International Civil Aviation Organization

Eighth Meeting of the Surveillance Implementation Coordination Group (SURICG/8)

Bangkok, Thailand, 6 – 9 June 2023

PROVISIONAL AGENDA

Agenda Item 8 Update on surveillance activities and explore potential cooperation opportunity

a) States/Administrations

UPDATE ON SURVEILLANCE ACTIVITIES IN THAILAND

(Presented by Thailand**)**

SUMMARY

This paper is an update providing information on Thailand's surveillance activities.

1. INTRODUCTION

1.1 To provide safe and efficient air traffic services, the surveillance sensor infrastructure has been implemented to provide coverage all over the Bangkok FIR**.** Moreover, by incorporating surveillance sensor data with the ATM automation system, air traffic services**'** capacity and efficiency will be increased, while safety is maintained**.** This paper provides a summary update on the surveillance sensors and ATM automation system implementation in Thailand**.**

2. SURVEILLANCE SENSORS

SSR Mode-S

2.1 The SSR)Secondary Surveillance Radar(Mode-S was initially implemented in Thailand in 2006. Thailand has installed and upgraded the SSR Mode-S with DAPs (Downlink Aircraft Parameters(capabilities since 2006. There are currently 12 SSR Mode-S stations with EHS capabilities, which are shown in the table and map below**.**

No.	Location	Capability
1	Suvarnabhumi Airport **(**VTBS**)**	EHS
2	Surat Thani Airport **(**VTSB**)**	EHS
3	Ubon Ratchathani Airport **(**VTUU**)**	EHS
4	Phuket Airport **(**VTSP**)**	EHS
5	Chiangmai Airport **(**VTCC**)**	EHS
6	Hat Yai Airport **(**VTSS**)**	EHS

7	Don Mueang Airport (VTBD)	EHS
8	Udonthani Airport (VTUD)	EHS
9	Roi-Et Airport (VTUV)	EHS
10	Chiangrai Airport (VTCT)	EHS
11	Chumpon Airport (VTSE)	EHS
12	Phitsanulok Airport (VTPP)	EHS

