



ICAO

*International Civil Aviation Organization***Tenth Meeting of the Surveillance Implementation
Coordination Group (SURICG/10)***Bangkok, Thailand, 21 - 23 April 2025*

Agenda Item 10: Review MODE S DAPs Implementation and Operations Guidance Document

**PROCESS AND REQUIREMENTS OF IC COORDINATION AND ASSIGNMENT
FOR APAC**

(Presented by Singapore)

SUMMARY

This paper proposes the process for States to request and coordinate for interrogator codes (IC) for mode S interrogators.

1. INTRODUCTION

1.1 For Mode S interrogators to work as intended, Interrogators Codes (IC) are to be assigned to Mode S interrogators. There will be risk of missed detection if interrogators having overlapping coverages use the same ICs. The ICAO APAC Regional Office is responsible for the coordination and assignment of the ICs for the Mode S interrogators used by the APAC States/Administrations.

1.2 This paper provides an overview on the process on the request and coordination for ICs.

2. DISCUSSION

2.1 Considerations

2.1.1 Arising from a study conducted by the Mode S and DAPs working Group, it is established that II codes are no longer sufficient to support the growing number of Mode S radars. ICAO APAC therefore made the decision to transit from the use of II codes to SI codes for the Mode S radars.

2.1.2 For SI codes to be used, aircraft transponders must be SI code capable. However, despite ICAO Annex 10 Vol IV having a requirement for all aircraft transponders to be SI code capable by 1 January 2005, there are still aircraft transponders which are not SI capable (at least in the foreseeable future). Aircraft transponder that are not SI capable will not be detected by interrogators with SI code unless the interrogator uses a special mode known as the II/SI code operations. The 5th meeting Surveillance Panel therefore endorsed the proposal for Amendment (pFA) for Annex 10 Vol IV in Sep 2023 requiring interrogators that use SI codes to use the II/SI code operations.

2.1.3 Certain ICs (i.e. II=0, SI=16, 32 and 48) are reserved for mobile interrogators (usually used by the military) that do not coordinate with the ICAO APAC Regional Office for the ICs. These ICs will not be assigned by ICAO APAC Regional Office.

2.1.4 Interrogators that do not perform lock-out do not need to coordination for IC. Example of such interrogators are the interrogators of active multilateration system.

2.2 Proposed workflow for the request and coordination of IC codes

2.2.1 The coordination for IC codes is very similar to that for the request of VHF frequencies. Based on the mentioned considerations and building on to the existing procedures for the request of VHF frequencies, the workflow in Annex A is proposed.

2.3 Recommendation

2.3.1 If the meeting is agreeable with the proposed workflow, the following conclusion will be adopted:

Conclusion/Decision SURICG/10/XX - Proposed workflow for the request and coordination of IC codes.		
What:	Interrogator Codes (IC) of Mode S interrogators in the Asia Pacific region are to be coordinated and assigned by ICAO APAC Regional Office. States/Administrations requiring ICs are to make the request from the ICAO APAC Regional Office. Annex A proposed the workflow to facilitate the request.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☐ Ops/Technical
	Follow-up:	☐ Required from States
When:	23-Apr-25	Status: Draft to be adopted by PIRG
Who:	☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX	

