



International Civil Aviation Organization

MIDANPIRG/21 & RASG-MID/11 Meetings

(Abu Dhabi, UAE, 4 – 8 March 2024)

Agenda Item 5.3: ANS (AIM, PBN, AGA-AOP, ATM-SAR, CNS and MET

AIDC/OLDI IMPLEMENTATION

(Presented by the Secretariat)

SUMMARY

This paper introduces an alternative mechanism for AIDC/OLDI to exchange traffic data between adjacent FIRs based on requirement of MIDRMA.

Action by the meeting is at paragraph 3.

REFERENCE(S)

- ATM SG/3 report (Cairo, Egypt, 22 – 25 May 2017)
- ATM SG/4 report (Amman, Jordan, 29 April – 2 May 2018)
- CNS SG/11 report (Muscat, Oman, 16-19 May 2022)
- ICAO Doc 4444 (PANS – ATM)
- ICAO Doc 002 (MID Air Navigation Strategy (Edition February 2021)
- ICAO MID ANP Volume II.
- ICAO Doc 006: Mid Region Guidance for the implementation of AIDC/OLDI (Edition April 2019)
- ICAO/ACAO/EUROCONTROL AIDC/OLDI workshop (Cairo, Egypt, 14 - 16 February 2023)
- MIDANPIRG/20 & RASG-MID/10 report (Muscat, Oman, 14 – 17 May 2023)
- MSG/6 Meeting Report (Cairo, Egypt, 3 – 5 December 2018)
- MIDRMA Board/14 Meeting Report (Khartoum, Sudan, 1-3 February 2016)
- MIDRMA Board/15 Meeting Report (Muscat, Oman, 29 – 31 January 2018)

1. INTRODUCTION

1.1 The MIDRMA Board/14 meeting noted that most of the LHDs were related to coordination failures between adjacent ACCs. Accordingly, States were encouraged to implement AIDC/OLDI, which would significantly improve the coordination process and would reduce the amount of coordination failures, thus enhancing safety.

1.2 The MIDRMA Board/15 meeting had noted with concern the high level of LHDs reports at the interface between Iraq and Kuwait as well as Muscat with Mumbai and Karachi.

The meeting noted that a Safety Protocol has been opened for the case of Muscat/Mumbai and that the MIDRMA and ICAO MID Office are in close coordination with concerned States, MAAR and ICAO APAC Office to resolve the issue. The meeting agreed that a Special Coordination Meeting between Iran, India, Oman and Pakistan with the presence of MAAR, MIDRMA, ICAO APAC and ICAO MID Regional Offices, to be held, as soon as possible, to agree on a clear action plan to mitigate the risk associated with the high level of coordination failures at the interfaces between the above-mentioned States.

1.3 The ATM SG/3 meeting encouraged States to use the guidance provided in the MID Doc 006 available on the ICAO MID Website. The meeting also encouraged States to conduct bilateral AIDC/OLDI Workshops, as per the guidance in MID Doc 006, in order to expedite the implementation, including the signature of revised LoA.

1.4 The ATM SG/4 meeting requested ICAO MID Office to circulate the AIDC/OLDI Questionnaire related to AIDC/OLDI to the ATM points of contact. The meeting also, that the implementation of AIDC/OLDI would improve significantly the coordination process and would reduce the amount of coordination failures between ACCs, which has been identified as a major long-standing issue by the MIDRMA Board. Consequently, the implementation of AIDC/OLDI would enhance safety and reduce ATC workload. accordingly, the meeting discussed the Secretariat's proposal to mandate the implementation of AIDC/OLDI through the inclusion of the requirement in the MID ANP Volume II Part IV-ATM under Specific Regional Requirements, based on a phased approach taking into consideration the situation in some States (Applicability area should be defined).

1.5 The OLDI/AIDC module is aimed at improving the flow of traffic by allowing neighbouring ATS units to exchange flight data automatically in the form of coordination and transfer messages. The greater accuracy of messages based on the updated trajectory information contained in the system and where possible updated by surveillance data, controllers have more reliable information on the conditions at which aircraft will enter his/her AoR with a reduction of the workload associated to flight coordination and transfer. The increased accuracy and data integrity is the one of the elements permits the safe application of reduced separations.

2. DISCUSSION

2.1 The ATM SG/8 meeting noted the CNS SG/11 meeting (Muscat, Oman, 16-19 May 2022) outcomes related to AIDC/OLDI implementation and urged States to implement AIDC/OLDI as per the applicability area. The meeting also noted that implementation of AIDC/OLDI capability priority 1 is one of the requirements of the MID States in the MID ANP Volume II, in this respect the States did not establish AIDC/OLDI connection should be subject to deficiency in MANDD.

