



International Civil Aviation Organization

MIDANPIRG Communication, Navigation and Surveillance Sub-Group

Ninth Meeting (CNS SG/9)
(Cairo, Egypt, 19 – 21 March 2019)

Agenda Item 4: CNS planning and implementation in the MID Region

OUTCOME OF THE MIDAMC STG/4 MEETING

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the MIDAMC STG/4 meeting for review and endorsement by the meeting

Action by the meeting is at paragraph 3.

REFERENCES

- MSG/6 Report

1. INTRODUCTION

1.1 The Fourth meeting of the MIDAMC Steering Group held in Cairo, Egypt, from 18-19 March 2019, back to back with the CNS SG/9.

2. DISCUSSION

SITA Integration in the MID Region

2.1 The Subject addressed in WP3, WP4, WP5, WP6 presented by the Secretariat, KSA, Egypt and SITA respectively and PPT1 presented by the secretariat.

2.2 The meeting noted that SITA Integration is a pre-requisite to any AMHS inter-regional connection, in order to keep efficient and regular messages exchange. ICAO APAC, EUR/NAT and SAM Regions have completed the integration successfully; AFI Regions are also progressing well.

2.3 The meeting recalled that CNS SG/8 meeting developed SITA Type X Transition Action Plan. The transition date has been postponed several times and the transition could not be completed.

2.4 The meeting underlined that lagging in SITA Integration may isolate the MID Region from AMHS upgrade with adjacent Regions, and keep operating the old obsolete protocol "AFTN". Moreover, the meeting highlighted the operational and safety consequences of not having SITA Type X Integrated in the Region.

2.5 The meeting was apprised of the special coordination meeting held with Egypt, EUROCONTROL, ICAO MID and SITA on 18th December 2018 to resolve the pending issues and that it was agreed to do the cutover in 28 February 2019, however, the transition could not be implemented as agreed.

2.6 The meeting noted ICAO EUR/NAT AFSG meeting (held in Paris from 5 to 8 March) concern regarding the lack of SITA AMHS Gateway into MID Region, that may affect the exchange of ATS messages between EUR and MID as well as inside the respective COM Centres of both Regions.

2.7 The meeting agreed that AMHS technical transition should not be impacted by bilateral specific issues to avoid any community impact. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/x: SITA INTEGRATION IN THE MID REGION

That, in order to finalize SITA Type X integration in the MID Region, to ensure seamless and efficient messages exchange with other ICAO Regions, States are urged to:

- a) implement necessary measures to enable SITA integration in the MID Region ASAP;*
- b) inform ICAO MID Office by 28 March 2019 about State's readiness to integrate SITA Type X;*
- c) be informed by ICAO MID Office about States are not ready for SITA Type X Integration (if any) by **1 April 2019**;*
- d) take necessary actions to avoid relaying messages through non-complied States;*
- e) use new routing tables published by MIDAMC by **10 April 2019**; and*
- f) complete SITA Type X Integration by **25 April 2019**.*

2.8 The meeting supported Saudi Arabia request to establish additional Regional Type X connection in the MID Region, in order to improve the reliability and the availability of AMHS/SITA interconnection. Furthermore, the meeting requested establishing a third Connection and develop a plan accordingly. SITA.....

2.9 The issue of Validating SITA Users addressee in the MID Region was addressed, and the challenges faced by States when dealing with Airlines addresses. It was agreed that SITA supports States to identify SITA Users addresses when requested.

IWXXM Implementation and ROC Connectivity

2.10 The meeting recalled that the thirteen ICAO Air Navigation Conference (ANC/13) through recommendation 2.3/2, urged States provide ICAO with their ICAO Meteorological Information Exchange Model (IWXXM) implementation plans before 2020, and requested ICAO to ensure that the IWXXM format is the only standard exchange format by 2026.

2.11 The meeting reviewed the AMHS plan of the MID ROC connectivity plan at **Appendix A**, to enable exchange of OPMET data in new format between the MID and EUR Regions.

2.12 The meeting noted that most of the AMHS systems in the MID Region are capable to run the extended services and in particular the File Transfer Body Part (FTBP).

