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)

ACAS IMPROVEMENT IN THE MID REGION (B0-ACAS)

(Presented by the Secretariat)

SUMMARY

This paper presents the status of implementation of the B0-ACAS elements in the MID Region.

Action by the meeting is at paragraph 3.

REFERENCES

- ANSIG/1 Report
- 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 all twelve priority 1 ASBU Modules along with their associated elements, applicability, performance Indicators, supporting Metrics and performance Targets.

1.2 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 B0-ACAS (ACAS Improvements) provides short-term improvements to existing Airborne Collision Avoidance Systems (ACAS) to reduce nuisance alerts while maintaining existing levels of safety. This will reduce trajectory deviations and increase safety in cases where there is a breakdown of separation. The Safety and operational benefits increase with the increase in the proportion of equipped aircraft.

2.2 The meeting may wish to note that the States need to mandate the carriage of the TCAS version 7.1 through appropriate regulations, since the implementation of B0-ACAS requires the Aircraft to be equipped with TCAS version 7.1 avionics.

2.3 The ANSIG/1 meeting reviewed and updated the status of implementation of the ASBU Module B0-ACAS element included in the MID Air Navigation Strategy, based on the data collected using the Table at **Appendix A**. The meeting agreed that this Table be included in Volume III of the MID eANP and be used by the CNS SG for monitoring purpose.

2.4 The ANSIG/1 meeting urged States to follow-up with the aircraft operators the implementation of the necessary avionics for their aircraft as described in B0-ACAS and develop/maintain a database related to the carriage of the TCAS v7.1, in accordance with their national regulations, since it will be needed in the near future for reporting in the performance dashboards.

2.5 The Status of implementation of the element for the B0-ACAS in MID Air Navigation Strategy is as follows:

Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***	***tus***
Avionics	All States	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons	80% by Dec. 2015	40% (6 States)
		Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons	100% by Dec. 2016	

3. ACTION BY THE MEETING

3.1 The meeting is invited to review and update the Status of B0-ACAS element in **Appendix A** and take action as appropriate.

APPENDIX A
ACAS V7.1 Status and regulation reference

State	ACAS V7.1 requirement	Regulation Reference	Remarks
1	2	3	4
Bahrain	All fixed - wing turbine - engine aircraft having maximum take - off mass in excess of 5700 KG or approved passenger seating configuration of more than 19, will be required to be equipped with ACAS II	1.5.1.5 in Bahrain AIP	Air Navigation Technical Regulations (ANTR) – will be updated to reflect Annex 10 (Volume IV)
Egypt	ACAS II mandated		Need to update regulation
Iran	4.3.5.3.1. New ACAS installations after 1 January 2014 shall monitor own aircraft's vertical rate to verify compliance with the RA sense. If non-compliance is detected, ACAS shall stop assuming compliance, and instead shall assume the observed vertical rate. 4.3.5.3.2. After 1 January 2017, all ACAS units shall comply with the requirements stated in 4.3.5.3.1.	Aeronautical Telecommunications bylaw, articles 3 and 4	According to articles 3 and 4 of Iran aeronautical telecommunications by law, ratified by board of ministers, Airborne collision avoidance systems are categorized as aeronautical telecommunications systems and should be manufactured, installed and maintained according to standards of Annex 10. -Since no difference to ICAO annex 10 is notified, ACAS V 7.1 is mandatory according to provisions of annex 10 amendment 85. -Airworthiness directives issued by FAA and EASA shall to be implemented by Iranian AOC holders.
Iraq			
Jordan	ACAS II mandated		Reference need to be provided
Kuwait			
Lebanon	ACAS II mandated		Reference need to be provided
Libya			
Oman			
Qatar	3.5.3.1 New ACAS installations after 1 January 2014 shall monitor own aircraft's vertical rate to verify compliance with the RA sense. If non-compliance is detected, ACAS shall stop assuming compliance, and instead shall assume the observed vertical rate. Note 1.— This overcomes the retention of an RA sense that would work only if followed. The revised vertical rate assumption is more likely to allow the logic to select the opposite sense when it is	QCAR – OPS 1, Subpart K, QCAR – OPS 1.668 – Airborne collision avoidance system	References: http://www.caa.gov.qa/en/safety_regulations

State	ACAS V7.1 requirement	Regulation Reference	Remarks
1	2	3	4
	consistent with the non-complying aircraft' s vertical rate. Note 2.— Equipment complying with RTCA/DO-185 or DO-185A standards (also known as TCAS Version 6.04A or TCAS Version 7.0) do not comply with this requirement. Note 3.— Compliance with this requirement can be achieved through the implementation of traffic alert and collision avoidance system (TCAS) Version 7.1 as specified in RTCA/DO-185B or EUROCAE/ED143. 4.3.5.3.2 QCAR CNS Note: All ACAS shall be compliant with the requirement in 4.3.5.3.1. 4.3.5.3.3 After 1 January 2017, all ACAS units shall comply with the requirements stated in 4.3.5.3.1.	QCAR Part 10 - Volume 4 Chapter 4 Airborne Collision Avoidance System	
Saudi Arabia			
Sudan	ACAS II Mandated using TCAS V 7.1	Amended ANNEX 10(V4)- ANNESX 6(V2)	According to adopted ANNEXEX TO SUDAN REGULATION (SUCAR 10 V4 Par. 4.3.5.3.1 AND SUCAR 6 V2 par 2.05.15)
Syria			
UAE	CAR-OPS 1.668 Airborne Collision Avoidance System (See IEM OPS 1.668) and CAAP 29 An operator shall not operate a turbine powered aeroplane: (a) Having a MCTOM (maximum certificated take-off mass) in excess of 5700 kg or a MAPSC (maximum approved passenger seating configuration) of more than 19 unless it is equipped with an airborne collision avoidance system (ACAS) II Change 7.0 . From 31 January 2015 such aeroplanes shall be equipped with ACAS II, Change 7.1. (b) Manufactured after 31 December 2012 and having a MCTOM in excess of 5700 kg or a MAPSC of more than 19 unless it is equipped with ACAS II, Change 7.1."	CAR-OPS 1.668 Airborne Collision Avoidance System (See IEM OPS 1.668) and CAAP 29 And AIP 1.5.6.6	https://www.gcaa.gov.ae/en/ePublication/Pages/CARs.aspx?CertID=CARs
Yemen	From 31 January 2015 such aeroplanes shall be equipped with ACAS II, Change 7.1		Reference need to be provided

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