



International Civil Aviation Organization

MIDANPIRG/20 and RASG-MID/10 Meetings

(Muscat, Oman, 14-17 May 2023)

Agenda Item 6.6: CNS

COMMUNICATION MATTERS

(Presented by the Secretariat)

SUMMARY

This paper presents update on the AMHS implementation Status and on extension of the New PENS Project to the MID Region and propose means to enhance the use of AMC tools and functions and AFS Network Performance in the MID Region. The Working Paper also proposes action to facilitate the implementation of AMHS/ARINC Gateway

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/19 Meeting Report
- CNS SG/12 Meeting Report
- AMC Manual (ICAO EUR 021)

1. INTRODUCTION

1.1 The seventh meeting of the MIDAMC Steering was Group (MIDAMC STG/7) was conducted on 15/5/2023, in Muscat, Oman. The meeting discussed the implementation and planning of the AFS matters, MIDAMC functions and tools in addition to the MID IP Network Project.

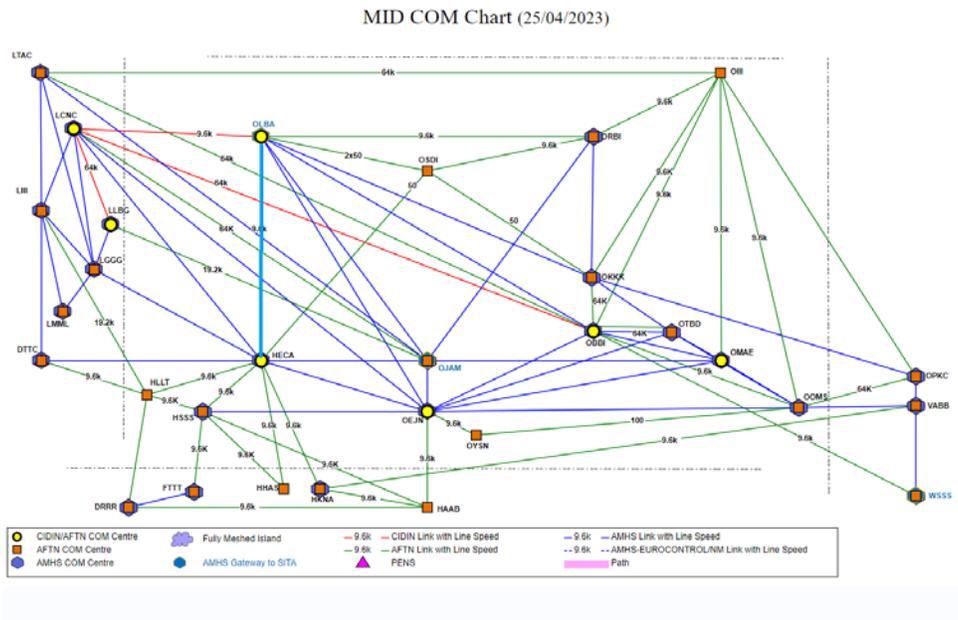
1.2 The MIDAMC STG/8 meeting was conducted back-to-back with the CNS SG/12 meeting in Amman, Jordan, 1-4 May 2023.

2. DISCUSSION

AMHS Implementation Status

2.1 The meeting may wish to recall that MIDANPIRG/15, through Conclusion 15/30, urged States to refrain from establishing new AFTN and CIDIN connections at the International level, gradually phase out the current connections based on AFTN or CIDIN standards, and expedite their AMHS implementation. In this regard, MID States have removed all CIDIN inter-regional links. However, inter-regional connection with Cyprus are still CIDIN link. The Status of AMHS implementation is shown in below chart, blue line represents AMHS connection.

2.2 The meeting may wish to note that the Regional OPMET Center (ROC) plan has been reviewed and updated as at **Appendix A**. 36 out of 38 actions has been completed, the remaining actions are related to the migration of inter-regional communication link to AMHS and evaluation of bandwidth increase if required.



2.3 According to the MID Air Navigation Report for 2022, the average implementation level of the AMHS (COMI B0/7) in the MID Region is 73%, four (4) States have not implemented AMHS (Iran, Libya, Syria and Yemen).

