Commercial phone: +XX XXXX-XXXX Mobile phone: +XX XXX XXX XXX Email: soporte@organizacion.com.xx

4.2 Once a contingency is confirmed, the assumes the role of director of the AMHS/COM contingency unit and is responsible for the correct implementation of this contingency plan to ensure prompt resumption of normal operations.

4.3 Furthermore, and in accordance with the described guidelines, the responsible parties in the units involved will define in a tactical manner the measures to be applied in scenarios not foreseen in this plan.

5. ADJACENT AMHS COM CENTRES

6. ACTIVATION OF THE PLAN

7. DEACTIVATION OF THE PLAN

8. OTHER PROVISIONS

**AMC EXTERNAL OPERATORS
FROM EACH CENTER WITH AMHS DE LA REGIÓN SAM**

Estado/State	Nombre/Name	Email	Teléfono Público/ Public phone	Teléfono REDDIG/ REDDIG phone
Argentina	Antonio Gonzalez Andrés Ariel Paolini Gisela Beatriz Agüero	agonzalez@eana.com.ar apaolini@eana.com.ar gaguero@eana.com.ar	+5411 4480 2362	2057376 / 2001 2057362 / 2001 2057362 / 2001
Bolivia	Fernando Quispe Condori Jose Guachalla Duran Jhony Arce Alipaz	fquispe_lp@aaasana.gob.bo jguachalla_lp@aaasana.gob.bo jarce_lp@aaasana.gob.bo	+591 22810204	
Brasil/Brazil	Lucio Cavalcante Francisco Heládio	luciolac@fab.mil.br heladiofhs@fab.mil.br	+55 61 98171-6012 +55 61 3364-8377	34429 34401
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Colombia	Claudia Pilar Sepulveda Caballero Oscar Arturo Alfonso Bravo Milton Balduino Zamudio Guauque	claudia.sepulveda@aerocivil.gov.co oscar.alfonso@aerocivil.gov.co milton.zamudio@aerocivil.gov.co	+573002068396 +573103037912 +573012192881	
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Uruguay	Mary Casaña Alicia Padilla	mary.casana@dinacia.gub.uy alicia.padilla@dinacia.gub.uy	+0059899647759 +0059894914841	
Venezuela	Maricel Berroteran Marla Sanchez	maricel.berroteran@inac.gob.ve marla.sanchez@inac.gob.ve	+584168259780 +584242548472	

Agenda Item 3: Review of routing tables and exchange of updated information on AMHS addresses allocated in each State

3.1 Under this agenda item, note was made of the need for external AMC operators in each AMHS COM centre in the Region to update the information in the database contained on the website of the Eurocontrol AMHS Messaging Management Centre (AMC): (<https://ext.eurocontrol.int/amc/index.do>).

3.2 It is important that all external AMC operators access the application on the first day of the following AIRAC cycle (October 9, 2020) to make the necessary changes in relation to each AMHS COM centre of the Region.

3.3 The Secretariat of the workshop/meeting noted that the AMHS COM centres that had already completed all AMHS P1 interconnections with adjacent centres should have a table similar to the one shown in Figure 3-1 on the AFTN routing tab.