2.13 The meeting recalled MSG/6 Conclusions to enable exchange IWXXM messages:

MSG CONCLUSION 6/29: IMPLEMENTATION OF FILE TRANSFER BODY PART (FTBP)

That, States are urged to:

- a) *implement FTBP capability at National COM Centres (AMHS is a prerequisite);*
- b) *implement P3/P7 with FTBP capability at the National OPMET Centre (NOC);*
and
- c) *set the maximum overall AMHS Message size to 4 MB.*

MSG CONCLUSION 6/30: THE COMMUNICATION NETWORK FOR IWXXM DATA EXCHANGE

That, the Main and Backup Regional OPMET Centres (Bahrain and Saudi Arabia) and the Main COM Centres in the MID Region be urged to join the CRV Project in order to enable the exchange of OPMET information in IWXXM format.

2.14 The meeting was apprised of the available FTBP implementation guidance and testing documents; Appendix H of the EUR AMHS Manual developed by EUR AFSG that contains the AMHS Profile for OPMET IWXXM data exchange as well as guidance material for conducting conformance testing of the involved implementations and the first edition of FTBP Testing Document endorsed by MIDANPIRG/16.

2.15 The meeting agreed to add FTBP capability to FICE Table in the ANP Vol III. Also the meeting agreed to monitor the implementation of required communication infrastructure for the exchange of the XML based messages (IWXXM, FIXM, AIXM,.etc.) over AMHS as at **Appendix C**.

2.16 It was highlighted that the current communication systems used in States (AMHS) has the required capabilities to meet the performance requirements of exchanging XML based messages in the MID Region. Furthermore, joining CRV Network will reduce the complexity of current mixed communication environment (AFTN/AMHS/CIDIN).

Inter-regional Connections and Missing Messages

2.17 The meeting recalled MIDANPIRG/15 Conclusion 15/30 regarding migration to AMHS:

CONCLUSION 15/30: AFTN/CIDIN AFS CONNECTIVITY AND AMHS IMPLEMENTATION

That, States be urged to:

- a) *refrain from establishing new AFTN and CIDIN connections at the International level;*
- b) *gradually phase out the current connections based on AFTN or CIDIN standards; and*
- c) *expedite their AMHS implementation.*

2.18 The meeting noted that all CIDIN connections have been removed within the MID Region and there is only one connection remaining between Bahrain and UAE.

2.19 The other CIDIN connections are the inter-regional ones with Athens and Nicosia pending SITA integration in the MID Region.

2.20 IATA raised a concern about the current performance of Cairo-Nicosia CIDIN connection, and the need to improve the inter-regional connection to accommodate the increasing demands of traffic exchange.

2.21 The meeting reviewed the MID Air Navigation Plan (MID ANP) VOL II, and noted that the entry/exit points with adjacent Regions are as follow:

- 1) Bahrain, Iran, and Oman are the entry/exit points with ASIA/PAC Region
- 2) Egypt and Saudi Arabia are the entry/exit points with AFI Region
- 3) Egypt, Kuwait and Lebanon are the entry/exit points with EUR Region

2.22 In this context, the meeting was apprised of Sudan's request to consider Khartoum COM Centre as a Main COM Centre and third gateway with the AFI Region, which could offer more channel for the inter-regional communications.

2.23 The meeting reviewed the MID Air Navigation Plan (MID ANP) VOL II, and agreed that Table CNS-II should be updated to reflect the current needs, accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/x: PFA TO THE MID ANP Volume II-CNS

That, a Proposal for Amendment to the MID ANP Volume II – Table CNS II-1 related to the Aeronautical Fixed Telecommunication Network Plan be processed in accordance with the standard procedure for ANP Amendment

2.24 The meeting discussed the causes of missing messages, and noted the following action have been taken by MID Office:

- a) requested the ICAO EUR/NAT Office to consider the establishment of new European Gateway (Rome) with the MID Region;
- b) invited Egypt and Lebanon to establish AMHS inter-regional connection with the current European gateways (Athens and Cyprus);
- c) coordinated with ICAO ESAF Office to establish new inter-regional AMHS connection between Cairo and South Africa;
- d) invited Bahrain – UAE to migrate their bilateral CIDIN connection to AMHS;
- e) requested all States in the MID Region to migrate to AMHS; and
- f) initiate communication with adjacent ICAO regions (APAC and AFI) to review the performance of the inter-regional connections.

2.25 The meeting underlined that States should notify Airspace users and ATS Units in case of communication failure and no routes available. It was agreed to form a team from IATA, ICAO MID and MIDAMC to coordinate and investigate missing messages once reported, the meeting recommended to investigate from origination to the destination to identify source and reason of the missing whether they are operational or technical issues. States concerned were requested to cooperate for the investigation once initiated.