2.4 The meeting may wish to note that the MIDAMC STG/8 discussed the need to rationalize AFTN/AMHS Network in the MID Region, based on operational requirements and traffic volume. Moreover, It was agreed that States need to review the operating of the bilaterally agreed connections. Accordingly, the CNS SG/12 meeting proposed the following Draft Conclusion:

Why	To improve the efficiency and performance of the AFS Network in the MID Region
What	To rationalise the inter-regional connection and migrate to AMHS
Who	MID States
When	May 2023

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DRAFT CONCLUSION 20/XX: INTER-REGIONAL COMMUNICATION LINKS

That, in order to enhance the AFS Network efficiency and performance, States are urged to:

- a) *migrate inter-regional communication links to AMHS; and*
- b) *rationalize the inter-regional connections established on bilateral basis, taking into consideration the regional requirements set in the MID ANP Vol II and operational needs.*

AMC Functions and Tools

2.5 During the MIDAMC STG/8 meeting, the MIDAMC team highlighted with concerns the issue of inconsistencies between the data held in the AMC and what it is implemented on AMHS switches, which cause addressing and routing problems within the global network. States are requested to ensure updating their systems data at the end of each AIRAC cycle.

2.6 The meeting may wish to recall that MIDANPIRG/18, through Conclusion 18/34, urged States to update their focal points details, Systems capabilities and Connections on AMC in order to improve MIDAMC Operation efficiency, since that the MIDAMC web application has been withdrawn on 1 March 2021. Six (6) States (Libya, Lebanon, Syria, Kuwait, Sudan, and Yemen) have not registered on the AMC and made the necessary update.

2.7 Furthermore, States were encouraged to register three AMC users with different personal roles (Operator, External COM Operator, backup External COM operator), the MIDAMC STG/8 reviewed the AMC Accreditation procedure and developed a procedure for the users from the MID Region as at **Appendix B**. Therefore, the following Draft Conclusion is proposed:

Why	To guarantee the confidentiality and integrity of data contained in the AMC database
What	Endorse accreditation procedure for AMC Users in the MID Region
Who	MIDANPIRG
When	May 2023

DRAFT CONCLUSION 20/XX: ACCREDITATION PROCEDURE FOR MID EXTERNAL COM OPERATORS

That, Accreditation Procedure for MID External COM Operators at Appendix B is endorsed.

2.8 The meeting may wish to note that EUROCONTROL has suspended the Routing Directory function for all users outside Europe Region since 28th March 2023 due to legal concerns. New AMC Terms of Use has been posted, States were requested to review the new Terms and provide any object they may have before 31 May 2023. If no objections received at the end of this period, EUROCONTROL would consider the new Terms of Use accepted by all users.

2.9 Furthermore, with this new Terms of Use in place, EUROCONTROL will establish clear and well defined commitments between the parties. Global routing function will be able to re-open for external COM centres. The MIDAMC STG/8 meeting was informed about certain operational problems (messages loop, non delivery, ...etc), it was agreed that routing tables need to be updated to make of the centralised tool on AMC, therefore, the MIDAMC STG/8 proposed the following Draft Decision:

Why	To update the AFS routing tables on AMC in order to mitigate messages looping issue
What	Establish action group
Who	MIDANPIRG
When	May 2023

DRAFT DECISION 20/XX: UPDATE OF THE AMC ROUTING TABLES

That,

- a) *AMC Routing Table Action Group be established to review and update AMC Routing Directory by 1 November 2023;*
- b) *be composed of:*
 - *the MIDAMC Chairman*
 - *the MIDAMC Team Leader (Jordan)*
 - *Ali Darwish.(Bahrain)*
 - *Ali Jaber.(Saudi Arabia)*

2.10 The MIDAMC STG/8 meeting requested ICAO MID Office to organize AMHS/AMC Workshop/Training for new AMC users, it was highlighted that new users have been designated from many States and need to be trained to ensure the efficient use of the web application, thus, it was agreed that the training be conducted back-to-back with the MIDAMC STG/9 in Feb,2024. Therefore, the following Draft Decision is proposed:

Why	To provide/refresh knowledge and hands-on experience on the use of AMS Web application for new AMC Users
What	AMC/AMHS Workshop be conducted
Who	ICAO MID Office
When	Feb 2024

DRAFT MIDAMC DECISION 8/3: AMHS/AMC WORKSHOP

That, AMHS/AMC Workshop be organised for AMC users in 2024.

Validation of ARINC Addressee

2.11 The ICAO EUR/NAT AFS to SWIM Transition Task Force (AST TF) is in coordination with the Collins Aerospace community (ARINC) is working to implement an AMHS gateway between the AMHS community and ARINC.

2.12 The first implementation step is to validate the addresses within ARINC community that are used for sending via the existing AFTN network. Therefore, the MIDAMC STG/8 meeting urged the concerned States (Egypt, Libya, and Sudan) to validate the ARINC Addressee by 1 August 2023 and proposed the following Draft Conclusion:

Why	To facilitate the implementation of AMHS/ARINC gateway
What	Validate ARINC addressee
Who	Egypt, Libya and Sudan
When	1 August 2023

DRAFT CONCLUSION 11/3: VALIDATION ARINC ADDRESSEE

That, States are urged to validate the ARINC Users addressee by 1 August 2023.