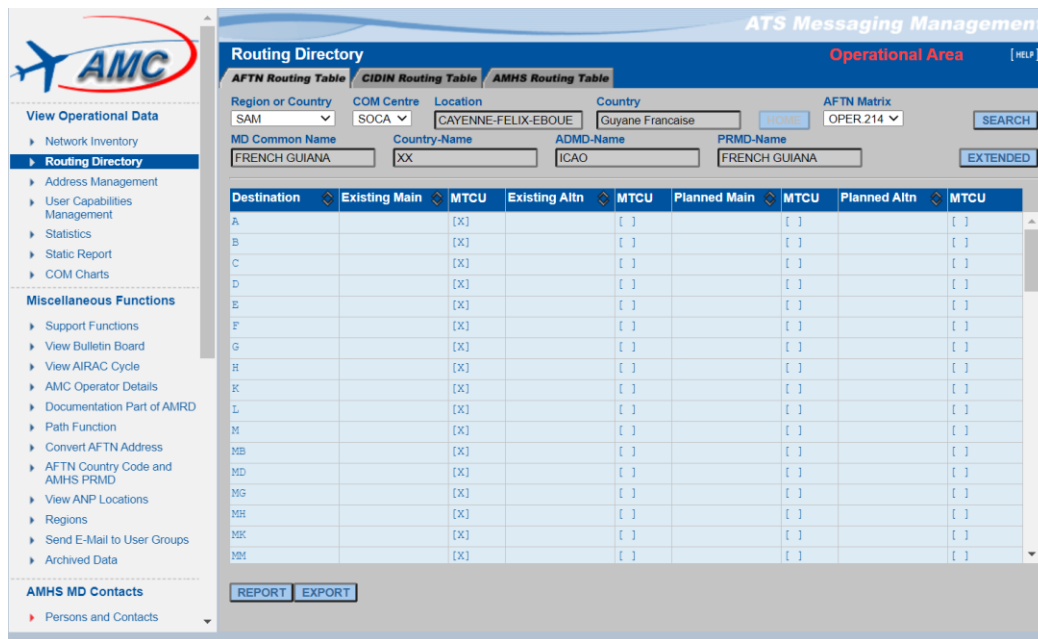


Figure 3-1 – AFTN routing for the Cayenne AMHS COM centre

3.4 Taking as an example the data for the AMHS COM Centre in Cayenne, once this centre had completed the AMHS P1 interconnections with the adjacent centres (Brasilia and Caracas), AFTN routing would no longer exist. Any AFTN address would be handled by the existing AFTN/AMHS Gateway (MTCU) in the Cayenne AMHS system. Once all AFTN users in the Cayenne AMHS COM centre had been migrated to AMHS, the Gateway would no longer be necessary.

3.5 Other important information to be reviewed is the table in the AMHS routing tab. As an example, Figure 3-2 shows AMHS routing for the Cayenne AMHS COM centre.

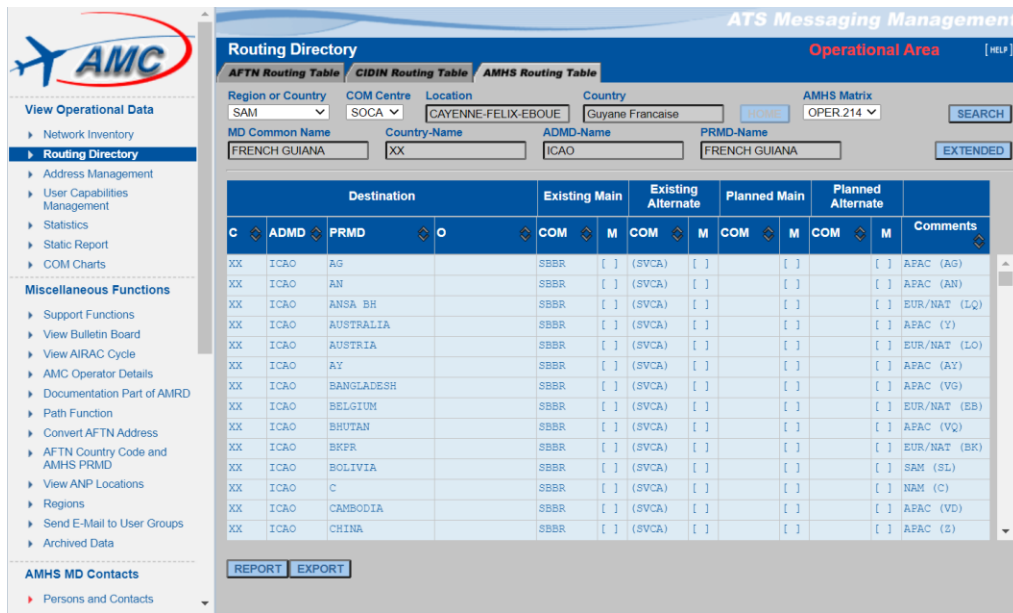


Figure 3-2 – AMHS routing for the Cayenne AMHS COM centre

3.6 The column entitled **Existing Main** must show the main adjacent centre for routing messages to the recipients listed in the PRMD (Private Management Domain) column. The column entitled **Existing Alternate** must indicate the alternate adjacent centre for routing the messages of this same PRMD.