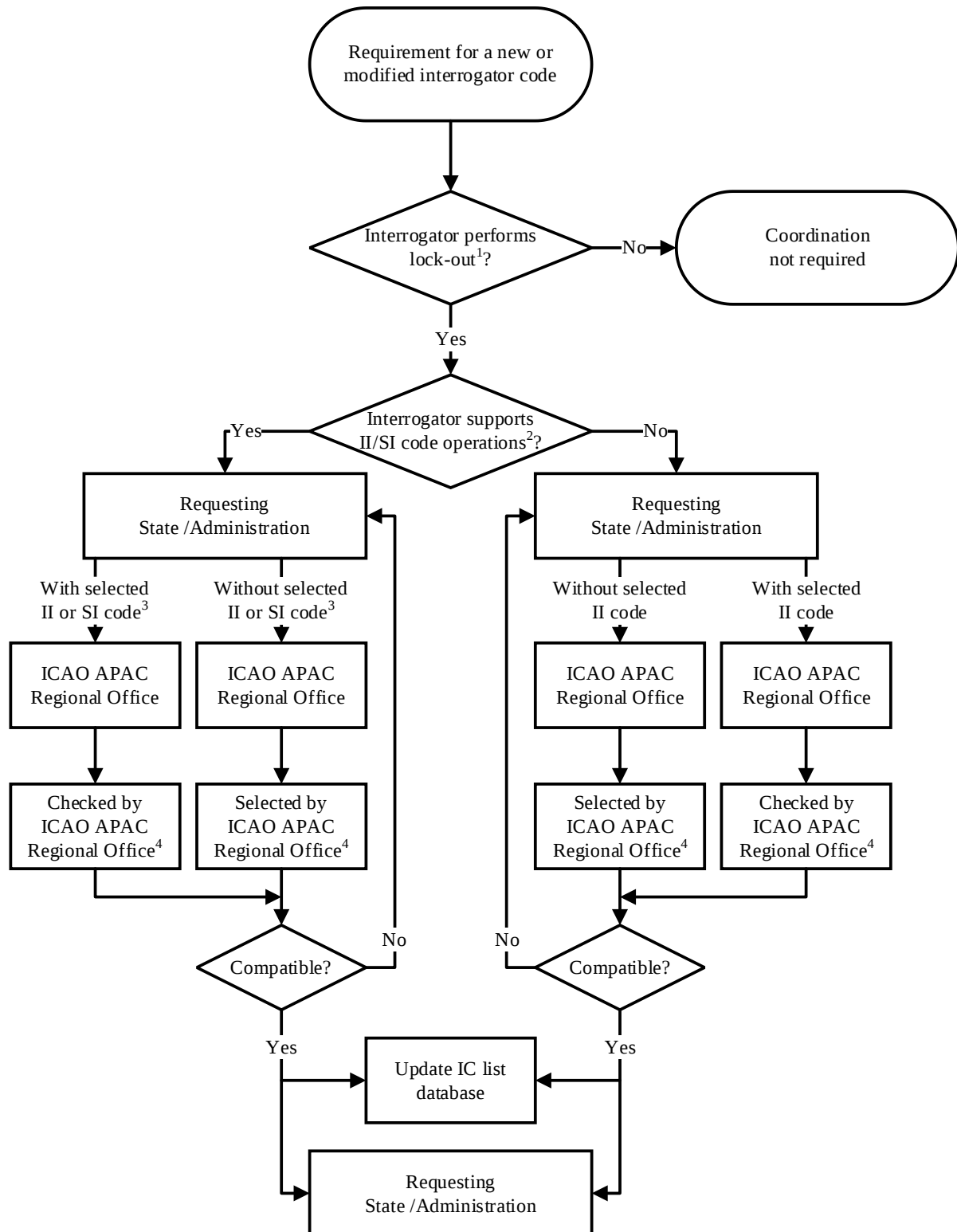
3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) consider the proposed workflow in Annex A; and
- c) discuss any relevant matter as appropriate

Annex A

WORKFLOW FOR THE REQUEST AND COORDINATION OF INTERROGATOR CODES



Note:

- 1) Interrogators that do not perform lock-out do not require coordination for IC. Example of such interrogator is the interrogator of an active MLAT
- 2) Interrogators must support II/SI code operations before it is allowed to use SI code.
- 3) States/Administrations are encouraged to use SI codes for interrogators that support II/SI code operations. But States/Administrations may choose to use II code for reasons such as safety assessment for the use of SI code has yet to be completed.
- 4) II=0, SI=16, 32 and 48 will not be assigned by ICAO APAC Regional Office.