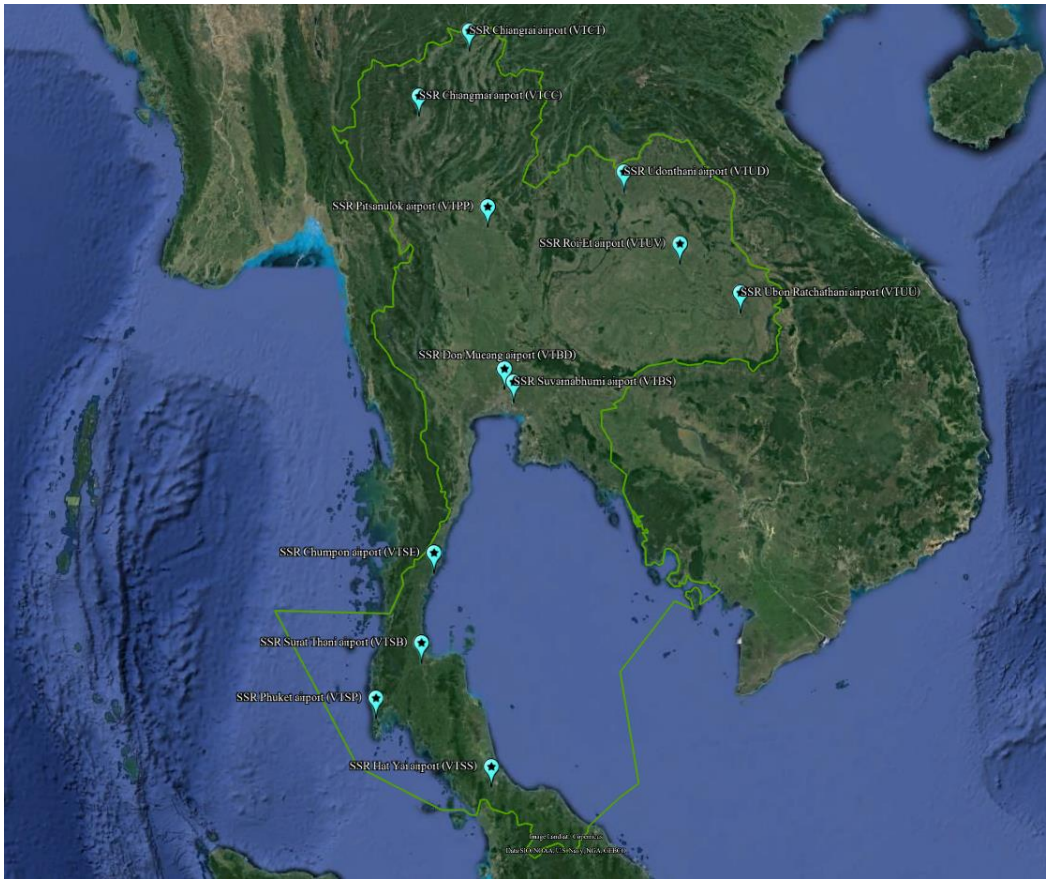

Fig 1. SSR Mode-S Stations in Thailand

2.2 New SSR Mode-S have been planned for Hua-hin airport (VTPH) and U-Tapao Airport (VTBU). Both are undergoing the beginning of the TOR preparation process and is expected to have the system ready in late 2024 and 2025, respectively.

PSR

2.3 The PSR (Primary Surveillance Radar) has been implemented at only 2 airports, located at Suvarnabhumi Airport (VTBS), and Huahin airport (VTPH). The PSR at Hua-hin airport will be replaced by future SSR Mode-S once procured.

2.4 The SMR (Surface Movement Radar) has been in operation at Suvarnabhumi airport since 2006.

MLAT

2.5 MLAT has been in operation at Suvarnabhumi Airport (VTBS) since 2006 with plans to procure an updated MLAT system to replace the existing one in 2024.

2.6 At Don Mueang Airport (VTBD), MLAT has been in operation since 2019, implemented simultaneously with the new ATM automation system.

2.7 New MLAT systems are planned for implementation at Chiangmai Airport (VTCC), Phuket Airport (VTSP) and U-Tapao Airport (VTBU). Implementations at VTCC and VTSP are planned with a target date of 2024, while implementation at VTBU is planned for 2025.

ADS-B

2.7 Five ADS-B ground stations have been primarily installed for research and development purpose. However, only 4 ADS-B systems installed at Doi Inthanon (Chaingmai), Hatyai Airport (VTSS), Samui Airport (VTSM) and Ubon Ratchathani Airport (VTUU) have been applied for use with air traffic services. Moreover, 3 SSRs installed at Surat Thani Airport (VTSB), Ubon Ratchathani Airport (VTUU), Phuket Airport (VTSP), has been upgraded with ADS-B capability

2.8 Thailand established the national airspace and air navigation master plan (NANP) in 2020 and has revised the plan in 2023 to reflect the current Covid-19 Pandemic. The national technical working groups of key development areas (e.g. AOM, ATM, CNS, MET, IM, and AD) consists of experts from all stakeholders (both civil and military), has been established to develop the action plan and monitor the implementation progress in order to achieve the key objectives in the master plan.

2.9 For the airspace organization and management, the airspace re-structure and aircraft equipage mandate have been studied, and is expected to be start implementation by the end of 2025.

3. ATM AUTOMATION SYSTEM

3.1 Thailand has transitioned to the new ATM automation systems nationwide under the project called Thailand Modernization CNS/ATM System (TMCS), replacing the legacy ATM systems since 2020.

3.2 Thailand has implemented A-SMGCS Level 2 at Suvarnabhumi airport with plans to study the level of A-SMGCS needed, and implementing A-SMGCS at other international airports by 2025.

3.3 In 2020, Thailand has successfully implemented AIDC communications with three adjacent ATSUs. The AIDC implementation dates of each ATSU are as following table.

Thailand	Adjacent ATSU	Implementation Date
Bangkok ACC	Kuala Lumpur ATCC (Malaysia)	14th March 2020
Bangkok ACC	Vientiane ACC (Lao PDR)	14th July 2020
Bangkok ACC	Phnom Penh ACC (Cambodia)	1st October 2020

3.4 According to Thailand's AIDC implementation plan, Yangon ACC (Myanmar) was the last adjacent ATSU to be implemented. However, AIDC operational trial between Thailand and Myanmar needed to be suspended due to situations in Myanmar.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matter as appropriate

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