3.7 The tables can be exported to an electronic template to facilitate viewing and editing/reviewing of the information. Figure 3-3 shows a template with information on the Cayenne AMHS COM centre.

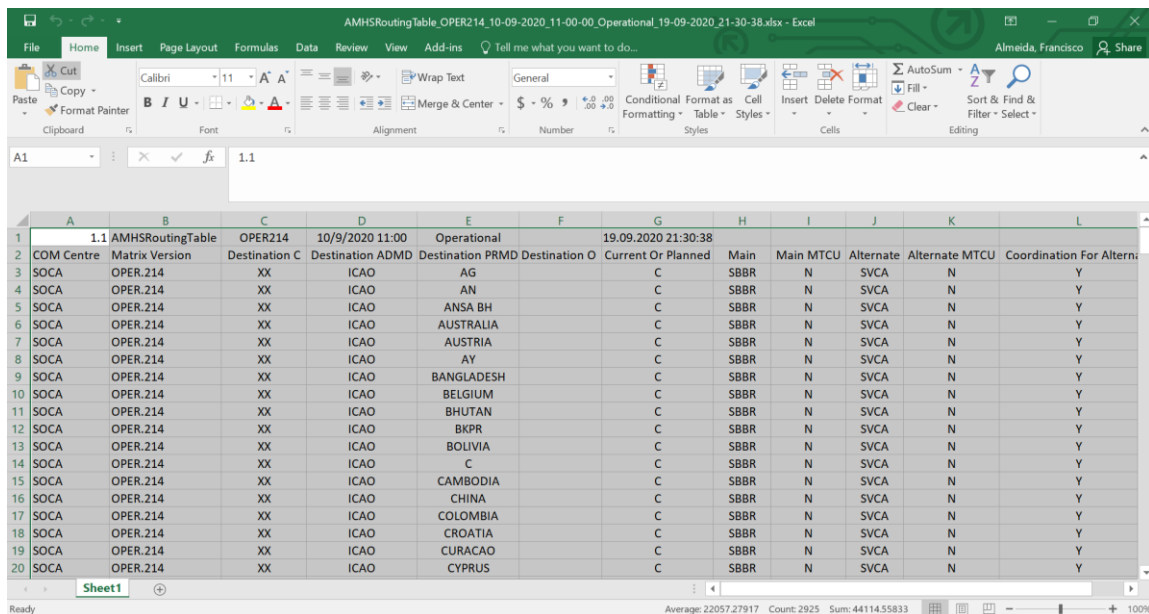


Figure 3-3 – Information exported to an electronic template

Agenda Item 4: Update of information in the AMHS Address Management Centre (AMC) of EUROCONTROL

4.1 As noted in Item 3, the information available on the AMC web tool must be periodically updated.

4.2 Important information, such as responsible parties and the means of contact of AMHS COM centres, must be available and updated on the AMC web tool.

The screenshot shows the 'Network Inventory' page in the 'ATS Messaging Management' system. The page is titled 'Operational Area' and includes a navigation menu on the left. The main content area contains search filters and a table of staff information.