2.26 The meeting was apprised of the performance review of the inter-regional connections with APAC that have been done during the CRV OG/5 (23-25 January 2019, Hong Kong). Among reported cases, causes were due to a communication failure, unavailability of alternative routes, and delay in AFTN failure detection.

2.27 The meeting was informed that after conducting an investigation for the missing messages between Kuwait and Karachi, appropriate changes to existing routing directory at Kuwait and Karachi Com Centres has been done, and the problem is resolved now.

CRV Project

2.28 The Subject addressed in WP9, WP10, PPT2 presented by the Secretariat, Oman, FAA respectively.

2.29 The meeting noted that States selected different packages for the same connections. In order to request price revision from CRV service provider, the Secretariat prepared consolidated proposal with unified package for all MID States. Furthermore, the meeting recalled MSG/6 Conclusion 6/28 agreed that States should complete their CRV Network Requirements:

MSG CONCLUSION 6/28: MIDCRV REQUIREMENTS

That, in order to request price revision from the CRV's Service provider (PCCW Global) for the MID Region, States that have not done so, are urged to complete the MID CRV requirements at Appendix 5.3P, not later than 15 February 2019.

2.30 The meeting was informed that CRV service provider (PCCW) offered a bundle discount with around 10-15% less if Six (6) States place order in the same period. However, CRV overall cost could be reduced if a high number of States join the project.

2.31 The meeting was apprised of the successful result of tests from the CRV Pilot Project that conducted through Pilot Project, and that proved the concept of the CRV network against the 10 points of test plan established at CRV OG/2 meeting. Furthermore, it was highlighted that it is not necessary for other States to duplicate a similar testing.

2.32 The meeting noted that the establishment of such a common network within specific Region would require careful consideration of all issues involved as well as the evaluation of common network proposal as compared to the current point-to-point configuration. Several issues need to be considered include, but are not limited to, the following factors:

- a) Technical requirements
- b) Cost, including arrangement for division/allocation of cost
- c) Process for contract award
- d) Responsibility for network administration
- e) Handling of network service issues
- f) Performance specifications
- g) Network security issues
- h) Network redundancy issues
- i) Capacity for growth and expansion
- j) Required lead time for implementation
- k) Performance management, measurement, monitoring, reporting and control
- l) Missing message issue faced by Bahrain, Kuwait and Oman.

2.33 Based on the above, the meeting agreed to conduct a special meeting on CRV project with Subject Matter Expert (SME) to investigate the issues described above, study the appropriate

CRV framework for MID IP Network and develop detailed proposal for appropriate CRV Packages for states, System Design Document (SDD) and Implementation Plan, in effective manner in the short term. Therefore, the meeting agreed to conduct MIDAMC STG/5 meeting in the fourth quarter 2019. The meeting will address only CRV project and will involve CRV service provider (PCCW Global).

2.34 The meeting was apprised of CRV Implementation in FAA. For voice service over CRV, FAA has Package A (Hot Standby). FAA can revert to International Dial Direct (IDD) as needed. For AMHS Network Backup, FAA has two CRV Package C at separated Locations.

2.35 The meeting noted the following recommendations/lessons learnt from APAC experience on CRV Project:

- a) Change States/Administrations to join CRV to “ANSPs”, as States/Administrations’ term is not specific and will delay approval process. The CRV is designed to primarily support time sensitive ATC voice and AFTN/AMHS.
- b) Maintain the AMHS routing and expand routing with coordination to all impacted ANSPs.
- c) IWXXM traffic will be distributed by AMHS as adopted by ICAO. IWXXM traffic should be evaluated regularly to ensure CRV can provide support.
- d) SWIM over CRV should be regularly evaluate of its traffic to ensure CRV bandwidth can be used efficiently.

Terms of Reference

2.36 The meeting reviewed the MIDAMC STG/4 Terms of reference and agreed to update it to include support and monitor the implementation of XML based messages over AMHS. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 4/X: TERMS OF REFERENCE OF THE MIDAMC STG

That, the Terms of Reference and Work Programme of the MIDAMC STG be updated as at Appendix xx.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and provide comments, as appropriate, to the outcome of the MIDAMC STG/4 Meeting; and
- b) endorse all Draft Conclusions.