2.2 The MIDANPIRG/20 meeting recalled that the MSG/6 meeting agreed, through Conclusion 6/16, to include a requirement for AIDC/OLDI implementation (priority 1 interconnections) in the MID eANP Volume II Part IV-ATM, under Specific Regional Requirements. It was highlighted that the lack of implementation of priority 1 interconnection will result in additional ANS deficiency to the MID Air Navigation Deficiency Database (MANDD). Therefore, it was agreed that deficiencies related to the lack of implementation of Priority 1 AIDC/OLDI connections will be added by December 2023.

2.3 The meeting may wish to note that based on document presented by EUROCONTROL in AIDC/OLDI workshop, OLDI/AIDC are capable of covering a wide range of messages as given below, but only 4 are mandatory in EURO region.

a) *Basic messages*

- i. in OLDI; Advance Boundary Information Message (ABI), but in AIDC, Notify.

- ii. in OLDI; Activate message (ACT), but in AIDC, Coordinate Initial
 - iii. in OLDI; Revision Message (REV), but in AIDC, Coordinate Update
 - iv. in OLDI; message for abrogation of coordination (MAC), but in AIDC, Coordinate Cancel
 - v. in OLDI; preliminary activation message (PAC), but in AIDC, Coordinate Initial
- b) *Situation awareness*
- i. in OLDI; basic flight data message (BFD)
 - ii. in OLDI; change flight data message (CFD)
 - iii. in OLDI; terminate flight data message (TFD)
- c) *Airspace crossing*
- i. in OLDI; cross intention notification (XIN)
 - ii. in OLDI; crossing clearance request (XRQ)
 - iii. in OLDI; crossing alternate proposal (XAP)
 - iv. in OLDI; crossing cancelation message (XCM)
- d) *Transfer messages*
- i. in OLDI; change of frequency (COF), but in AIDC, Transfer Comm
 - ii. in OLDI; manual assumption of communication (MAS), but in AIDC, Transfer Comm Assume
 - iii. in OLDI; transfer initiation (TIM), but in AIDC, Transfer Initiate
 - iv. in OLDI; supplementary data message (SDM), but in AIDC, General Exec Data
 - v. in OLDI; handover proposal (HOP), but in AIDC, Transfer Conditions Proposal
 - vi. in OLDI; request frequency (ROF), but in AIDC, Transfer Request and Transfer Conditions Accept
- e) *Coordination dialogue messages*
- i. in OLDI; referred activation proposal (RAP), but in AIDC, Coordinate Negotiate
 - ii. in OLDI; referred revision proposal (RRV), but in AIDC, Coordinate Update
 - iii. in OLDI; coordination (CDN), but in AIDC, Coordinate Update also reply to Coordinate Negotiate
 - iv. in OLDI; request tactical instructions (RTI)
 - v. in OLDI; tactical instructions proposal (TIP)
 - vi. in OLDI; release request (RRQ)
 - vii. in OLDI; release (RLS)
- f) *Data Link and Oceanic*
- i. in OLDI; oceanic clearance message (OCM)
 - ii. in OLDI; logon forward (LOF)
 - iii. in OLDI; next authority notified (NAN)
- g) *Skip and Departure handling messages*
- i. in OLDI; skip communication (SCO)

- ii. in OLDI; skip cancellation (SKC)
- iii. in OLDI; clearance request (CRQ)
- iv. in OLDI; clearance response (CRP)
- h) *Complementary messages*
 - i. in OLDI; SSR code assignment (COD)
 - ii. in OLDI; point (PNT), but in AIDC, General Point
 - iii. in OLDI; information (INF)
 - iv. in OLDI; arrival management (AMA)
- i) *Operational replies messages*
 - i. in OLDI; acceptance (ACP), but in AIDC, Coordinate Accept
 - ii. in OLDI; rejection (RJC), but in AIDC, Coordinate Reject
 - iii. in OLDI; stand-by (SBY), but in AIDC, Coordinate Standby
- j) *in OLDI; Acknowledgment (LAM), but in AIDC, App Accept*

Note: AIDC also cover “Coordinate Ready”, “Coordinate Commit”, “Coordinate Rollback”, “Free text Emergency”, “Free text General”, “Transfer Control”, “Transfer Control Assume”, “App Status” and “App Error” which they have not specific equivalent in OLDI.

2.4 Based on the above, the meeting may wish to recall that the primary objective of the establishment of AIDC/OLDI at MID region was to deal with LHD reports as indicated in paragraph 1.1. which is almost covered by two OLDI/AIDC messages; “Activate message (ACT)/Coordinate Initial” and “Revision Message (REV)/Coordinate Update”.

2.5 In this respect, since the implementation of a semiautomated coordination mechanism and agreement between Tehran ACC and Ankara ACC at its initial phase, with the subsequent extension to UAE, Bahrain, Qatar and Pakistan, Iran has achieved significant results to cover requirement of two messages indicated in paragraph 2.4 in terms of reducing/eliminating number of coordination failures associated with adjacent FIRs.