Personal Role	Firstname	Surname	Phone	E-Mail
Operator	Operator	24 H	+34 916 766 639	crami_operaciones@enaire.es
Technical Operator	Technical operator	24 H	+34 916785134	lecm_cgr@enaire.es
Backup CCC Operator	Angel	Fernandez	+34 916 785 310	afsebastian@enaire.es
Management	Manuel	Garcia	+34 913213261	mangarcia@enaire.es
Supervisor	OPS Supervisor	H24	+34 916 785 310	coordinador_at@enaire.es
Operations Manager	Guadalupe	Hernandez	+34 91 627 88 28	ghelopez@enaire.es
Head of Technical Department	Javier	Lores	+34 916 785 297	jlores@enaire.es
CCC Operator	Elena	Torrijos	+34 916 785 169	etorrijos@enaire.es

Figure 4-1 – Staff and contact information of the Madrid AMHS COM centre

4.3 Figure 4-1 contains information of the Madrid AMHS COM centre, as an example. The external AMC operators (or CCC operators) must request the registration of other persons with read-only access (they cannot change the information contained in the web tool).

4.4 It is advisable that the following users be registered:

- External AMC operators (main and standby);
- 24h operator of the AMHS COM centre;
- 24h technical support; and
- Other persons (heads, supervisors, etc.).

4.5 During the workshop/meeting it was stressed that in the AMHS context, the COM centre that identified the problem (generation of an NDR, for example) was responsible for seeking a solution to the situation.

4.6 A common occurrence is a message sent to a non-existent address. For example, an AMHS user from another Region sends a message to the following address:

C=XX; A=ICAO; P=SB; O=SBBR; OU1=SBBR and CN=SBBRNOEX.

4.7 Intermediary MTAs will analyse up to attribute P (PRMD) and make sure it is routed to an adjacent MTA on the way to Brazil (SB). Intermediary MTAs cannot determine whether the AMHS address of the addressee is correct or not.

4.8 Only when the message reaches the AMHS COM centre in Brasilia will the MTA in Brasilia determine that the address does not exist, generating an NDR. It is up to the staff of the AMHS COM centre in Brasilia to contact the AMHS COM centre (in another Region) of the originator of the message to report that the recipient's address does not exist or is incorrect. Such communication may be by AMHS service message, e-mail *via* Internet, telephone, etc.

4.9 In this sense, it is essential that the staff of AMHS COM centres have the ability to communicate in another language, preferably English, to hold discussions with centres in other Regions.

Agenda Item 5: Other business

5.1 Under this agenda item, the participants received information regarding the operation/implementation of AMHS COM centres.

REDDIG number for AMHS COM centres of the SAM Region

5.2 The workshop/meeting participants were informed that the SAM digital network (REDDIG II) had two switched telephone networks: an operational network for air traffic coordination and an administrative/maintenance network.

5.3 It is recommended that AMHS COM centres of the Region have a REDDIG II telephone available to coordinate with other centres. Those responsible for COM centres must consult with REDDIG II node technicians in each State to obtain information for the installation of this resource, if available.

Migration of AFTN users

5.4 The Secretariat highlighted the importance of planning the migration of remaining AFTN users to the AMHS environment. The AFTN (text) message limits the possibility of automation of systems supporting air navigation services. New message formats were being implemented for the exchange of flight plans (FIXM), aeronautical information (AIXM), and meteorological information (IWXXM). AFTN users would not be able to process messages in the new formats.

5.5 Special attention must be paid to AFTN users hosted in automated systems, such as automatic weather stations, flight plan processors and aeronautical information data banks, the upgrading of which for the exchange of messages in the AMHS environment involved relatively high costs.

New meteorological message format (IWXXM)

5.6 ICAO, through Amendment 78 to Annex 3 on Aeronautical Meteorology, has provided information on, and approved the exchange of, operational meteorological messages in IWXXM format, which provides for better process automation compared to the (traditional) TAC format. In this sense, air navigation service providers (ANSPs) must adapt their systems for the exchange of meteorological information in the new format.

Regional OPMET data bank of Brasilia

5.7 In compliance with Amendment 78 to Annex 3, Brazil informed that the regional OPMET data bank of Brasilia had been adapted for the exchange of operational meteorological messages in the new IWXXM format, version 2.1, and was already operational since 2017.

