



International Civil Aviation Organization

**MIDANPIRG Communication Navigation and Surveillance
Sub-Group (CNS SG)**

Fourth Meeting
(Cairo, Egypt, 25 – 27 September 2011)

Agenda Item 5: Developments in CNS Field

MODE S IC CODE ALLOCATION ISSUES IN THE MID REGION

(Presented by Secretariat)

SUMMARY

This paper provides mode S IC code allocation issues in the MID Region and proposes the process of allocation.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/12 Report

1. INTRODUCTION

1.1 MIDANPIRG/12 meeting was held in Amman, Jordan 17-21 October, recalled that SSR Mode S interrogator Identifier Codes are used to reduce garble and to improve performance in the overlapping coverage of SSRs, each Mode S sensor or cluster of Mode S sensors requires a unique Interrogator Identifier (II) code and/or a Surveillance Identifier (SI) code, collectively referred to as Interrogator Codes (IC). Since there are only 15 II and 63 SI codes that can be operationally assigned (special use of II Code zero and SI Code zero is not used), IC assignment needs to be carefully organized to ensure that identical codes are not used in overlapping Mode S coverage areas.

2. DISCUSSION

2.1 MIDANPIRG/12 meeting noted that the ICAO provision on the assignment of interrogation codes being subject to Regional Air Navigation Agreements. Furthermore, ICAO MID Region is an interface with AFI, EUR and APAC Regions. Consequently, the allocation of IC codes requires coordination with these Regions and within the MID Region.

2.2 The meeting may wish to note that the acquisition of Mode S radar installations by Air Navigation Service Providers (ANSPs) and Military Authorities in European Region has focused attention on the need to establish a single European interrogator code allocation mechanism. Consequently European Region through EUROCONTROL has created Mode S IC Co-ordination Group (MICoG) and Civil/Military SSR Environment Liaison Group (CIMSEL) also developed a software (MICA) application for this purpose.

2.3 The MIDANPIRG/12 meeting further noted that the centralized Mode S IC Allocation mechanism in Europe is handled by MICoG, where the MICoG members act as the contact points between the Mode S IC Allocation Cell and the State Authority applying for interrogator codes. MICoG provide regular reports to EANPG.

2.4 MIDNPIRG/12 meeting noted that European region has a large number of operational mode S radars as a result some MID States experienced IC code conflicts. MIDANPIRG/12 also noted that ICAO MID Regional Office carried out coordination processes with European Region through the MICoG and the MICA application for the allocation of the IC codes for MID States.

2.5 MIDANPIRG/12 agreed that ICAO MID Regional Office should continue the same process through MICoG, where ICAO MID Regional Office acts as the focal point. MIDANPIRG/12 meeting also agreed that ICAO MID Regional Office formalize the process with EUROCONTROL.

2.6 Based on the above ICAOMID Regional office carried out the formalization process with EUROCONTROL and obtained the official approval that the MICA cell will provide the ICAO MID Regional office at the same time as the standard twice-yearly allocation cycle for mode S radars in the EUR region, a coordinated listing of interrogator codes and radar coverage maps for mode S radars in the MID Region.

2.7 In order to improve the efficiency of the interrogator code allocation process operators of mode S radar from the MID region could be given appropriate access to the MICA web application. Accordingly all MID States operating or planning to operate mode S radar are requested to assign a Focal Point per State. The process will be as follows:

- a) State to assign focal point and send to ICAO MID Regional Office, in order to determine which mode S operators from ICAO MID region are eligible to be registered in the MICA WEB application;
- b) self-register on the EUROCONTROL OneSkyOnline portal (the link is provided here below):
<https://extranet.eurocontrol.int/http://was.eurocontrol.int/elsh/registerNewUserForApplication.do?eurocontrolresourceid=circa>
- c) the registered focal points will be requested to use the MICA web as required fill the new requests or amendment required for the IC code allocations;
- d) the registered focal points will also be requested follow-up the allocations assigned in the MICA application and coordinate internally within the State.

2.8 The meeting may wish to note that a document laying down recommendations and requirements for an efficient support of the MICA cell to the allocation of IC by the ICAO MID office in the ICAO Middle East Region is in the draft process and is under review, it will circulated and then posted on the MID forum.

2.9 Based on the above the meeting may wish to agree on following Draft Conclusion:

Why	Streamline the Mode S IC code allocation process in MID Region
What	Mode S IC code allocation process
Who	ICAO and MID States
When	MIDANPIRG/13

DRAFT CONCLUSION 4/XX: MID MODE S IC ALLOCATION PROCESS

That,

- a) *MID States be urged to assign Mode S IC focal points and send to ICAO MID Regional office; and*
- b) *the MID States Mode S IC focal points to:*
 - i. *register in the appropriate EUROCONTROL website;*
 - ii. *fill new requests or amendments required for the IC code allocations; and*
 - iii. *follow-up the allocations assigned in the MICA application and coordinate internally within the State and report back.*

2.10 The current list of assigned IC for the MID States Mode S radars is at **Appendix A** to this working paper, which will be incorporated in the new documents that will be published electronically by ICAO MID Regional Office.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information in this working paper and its Appendices; and
- b) endorse Conclusion in 2.9.

APPENDIX A

Code Allocation Status for Bahrain

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
BAHRAIN					

Code Allocation Status for Egypt

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
EGYPT					
Aswan ERR	02		ad hoc 17/03/2009	NANSC	MICA/ALLOC461
Asyut ERR	03		ad hoc 17/03/2009	NANSC	MICA/ALLOC462
Cairo ERR	04		ad hoc 17/03/2009	NANSC	MICA/ALLOC463
Hurghada ERR	05		ad hoc 17/03/2009	NANSC	MICA/ALLOC464
Messa Matruh ERR	06		ad hoc 17/03/2009	NANSC	MICA/ALLOC465

Code Allocation Status for Iran

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
IRAN					

Code Allocation Status for Iraq

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
IRAQ					

Code Allocation Status for Israel

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
ISRAEL					

Code Allocation Status for Jordan

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
JORDAN					

Code Allocation Status for Kuwait

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
KUWAIT					

Code Allocation Status for Lebanon

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
LEBANON					
Baysour	02		23/04/2009	DGCA	MICA/ALLOC467

Code Allocation Status for Oman

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
OMAN					
	11		Ad-hoc, 14/06/2010	DGMAN	

Code Allocation Status for Qatar

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
QATAR					

Code Allocation Status for Saudi Arabia

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
SAUDI-ARABIA					
Madinah	04		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC529
Rafha	05		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC530
Zamosc	10		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC531

Code Allocation Status for Syria

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
SYRIA					

Code Allocation Status for UAE

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
EMIRATES					

Code Allocation Status for Yemen

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station	ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
	II	SI	Effective Date		
YEMEN					