2.6 The ATM automation set up as well as agreement with adjacent FIRs are presented at **Appendix A**.

2.7 Based on the above, and to mandate establishment of at least one of the following capabilities between ATS units have been identified as priority one in the MID ANP Volume II, the meeting is invited to review and agree on the following Draft Conclusion, emanating from the ATM SG:

- a) implementation of AIDC/OLDI messages “Activate message (ACT)/Coordinate Initial” and “Revision Message (REV)/Coordinate Update” or
- b) equivalent automation and agreement mechanism applicable to the above requirement, as agreed by ATM SG meeting.

Why	To eliminate/significantly reduce LHD report between adjacent ACCs.
What	Implement automation system to exchange required messages between adjacent ACCs
Who	MID States (relevant ACCs) per applicability area
When	Within the ASBU timeframe

**DRAFT MIDANPIRG CONCLUSION 21/x: MID REGIONAL AIDC/OLDI
IMPLEMENTATION**

That,

- a) *States which are subject to priority one in accordance with **Appendix A** are required to take necessary action to implement AIDC/OLDI capability to exchange at least messages “Activate message (ACT)/Coordinate Initial” and “Revision Message (REV)/Coordinate Update” or equivalent automation and agreement mechanism applicable to the above requirement until end of December 2024;*
- b) *ATM SG to assess equivalent automation and agreement mechanism proposed by States to meet at least the requirement of AIDC/OLDI capability indicated in item “a”;*
- c) *CNS SG to address the technical needs to support the implementation based on the ATM SG feedback on the States AIDC/OLDI capability as indicated in item b).*
- d) *States which are subject to priority two for implementation and do not have AIDC/OLDI capability are urged to plan for an upgrade of their systems as soon as possible; and*
- e) *ICAO MID Office provide required technical assistance to the states having difficulty to implement AIDC/OLDI capability with adjacent states.*

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and agree on mechanism at **Appendix A** as an equivalent capability to meet the requirement of AIDC/OLDI explained in paragraph 2.7 and remove related deficiency against concern States;
- b) review and agree on Draft Conclusions proposed in paragraph 2.7;
- c) remove associated deficiencies against relevant States and encourage them to implement FICE-B0/1 (Automated basic inter facility data exchange (AIDC)); and
- d) remove AIDC/OLDI capability from the MID ANP Volume II as a regional requirement and consider it as a part of MID ANP Volume III and MID Strategy plan (ICAO MID Doc 002).

EXCHANGE OF FLIGHT PLAN MESSAGES THROUGH AFTN

To exchange traffic data automatically through AFTN, the followings are required:

- a) ACC automation system shall be set up and operational in both ACCs;
- b) each ACC shall have its own individual AFTN address;
- c) AFTN directly connected to both ACC automation systems;
- d) both ACC automation systems are required to generate the required estimate and revision messages based on ICAO Doc 4444, Chapter 11 and send it through AFTN to the accepting ACC's address;
- e) both ACC automation systems are required to receive and process AFTN messages based on ICAO Doc 4444, Chapter 11 to activate and update flight plan (revision messages);
- f) ATS surveillance service shall be available at both ACCs and each ACC shall have adequate coverage in the adjacent FIR;
- g) ATCO shall set up situational display in the right manner to ensure that the required coverage is visible;
- h) the required procedure in ACC operation manual as well as contingency plan shall be developed;
- i) the required letter of agreement between adjacent FIR shall be signed and operational;
- j) required theoretical and practical training for ATCOs shall be conducted; and
- k) States needs to conduct the required safety assessment to make sure that safety of flights will not be infringed in all cases.

Automatic Data Exchange

- a) transferring ACC shall automatically generate and pass the "EST" messages to accepting ACC **xx minutes** before the aircraft is estimated to pass the transfer of control point.
- b) after passing "EST" messages, any revision including flight level, route, estimate shall be automatically generated and passed to accepting ACC to update respective flight plan.
- c) in case the accepting ATCOs finds out that an aircraft is approaching FIR boundary, but no data has received via automatic exchange, they should call transferring unit in order to obtain information related to the aircraft.
- d) any coordination failure shall be reported to the relevant ACC supervisor.

Verbal Estimates.

For condition that are not supported by the automatic data exchange such as AFTN failure or in case of surveillance failure, verbal estimates will be exchanged.

APPENDIX A

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- a) a verbal estimate shall be passed to the accepting ATS unit at least xx minutes prior, but not earlier than xx minutes before the aircraft is estimated to pass the transfer of control point.
- b) any change in the flight conditions (FL, Route, Estimate etc.) after the transmission of the “EST” message shall be given via DSC line between the two ACCs.

- END -