5.8 Meteorology users capable of sending AMHS messages with meteorological information coded in the IWXXM format (as an attachment to the AMHS message) would be able to enter/consult information at the regional OPMET data bank of Brasilia, using the following AMHS address:

***/CN=SBBRYZYX/OU=SBBR/O=SBBR/PRMD=SB/ADMD=ICAO/C=XX/
(AFTN address SBBRYZYX).***

5.9 Meteorology users unable to send information in the new IWXXM format could still enter/consult meteorological information in the TAC format, using the same AMHS address mentioned above.

5.10 The regional OPMET data bank of Brasilia has a (built-in) converter that converts messages from TAC to IWXXM format and *viceversa*. Thus, when a user enters meteorological information in the TAC format, the same information is available in the IWXXM format. Likewise, information entered in the IWXXM format is available in the TAC format.

5.11 TAC messages containing errors **will not be converted** to the IWXXM format.

5.12 The aforementioned AMHS address corresponds to the operational regional OPMET data bank; only valid (TAC or IWXXM) messages must be entered. To conduct **(IWXXM or TAC) tests** with the OPMET data bank of Brasilia, AMHS messages must be sent to the following address:

**/CN=SBBRWXXM/OU=SBBR/O=SBBR/PRMD=SB/ADMD=ICAO/C=XX/
(AFTN address SBBRWXXM)**

5.13 At this AMHS/AFTN address, there is no problem if invalid (test) messages are entered.

5.14 Meteorological users should refer to EUR DOC 33 - Concept of Operations for the Transition of OPMET Data Exchange using IWXXM, for information on the new format.

New regional OPMET data bank of Brasilia

5.15 The main ANSP of Brazil (DECEA) was in the process of implementing a new regional OPMET data bank in Brasilia, in compliance with **version 3.0** of the new IWXXM format (and previous versions), with the same (AMHS or AFTN) aeronautical messaging reception and transmission characteristics as the system currently in operation described above. Figure 5-1 shows the interconnection scheme of the future regional OPMET data bank of Brasilia.

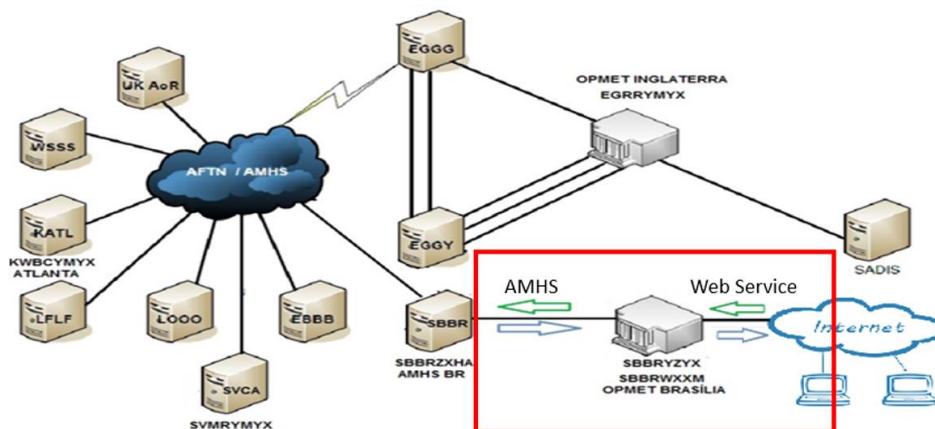


Figure 5-1 – New regional OPMET data bank of Brasilia

5.16 The new system was expected to be implemented by the first quarter of 2021. In addition to the functionalities already existing in the current system, the new system would provide registered MET users with access to a web service allowing them to enter and consult meteorological information

through IP networks (Intranet or Internet). Figure 5-2 shows the possibilities that MET users have to connect to the new system of the regional OPMET data bank of Brasilia.

