International Civil Aviation Organization

Middle East Air Navigation Planning and Implementation Regional Group

Fifteenth Meeting (MIDANPIRG/15)
(Bahrain, 8 – 11 June 2015)

Agenda Item 5.2.1: MID Region air navigation priorities and target (ASBU Implementation)

IMPROVED AIRPORT OPERATIONS THROUGH A-CDM (B0-ACDM)

(Presented by the Secretariat)

SUMMARY

This paper presents an overview on B0-ACDM which is a priority one ASBU module in the MID Air Navigation Strategy aiming at Improved Airport Operation through Airport-CDM.

Action by the meeting is at paragraph 3.

REFERENCES

- ANSIG/1 Report
- Eurocontrol Manual on Airport CDM Implementation
- ICAO ASBU Working Document
- ICAO Manual on Collaborative ATFM (Doc 9971)
- MSG/4 Report

1. INTRODUCTION

1.1 The MID Region Air Navigation Strategy was endorsed by the Fourth meeting of the MIDANPIRG Steering Group (MSG/4, Cairo, Egypt, 24-26 November 2014) as the framework identifying the regional air navigation priorities, performance indicators and targets. The Strategy includes tables for twelve priority 1 ASBU Modules along with their associated elements, applicability, performance Indicators, supporting Metrics and performance Targets.

1.2 Airport Collaborative Decision Making (A-CDM) is a concept which aims at improving Air Traffic Flow and Capacity Management (ATFCM) at airports by reducing delays, improving the predictability of events and optimising the utilisation of resources.

1.3 B0-ACDM (Improved Airport Operation through Airport-CDM) is a priority one ASBU module in the MID Air Navigation Strategy. Implementation of A-CDM will enhance surface operations and safety by making airspace users, ATC and airport operators better aware of their respective situation and actions on a given flight.

1.4 The First Meeting of the Air Navigation Systems Implementation Group (ANSIG/1) (Cairo, Egypt, 10-12 February 2015). The meeting was attended by a total of thirty two (32) participants from seven (7) States (Bahrain, Egypt, Iran, Kuwait, Qatar, Saudi Arabia and United Arab Emirates) and two (2) Organizations/Industries (IATA and MIDRMA).

2. DISCUSSION

2.1 Airport-CDM is a set of improved processes supported by the interconnection of various airport stakeholders information systems. It includes application designed to "Implement collaborative procedures that will allow the sharing of surface operations data among the different stakeholders at the airport".

2.2 A-CDM is not just a system, hardware or software, meeting or telephone call; it involves culture change, handling of sensitive data, procedural changes and building confidence and understanding of each partners operational processes. With the help of airport stakeholders the European airport CDM concept has matured significantly over the years from a high level concept into a process that is delivering real operational benefits

2.3 EUROCONTROL has developed and performed trials of a number of Airport CDM elements and is currently proactively encouraging European airports to implement A-CDM locally. The EUROCONTRO Manual on Airport CDM Implementation (version, April 2012), which is available at: https://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4 provides a detailed guidance on A-CDM implementation.

2.4 The ICAO Doc 9971 and EUROCONTRO Manual on Airport CDM Implementation (version 4, April 2012) suggest the following A-CDM implementation concept elements:

1. Information Sharing
2. Milestone Approach
3. Variable Taxi Time
4. Pre-departure Sequencing
5. Adverse Conditions
6. Collaborating Management of Flight Updates

Benefits

2.5 Airport operators – A-CDM improves the efficient use of stands/gates and increase airport capacity.

2.6 Aircraft operators – A-CDM will help them reduce surface movement costs due to lower fuel consumption as a result of reduced taxiing and runway end holding times, also reducing environmental impact.

2.7 Ground handling service providers – A-CDM will make data available more in advance, permit better planning of tasks, and improve, inter alia, awareness of aircraft status on the ground, thus reducing delays.

2.8 Air traffic service providers – A-CDM can improve flow control and increase airspace capacity.

2.9 Air traffic controllers – A-CDM can assist in the development of runway improvements and capacity planning.

2.10 Passengers – Passengers will also obtain significant benefits since it will improve punctuality, increase customer satisfaction, reduce lost connections, and they will have better information and service when incidents occur.

Implementation and Monitoring

2.11 The ANSIG/1 meeting agreed on the identification of a number of international airports for implementation of A-CDM. The name of applicable airports, implementation status and Targets are included in Volume III of the MID eANP as at **Appendix A**.

