ICAO Provisions related to AIDC/OLDI

Background

The Aeronautical Fixed Services

a) ATS direct speech circuits and networks;

b) meteorological operational circuits, networks and broadcast systems;

c) the aeronautical fixed telecommunication network (AFTN);

d) the common ICAO data interchange network (CIDIN);

e) the air traffic services (ATS) message handling services; and

f) the inter-centre communications (ICC)

Background

- AIDC stands for ATS interfacility data communication
- OLDI stands for Online Data Interchange

- The AIDC application exchanges information between ATS units in support of critical ATC functions, including notification of flights approaching a flight information region (FIR) boundary, coordination of boundary-crossing conditions, and transfer of control.

Background

ICAO Reference materials:

- **ANNEX 10 VOL II**
- **Manual of Air Traffic Services Data Link Applications, ICAO DOC 9694**
- **PANS-ATM, ICAO DOC 4444**
- **ICAO MID Doc 006 MID Region Guidance for The Implementation of AIDC/OLD**

ASBU FICE Thread

FICE

FICE-B0/1	Automated basic inter facility data exchange (AIDC)	Information
FICE-B2/1	Planning Service	Information
FICE-B2/2	Filing Service	Information
FICE-B2/3	Trial Service	Information
FICE-B2/4	Flight Data Request Service	Information
FICE-B2/5	Notification Service	Information
FICE-B2/6	Publication Service	Information
FICE-B2/7	Flight information management service for higher airspace operations	Information
FICE-B2/8	Flight information management service for low-altitude operations	Information
FICE-B2/9	Flight information management support for inflight re-planning	Information
FICE-B3/1	Flight information management services for enhanced trajectory operations	Information
FICE-B4/1	Integrated flight information management system for end-to-end global flight planning	Information
FICE-B4/2	Real-Time Participation of operators in flight information	Information

ASBU FICE Thread

FICE-B0/1	Automated basic inter facility data exchange (AIDC)	Information

Main Purpose To improve the efficiency of coordination and tranfer of control between ATS units.

New Capabilities Replacement of voice communication between ATS units by automatic message exchange.

Description This element represents a first automation step in the evolution of the coordination and transfer of control between neighbouring ATS units to guarantee that all related and necessary flight information will be available to the other unit as per agreement.

Maturity Level Ready for implementation

Human Factor Considerations

1. Does it imply a change in task by a user or affected others? **No**
2. Does it imply processing of new information by the user? **Yes**
3. Does it imply the use of new equipment? **Yes**
4. Does it imply a change to levels of automation? **Yes**

PLANNING LAYERS

Tactical-Pre ops | Tactical-During ops

OPERATIONS

Departure | En-route | Arrival

ASBU FICE Thread

PLANNING LAYERS

Tactical-Pre ops | Tactical-During ops

OPERATIONS

Departure | En-route | Arrival

DEPENDENCIES AND RELATIONS

Type of Dependencies	ASBU Element
Relation-technology benefit	COMI-B0/7 - ATS Message Handling System (AMHS)

ENABLERS

Enabler Category	Enabler Type	Enabler Name	Description / References	Stakeholders	Year
Regulatory provisions	SMS	Apply SMS	Apply Safety Management System in accordance with the national requirements and guidance.	ANSP	2013
Ground system infrastructure	Flight and Flow information	HMI and FDPS	Upgrade the ground system to support the composition, exchange and processing of messages.	ANSP	2013
Operational procedures	Flight and flow information	Procedures for AIDC	Procedures for message composition and exchange. References: PANS-ATM ICAO Doc 4444 - Procedures for Air Navigation Services and regional interface control (ICD) documents. read less	ANSP	2013
Ground system infrastructure	Flight and Flow information	Interconnectivity	Connectivity between ATSU systems through IP, AMHS, etc.	ANSP	2013
Training	Flight and Flow information	Training requirements for AIDC	Training for ATCO and CNS staff regarding AIDC.	ANSP	2013
Regulatory provisions	National regulatory framework	National regulatory framework amendment for the use of AIDC	If applicable, CAA may need to amend the national regulatory provisions on the use of AIDC. References: PANS-ATM (ICAO Doc 4444) and Regional Interface Control (ICD) documents. read less	CAA	2013

MID AN Strategy (ICAO MID Doc 002)

- **Priority 1 ASBU Element**: Elements that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These Elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.
- **Priority 2 ASBU Element**: Elements recommended for implementation based on identified operational needs and benefits by States.
- **Priority 1 Thread**: Any Thread with at least one priority 1 element