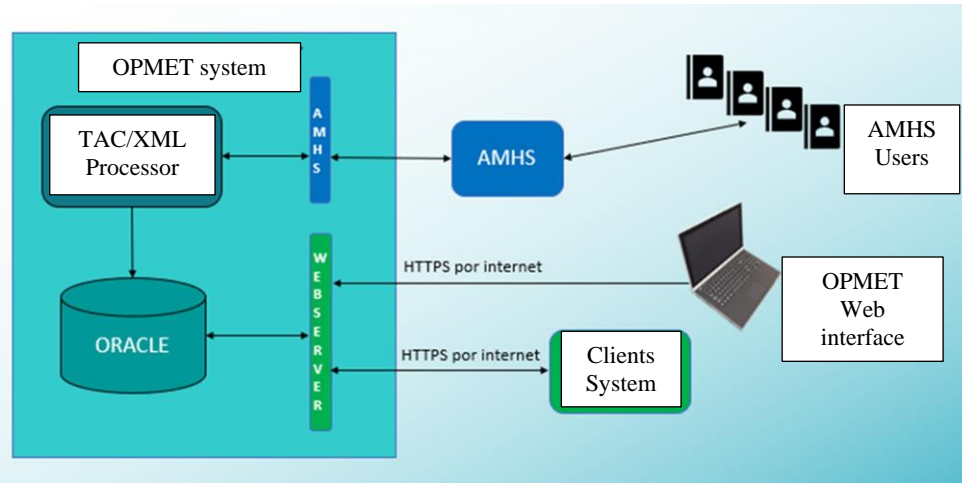


Figure 5-2 – User connection possibilities

Webmail

5.17 The use of web services in information technology systems is becoming increasingly common. One example is webmail, which allows users of an e-mail system to access their message inbox, through a URL, using a browser. Figure 5-3 illustrates the webmail concept.

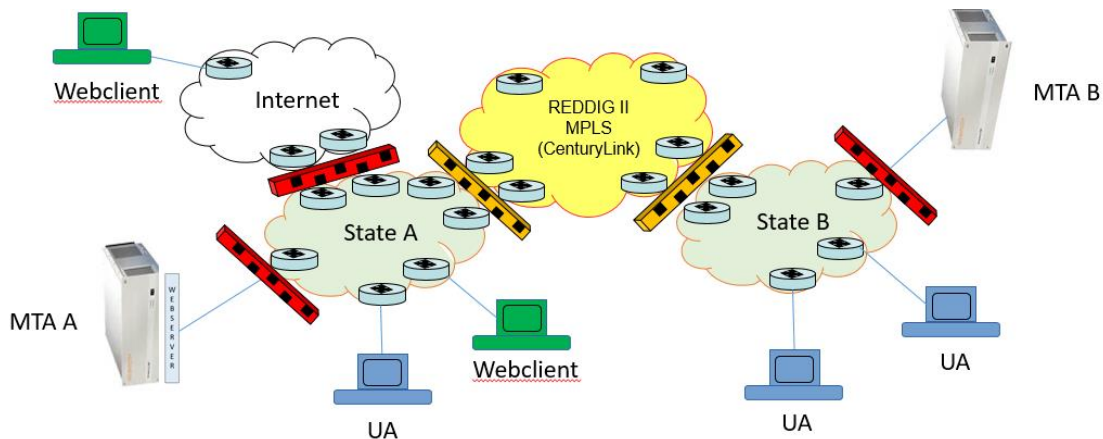


Figure 5-3 – Webmail concept

5.18 In Figure 5-3, the MTA B does not have a webmail service. Thus, users only have the possibility of accessing their inbox through an application (UA - User Agent) installed in their terminals. The MTA A implements a webmail, allowing its users to access their inbox through UAs or web clients.

5.19 It should be noted that webmail users can have access both from a private network (Intranet) or from a public network (Internet). The use of this type of functionality requires the adoption of strict cybersecurity measures (firewalls).