2.12 The ANSIG/1 meeting that three (3) main elements related to A-CDM implementation are to be included in the MID Region Air Navigation Strategy. These elements are: Apron management; ATM-Aerodrome coordination; and Declared terminal and runway capacity where:

i. Apron Management: airport should provide an appropriate apron management service in order to regulate entry of aircraft into and coordinate exit of aircraft from the apron. This element is related to the milestone approach and the pre-departure sequencing as detailed by the Eurocontrol A-CDM Implementation Manual.

ii. ATM-Aerodrome Coordination: airport should have appropriate ATM coordination on airport development and maintenance planning; coordination with local authorities regarding environmental, noise abatement, and obstacles; and ATM/PBN procedures for the aerodrome. This element is related to the Information Sharing and Variable Taxi Time as explained by the Eurocontrol A-CDM Implementation Manual.

iii. Declared aerodrome capacity: airport should have a declared airport terminal and runway capacity based on all the stakeholders' plans and resources. This element is related to the Adverse Conditions and the Collaborative Management of Flight Updates as explained by the Eurocontrol A-CDM Implementation Manual.

2.13 The ANSIG/1 meeting reviewed the status of implementation of this ASBU Module and noted that the following aerodromes have plans to implement B0-ACDM: OBBI, OMDB, OMAA, OMDW, OTBD, and OTHH. However, none of the MID aerodromes has A-CDM yet

2.14 The ANSIG/1 meeting noted that the difficulties/challenges in implementation of this module include lack of guidance material and awareness, lack of coordination procedures, financial constraints, unavailability of IT supporting systems in the airports, lack of qualified human resources and training.

2.15 In order to support the implementation of B0-ACDM in the MID Region, the ICAO MID Regional Office will organize a workshop on A-CDM implementation. The tentative date is 11-13 October 2015 and the venue will be the ICAO MID Regional Office in Cairo unless a State is willing to host it.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) review and update the status of implementation of the B0-ACDM Module in the MID Region; and take action as appropriate; and

b) invite States and International Organizations to actively participate to the forthcoming ICAO MID A-CDM Workshop planned for 11-13 October 2105.

APPENDIX A

A-CDM Elements

B0 – ACDM: Improved Airport Operations through Airport-CDM

Description and purpose

To implement collaborative applications that will allow the sharing of surface operations data among the different stakeholders on the airport. This will improve surface traffic management reducing delays on movement and manoeuvring areas and enhance safety, efficiency and situational awareness.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	N

Applicability consideration:

Local for equipped/capable fleets and already established airport surface infrastructure.

B0 – ACDM: Improved Airport Operations through Airport-CDM			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
A-CDM	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented improved airport operations through airport-CDM Supporting metric: Number of applicable international aerodromes having implemented improved airport operations through airport-CDM	40% by Dec. 2017

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TABLE B0-ACDM

EXPLANATION OF THE TABLE

Column

1 Name of the State

2 Name of City/Aerodrome and Location Indicator

3 Status of implementation of Apron Management, where:
Y – Yes, implemented
N – No, not implemented

4 Status of implementation of ATM-Aerodrome coordination, where:
Y – Yes, implemented
N – No, not implemented

5 Terminal & runway capacity is declared, where:
Y – Yes, declared
N – No, not declared

6 Action plan — short description of the State's Action Plan with regard to the implementation of B0-ACDM.

7 Remarks

State	City/ Aerodrome Location Indicator	Apron Management	ATM-Aerodrome Coordination	Terminal &runway capacity declared	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*
BAHRAIN	Bahrain/Bahrain Intl (OBBI)	N	N	N		
EGYPT	Cairo/Cairo Intl (HECA)	N	N	N		
IRAN	Tehran/Mehrabad Intl (OIII)	N	N	N		
KUWAIT	Kuwait/Kuwait Intl (OKBK)	N	N	N		
OMAN	Muscat/Muscat Intl (OOMS)	N	N	N		
QATAR	Doha/Doha Intl (OTBD)	N	N	N		
QATAR	Doha/Hamad Intl (OTHH)	N	N	N		
SAUDI ARABIA	Jeddah/King Abdulaziz Intl (OEJN)	N	N	N		
SAUDI ARABIA	Riyadh/King Khalid Intl (OERK)	N	N	N		
UAE	Abu Dhabi/Abu Dhabi Intl (OMAA)	N	N	N	2017	
UAE	Dubai/Dubai Intl (OMDB)	N	N	N	2016	
UAE	Dubai/Al Maktoum Intl (OMDW)	N	N	N	2017	
Total Percentage		**0**	**0**	**0**		

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