

AFI SSR CODE ALLOCATION AND ASSIGNMENT REVIEW ASCAAR PROJECT 3 - WORKSHOP

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27- 01-2020 NAIROBI, KENYA

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OUTLINE

INTRODUCTION

PANS-ATM (Doc 4444) 2016

ORCAM

ASCAAR

INTRODUCTION

- Code Allotment Management (CMP) is expected to provide States in the AFI region with a means to coordinate the use of 4096 Secondary Surveillance Radar (SSR) codes in Mode A/3 in the most efficient and economical manner.
- Some of the SSR codes are reserved for special use only
- This structure fails to provide sufficient SSR codes for current demand due to further increase of traffic but also the change of major traffic flows in AFI.
- SSR codes are therefore a Scarce Resource thus requiring change in the management method

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Chapter 8

Para 8.51 – General

- To ensure the safe and efficient use of ATIS surveillance services, pilots and controllers shall strictly adhere to published operating procedures and standards radiotelephony phraseology shall be used
- The correct setting of transponder codes and/or aircraft identification shall be ensured at all times

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Para 8.5.2 – SSR code management

1- Codes 7700, 7600 and 7500 shall be reserved internationally for use by pilots encountering at state of emergency, radio communication failure or unlawful interference respectively

2- SSR codes are to be allocated and assigned in accordance with the following principles

➤ Codes should be allocated to States or areas in accordance with regional air navigation agreements, taking into account overlapping radar coverage over adjacent airspaces

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- The **appropriate ATS authority shall establish a plan** and procedures for the allocation of codes to ATS units
- Plans and procedures should be compatible with those practiced in adjacent States
- The allocation of a code should preclude the use of this code for any other function within the area of coverage of the same SSR for a prescribed time period
- To reduce pilot and controller workload and the need for controller/pilot communication, the number of code changes required of the pilot should be kept to the minimum

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- Codes shall be assigned to aircraft in accordance with the plan and procedures laid down by the appropriate authority.
- Where there is a need for individual aircraft identification, each aircraft shall be assigned a discrete code which should, whenever possible, be retained throughout the flight
- Except for aircraft in a state of emergency or during communication failure or unlawful interference situations and unless otherwise agreed by regional air navigation agreement or between a transferring and accepting ATC unit, the transferring unit shall assign Code A2000 to a controlled flight prior to transfer of communications

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- SSR codes shall be reserved as necessary for exclusive use by medical aircraft operating in areas of international armed conflict. SSR codes shall be **allocated** by ICAO through its Regional Offices in coordination with States concerned and should be **assigned** to aircraft for use within the area of conflict

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Para 8.5.3 – Operation of SSR Transponders

- When it is observed that the Mode A code shown on the situation display is different to what has been assigned to the aircraft, the pilot shall be requested to confirm the code selected and if the situation warrants (e.g not being a case of unlawful interference), to reselect the correct code
- If the discrepancy between assigned and displayed Mode A codes still persists, the pilot may be requested to stop the operation of the aircraft's transponder. The next control position and any other affected unit using SSR and/or MLAT in the provision of ATS shall be informed accordingly

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- Aircraft equipped with Mode S having an aircraft identification feature shall transmit the aircraft identification as specified in item 7 of the ICAO flight plan or when no flight plan has been filed the registration
- Whenever it is observed on the situation display that the aircraft identification transmitted by a Mode S – equipped aircraft is different from that expected from the aircraft, the pilot shall be requested to confirm and if necessary re-enter the correct aircraft identification

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- If following confirmation by the pilot that the correct aircraft identification has been set on Mode S ident feature, the discrepancy continues to exist, the following actions shall be taken by the Controller
 - inform the pilot of the persistent discrepancy
 - where possible correct the label showing the aircraft ident on situation display
 - notify the erroneous aircraft ident transmitted by the aircraft to the next control position and any other interested unit using Mode S for ident purposes

ORIGINATING REGION CODE ASSIGNMENT METHOD (ORCAM)

ORCAM provides;

- efficient management of SSR codes
- ensures that aircraft are assigned discrete SSR codes
- maximum retention of a code
- reduction of code conflicts
- flexibility to match future demands
- SSR codes for special events and military exercises

ORIGINATING REGION CODE ASSIGNMENT METHOD (ORCAM)

Challenges in Current ORCAM

- inefficient SSR codes management due to limited number of codes allocated
- ineffective assignment of discrete SSR codes to aircraft
- long retention period of codes
- increase in code conflicts
- lack of flexibility to match future demands
- non adherence to the ORCAM

AFI / EUR /MID INTERFACE



AFI SSR CODE ALLOCATION AND ASSIGNMENT REVIEW – (ASCAAR)

- ASCAAR project sought to resolve the challenges currently encountered by States
- Reviewed current ORCAM
- Reviewed AFI SSR Code Allotment Plan
- Developed a monitoring mechanism to facilitate future review
- Considered level of automation

THANK YOU

The background is a blue gradient with a starry space pattern. On the right side, there are several technical diagrams, including a large circular gauge with a scale from 0 to 210 and a smaller circular diagram below it. On the left side, there are partial views of similar circular diagrams.