SITA Type X Gateway

5.20 The Secretariat noted that the connection of the SITA Type X Gateway to the two COM centres planned for the SAM Region (Brasilia and Ezeiza) had been completed in 2019. This interconnection allowed users within the aircraft operators’ messaging context (SITA) to exchange messages with AMHS users (ANSPs). Figure 5-4 illustrates the SITA Type X Gateway connections with the AMHS context in all ICAO Regions.

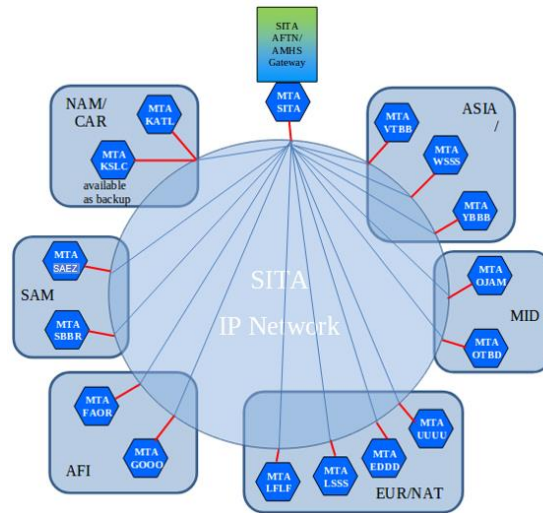


Figure 5-4 – SITA Type X Gateway interconnections in the AMHS context

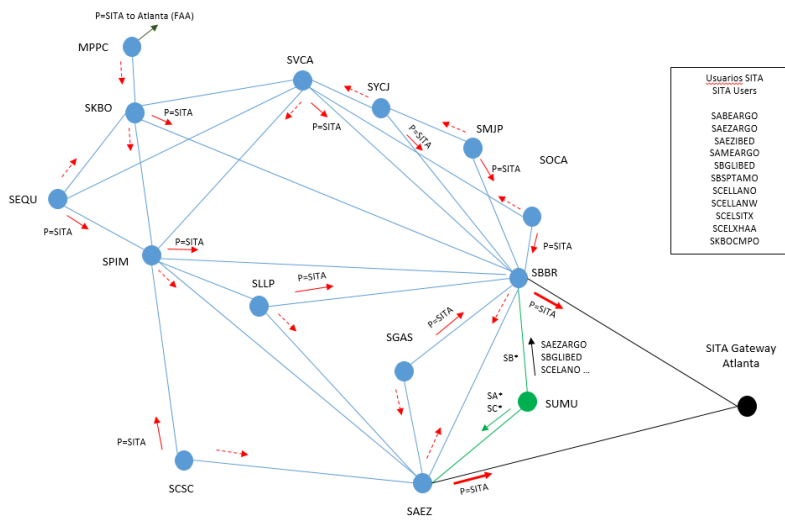


Figure 5-5 – SITA routing scheme

5.21 MTAs of the SAM Region must route messages to SITA users (PRM=SITA) in accordance with the diagram shown in Figure 5-5.

5.22 The workshop/meeting participants agreed that, in order to facilitate and ensure the implementation of new aeronautical technologies and effective transition to SWIM in the SAM Region,

the aeronautical authorities of the States of the Region should make sure that AMHS communication centres (AMHS COM centres) had sufficient and properly trained personnel available.

Advanced course on AMHS

5.23 The secretariat of the workshop/meeting reported that the 2020 Advanced course on AMHS had been held on 14-18 September 2020, with the participation of 28 representatives of the States (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Panama, Paraguay, Peru, Uruguay, and Venezuela) and two officers from the SAM Regional Office.

5.24 The material used in the course is available at:

<https://1drv.ms/u/s!AnTL39qVz81ijqVRsSmzHxFzEu-Jqg?e=j4qQSo>

5.25 The Secretariat reasserted the need for wide dissemination by State representatives at training courses, workshops, seminars, meetings and other events, and to share information with other colleagues.