MID AN Strategy (ICAO MID Doc 002)

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
Information Threads							
FICE							
FICE	**B0/1**	Automated basic inter facility data exchange (AIDC)	1	2014	CNS SG ATM SG		

MID AN Strategy (ICAO MID Doc 002)

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
FICE					
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area at Attachment A	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70%	Dec 2020

MID Region AIDC/OLDI Applicability Area (Priority 1 and 2 for Implementation)

As of July 2018

ACC	Adjacent ACCs						
Amman	Cairo (1)	Baghdad (2)	Damascus (2)	Jeddah (1)	Tel Aviv (2)		
Baghdad	Amman (2)	Ankara (1)	Damascus (2)	Jeddah (2)	Tehran (2)	Kuwait (1)	
Bahrain	Doha (1)	Emirates (1)	Jeddah (1)	Kuwait (1)	Riyadh (1)	Tehran (2) AFTN MSG	Dammam (2)
Beirut	Damascus (2)		Nicosia (1)				
Cairo	Amman (1)	Athena (2)	Jeddah (1)	Khartoum (1)	Nicosia (1)	Tel Aviv (2)	Tripoli (2)
Damascus	Amman (2)	Ankara (2)	Bagdad (2)	Beirut (2)	Nicosia (2)		
Doha*	Bahrain (1)	Emirates (1)	Jeddah (2)	Riyadh (2)			
Emirates	Bahrain (1)	Doha (1)	Jeddah (1)	Muscat (1)	Tehran (2) AFTN MSG		
Jeddah	Amman (1)	Asmara (2)	Baghdad (2)	Bahrain (1)	Cairo (1)	Doha (2)	Emirates (1)
	Khartoum (1)	Kuwait (2)	Muscat (1)	Riyadh (1)		Sana'a (2)	
Riyadh	Bahrain (1)	Doha (2)	Kuwait (2)	Jeddah (1)			
Khartoum	Addis (1)	Asmara (2)	Brazzaville (2)	Cairo (1)	Entebbe (2)	Jeddah (1)	Juba (1)
	Kinshasa (2)	N'Djamena (2)	Nairobi (2)	Tripoli (2)			
Kuwait	Baghdad (1)	Bahrain (1)	Jeddah (2)	Tehran (2)			
Muscat	Emirates (1)	Jeddah (1)	Karachi (2)	Mumbai (1)	Sana'a (2)	Tehran (1)	
Sana'a	Djibouti (Addis Ababa) (2)	Asmara (2)	Jeddah (2)	Mogadishu (2)	Mumbai (2)	Muscat (2)	
Tehran	Ankara (1)	Ashgabat (2)	Baghdad (2)	Bahrain (1)	Baku (2)	Emirates (2) AFTN MSG	Kabul (2)
	Karachi (1)	Kuwait (2)	Muscat (1)	Yerevan (2)			
Tripoli	Algiers (2)	Cairo (2)	Khartoum (2)	Malta (2)	N'Djamena (2)	Niamey (2)	Tunis (2)

(1) = Priority 1 for implementation based on the number of traffic movements and/or operational needs (Green color means already implemented)

(2) = Priority 2 for implementation based on the number of traffic movements or if other solution is in place such as exchange of information via AFTN

MID AN Strategy (ICAO MID Doc 002)

FICE					
Element	**Title**	**Applicability**	**Performance Indicators/**	**Performance Indicators/**	**Performance Indicators/**
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70%	Dec 2020

	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan	Syria	UAE	Yemen
B1/1															

Average Regional Implementation is 21%

CNS SG/10

- The CNS SG/10 meeting reviewed the MID Doc 006 - MID Region Guidance for The Implementation of AIDC/OLDI and agreed it needs a comprehensive update

DRAFT CONCLUSION 11/5: AIDC/OLDI IMPLEMENTATION

That,

a) a Workshop on AIDC/OLDI be organised in 2023;and

b) to review and update the ICAO MID Doc 006 Mid Region Guidance for The Implementation of AIDC/OLDI during the Workshop for review and endorsement by MIDANPIRG/20

CNS SG/10

- The CNS SG/10 meeting noted the following challenges associated with AIDC/OLDI Implementation in some of the MID States:
  - No prior experience with OLDI/AIDC.
  - System compatibility issues.
  - OLDI version compatibility.
  - Developing Concept of operation.
  - Training ATCOs and ATCAs.
  - Cyber Security
  - availability of communication links