AMHS/SWIM Gateway

2.13 SWAMWAY SG is a joint initiative the undertaken by a group of organizations including several ANSPs and industries with a deep expertise in both, AMHS and SWIM. The Study Group aims at developing a core technical specification for the AMHS/SWIM Gateway that establishes a basic framework through a set of essential requirements.

2.14 During the MIDAMC STG/8 meeting, the meeting was apprised of the technical specifications under development of the AMHS/SWIM Gateway. It was noted that the AFTN addressee will be used for naming and addressing use for the AMHS/SWIM Gateway and that AMC will be used for addressee translation on the long term.

Update on MID IP Network Project

2.15 The meeting may wish to recall that MIDANPIRG/18 agreed, through Conclusion 18/37, that the ICAO MID Office, with the support of concerned States, initiate discussions with EUROCONTROL, in order to explore the possibility of joining the NEWPENS project as an alternative solution for establishing a MID IP Network.

2.16 ICAO MID requested EUROCONTROL to extend the New PENS to MID States. New PENS Webinar conducted (10 November 2021). Eight (8) States (Bahrain, Egypt, Jordan, Lebanon, Kuwait, Oman, Saudi Arabia and UAE) confirmed their interest to join the EUROCONTROL IP Network Project (New PENS) pending technical and financial proposals.

2.17 The meeting was informed that EUROCONTROL Member States should cast their vote on the project extension by April 28th. The results of the voting will be announced during the 2nd week of May 2023.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the AMHS implementation Status in the MID Region and the progress toward completion of the ROC plan;
- b) note the update regarding joining the New PENS project and discuss any relevant matter; and
- c) support and endorse the Draft Decisions and Conclusions at Para. 2.4, 2.7, 2.9, 2.10 and 2.12

APPENDIX A

MID ROC Plan

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
1	Establish Jeddah – Beirut IP Network.	Jul 2015	Saudi Lebanon	IM MS	Completed
2	Establish Bahrain – Beirut IP Network.	Feb 2016	Bahrain Lebanon	YH MS	Completed
3	Establish Cairo – Beirut IP Network.	July 2016	Egypt Lebanon	AF//MR MS	Completed
4	Establish Bahrain – Jeddah IP Network.	Mar 2016	Bahrain Saudi	IM YH	Completed
5	Perform the Interoperability test between Jeddah and Beirut COM Centers.	July 2015	Saudi Lebanon	IB MS	Completed
6	Perform the Interoperability test between Bahrain and Beirut COM Centers.	July 2016	Bahrain Lebanon	MS YH	Completed
7	Perform the Interoperability test between Cairo and Beirut COM Centers	July 2016	Egypt Lebanon	AF/TZ/MR MS/EK	Completed
8	Perform the Interoperability test between Bahrain and Jeddah COM Centers.	15 October 2020	Bahrain Saudi	YM AA	Completed
9	Perform the Pre-operational test between Jeddah and Beirut COM Centers.	July 2015	Saudi Lebanon	IM MS	Completed
10	Perform the Pre-operational test between Bahrain and Beirut COM Centers.	July 2016	Bahrain Lebanon	YH MS	Completed
11	Perform the Pre-operational test between Cairo and Beirut COM Centers.	March 2017	Egypt Lebanon	AF/ /MR MS/EK	Completed
12	Perform the Pre-operational test between Bahrain and Saudi COM Centers.	25 October 2020	Bahrain Saudi	YM IM	Completed
13	Place the AMHS link into operation between Jeddah and Beirut COM centers, and updating the Routing tables.	July 2015	Saudi Lebanon MID AMC	IM MS/EK MN	Completed July, 2015
14	Place the AMHS link into operation between Bahrain and Beirut COM centers, and updating the Routing tables.	July 2016	Bahrain Lebanon MID AMC	YH MS/EK MN	Completed On 3/5/2016
15	Place the AMHS link into operation between Cairo and Beirut COM centers, and updating the Routing tables.	April 2017	Egypt Lebanon MID AMC	AF/TZ/MR MS/EK MN	completed

