International Civil Aviation Organization

MIDANPIRG/22 & RASG-MID/12 Meetings

(Doha, Qatar, 4 – 8 May 2025)

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

IMPLEMENTATION OF AUTOMATED LABEL HANDOVER BETWEEN ATC UNITS IN THE MID REGION USING OLDI/AIDC MESSAGES

(Presented by UAE)

SUMMARY

This paper presents the need for improved ATC coordination in the ICAO Middle East (MID) region due to increasing air traffic. It explores the implementation of automated label handover using OLDI messages, which reduce workload, enhance accuracy, minimize miscommunication, and enable seamless, real-time transfer of control across FIR boundaries.

Action by the meeting is at paragraph 6.

1. INTRODUCTION

1.1 The increasing volume of air traffic in the ICAO Middle East (MID) region necessitates improvements in coordination between Air Traffic Control (ATC) units to enhance operational efficiency and safety.

1.2 Automated label handover between ATC units using On-Line Data Interchange (OLDI) or ATS Inter-Facility Data Communication (AIDC) messages provides a solution to enhance situational awareness, reduce workload, and improve the accuracy of flight data transfer during handovers.

1.3 This paper discusses the benefits of implementing automated label handover and the relevant (OLDI/AIDC) messages that facilitate its operation.

2. BACKGROUND

2.1 The Currently, transfer of control conditions is described in letters of agreements between ATC units, and often include complex descriptions of release conditions. This approach may introduce risks of miscommunication, delays in coordination, and increased controller workload.

2.2 OLDI/AIDC, as standardized by ICAO and EUROCONTROL, provide a framework for electronic coordination and data exchange between ATC units. Key messages within (OLDI/AIDC) allow for seamless label handover, ensuring more efficient flight progression across FIR boundaries.

3. RELEVANT OLDI MESSAGES FOR TRANSFER OF CONTROL

3.1 The following OLDI messages are essential for implementing automated label handover between ATC units:

3.1.1 COF (change on frequency) - indicates that a flight has been instructed to contact the accepting sector.

3.1.2 MAS (manual assumption) - informs the transferring unit that the accepting unit has established radio communication with the flight.

3.1.3 RRQ (release request) - used by the accepting unit to request the release of a flight.

3.1.4 RLS (release) - used by the transferring unit to release a flight. The message may be used as a response to a RRQ or on the initiative of the transferring controller.

3.1.5 ROF (request on frequency message) - indicates a request by the accepting unit for an early transfer of the flight.

3.1.6 TIM (transfer phase initiation message) - signifies the end of the coordination phase and the start of the transfer phase.

3.1.7 HOP (handover proposal message) - proposes the flight for handover.

3.2 The following AIDC messages are essential for implementing automated label handover between ATC units:

3.2.1 TOC (Transfer of Control Message) - The TOC message is sent to propose executive

3.2.2 control of a flight to the receiving ATSU.

3.2.3 AOC (Acceptance of Control Message) - The AOC message is transmitted in response to a received TOC message to indicate acceptance of executive control of a flight.

4. BENEFITS OF IMPLEMENTING AUTOMATED LABEL HANDOVER

4.1 Improved Transfer of Control Conditions

- Ensures seamless and timely transfer of control between ATC units.
- Reduces reliance on voice coordination, minimizing errors and miscommunication.
- Enhances efficiency by automating flight data updates in real time.

4.2 Enabling Safe Release Conditions during transfer of control

- Ensures that flights are only released when proper conditions are met, reducing the risk of conflicts.
- Provides controllers with the ability to execute transfer of control in a manner relevant to each aircraft and prevailing traffic conditions.
- Reduces workload by automating repetitive tasks, allowing controllers to focus on situational awareness and decision-making.

4.3 Enhanced Airspace Management

- Optimizes sector capacities by improving coordination between adjacent ATC units.
- Supports better predictability and flow management in high-density traffic environments.
- Improvement in system planning and safety tools functioning (e.g., MTCD).
- Facilitates compliance with ICAO ABSU element FICE-B0/1
- Automated basic inter facility data exchange (AIDC).

5. CONCLUSION AND RECOMMENDATIONS

5.1 The implementation of automated label handover using (OLDI/AIDC) messages in the MID region presents a significant opportunity to enhance ATC coordination, improve flight safety, and optimize operational efficiency.

5.2 It is recommended that ATC units in the MID region progressively adopt (OLDI/AIDC) messaging protocols for automated label handovers.

5.3 ICAO MID is encouraged to establish a working group to oversee the phased implementation of (OLDI/AIDC) coordination procedures, ensuring harmonized integration across FIR boundaries.

5.4 Further workshops and training programs should be conducted to familiarize ATC personnel with the benefits and operational use of (OLDI/AIDC) messages in automated coordination.

6. ACTION BY THE MEETING

6.1 The meeting is invited to:

a) acknowledge the benefits of automated label handover using (OLDI/AIDC) messages;

b) support the adoption of (OLDI/AIDC) messaging for inter-unit coordination in the MID region; and

c) encourage states and ANSPs to collaborate on implementing automated label handover procedures.

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