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
16	Evaluate the Trunks connections bandwidth and increase it if required between (Bahrain, Beirut, Cairo and Jeddah).	Q4 2021	Bahrain Beirut Cairo Jeddah	YH MS/EK AF/TZ IM	
<i>The AMHS Interconnection with EUR Region Depends on Nicosia and Athens</i>					
17	Establish Cairo – Tunis IP Network.	<i>March2016 July 2016</i>		AF/TZ/MR IB/MA	completed
18	Establish Nicosia – Beirut IP Network.	Q3 2021		MS/EK	Lebanon is ready to connect
19	Establish Nicosia – Jeddah IP Network.	Q3 2021		IM	Saudi Arabia is ready to connect
20	Establish Bahrain – Nicosia IP Network.	Q3 2021		AD	Bahrain is ready to connect
21	Establish Cairo – Athens IP Network.	Dec 2016		AF/TZ/MR	completed
22	Perform the Interoperability test between Cairo and Tunis COM Centers.	<i>April 2016 August 2016</i>		AF/ /MR IB/MA	Completed
23	Perform the pre operational test between Cairo and Tunis COM Centers.	<i>Q3 2016</i>		AF/ /MR IB/MA	Completed
24	Place the AMHS link into operation between Cairo and Tunis COM Centers, and updating the Routing tables.	<i>Aug 2016</i>		AF/ /MR IB/MA	completed
25	Perform the Interoperability test between Athens and Cairo COM Centers.	Mar 2017		AF/TZ/MR IB/MA	completed
26	Perform the Interoperability test between Bahrain and Nicosia COM Centers.	Q3 2021		AD	Bahrain is ready to connect
27	Perform the Interoperability test between Nicosia and Jeddah COM Centers.	Q3 2021		IM	Saudi Arabia is ready to connect
28	Perform the Interoperability test between Nicosia and Beirut COM Centers.	Q3 2021		MS/EK	Lebanon is ready to connect
29	Perform the Pre-operational test between Athens and Cairo COM Centers.	Mar 2017		AF/TZ/MR	Completed
30	Perform the Pre-operational test between Bahrain and Nicosia COM Centers.	Q3 2021		YH	Bahrain is ready to connect
31	Perform the Pre-operational test between Nicosia and Beirut COM Centers.	Q3 2021		MS/EK	Lebanon is ready to connect

<i>AMHS Plan for ROC in Jeddah and Bahrain</i>					
	Task	Timeframe	Assigned to	Champion	Status
<i>AMHS Intra-regional Trunk Connections</i>					
32	Perform the Pre-operational test between Nicosia and Jeddah COM Centers.	Q3 2021		IM	Saudi Arabia is ready to connect
33	Place the AMHS link into operation between Athens and Cairo COM Centers, and updating the Routing tables.	Q1 2017		MIDAMC AF/ /MR	Completed
34	Place the AMHS link into operation between Bahrain and Nicosia COM Centers, and updating the Routing tables.	Q3 2021		MID AMC YH	
35	Place the AMHS link into operation between Nicosia and Jeddah COM Centers, and updating the Routing tables.	Q3 2021		MID AMC IM	
36	Place the AMHS link into operation between Nicosia and Beirut COM Centers, and updating the Routing tables.	Q3 2021		MS/EK	
37	Evaluate the inter-region connections bandwidth and increase it if required.	Q3 2021		MID AMC	
38	Transition of all regional AFTN/CIDIN Connections to AMHS.	Q3 2021	Bahrain UAE		3 intra-regional CIDIN connection remains

APPENDIX B

AMC USER ACCREDITATION PROCEDURE FOR MID COM CENTERS

- All MID COM centers are considered as **External COM Operators** on AMC.
- The accreditation procedures found in Para (2.5.2) in ATS Messaging Management Manual (EUR Doc 021) are no longer applicable to MID COM centers.
- The MID AMC Team has developed new accreditation procedures for MID External COM Operators after MID AMC web application was withdrawn in April 2021 .
- Each MID COM Centre shall be allowed to designate one External COM Operator + two backup associated to its COM Centre.
- The External COM Centre should firstly register an account in the OneSky Online Extranet using the following link
:https://ext.eurocontrol.int/elsh/registerNewUserForApplication.do?eurocontrolresourceid=amc_users
- The External COM Centre request an account activation of the registered users by sending an email to MID AMC Team with a CC to the CNS Officer of the ICAO Middle East Regional Office including the full name, position, Organization and contact details
- The request is endorsed by the CNS Officer of the ICAO Regional Office & MID AMC Team.
- The MID AMC Team will add the new External COM operators in the Network inventory, Person & Contacts on Day 1 of the next AIRAC cycle (when the AMC entry phase is open).
- The MID AMC Team submit a request of account activation to EUROCONTROL who accepts the request;
- The External COM Centre is notified by the MID AMC team when the request is approved and the account is active.

-END-