International Civil Aviation Organization

Tenth Meeting of the Surveillance Implementation Coordination Group (SURICG/10)

Bangkok, Thailand, 21 - 23 April 2025

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

UPDATE ON SURVEILLANCE STATUS IN CHINA

(Presented by China)

SUMMARY

This paper updates the current status of surveillance sensors in China as of the end of 2024. It is an update of the papers previously submitted.

1. INTRODUCTION

1.1 This paper updates the status of surveillance sensors as of the end of 2024 in China, as well as the construction of sensors in 2024.

2. DISCUSSION

Surveillance Status

2.1 Surveillance Radars: Currently, there are 30 primary and secondary combined radars, 120 standalone secondary radars, and 14 movables secondary radars in service. Among all secondary radars, 94 radars are operating in Mode S according to the operational needs of their locations. In 2024, two standalone secondary radars were out of service, one movable secondary radar was new-constructed, and five standalone secondary radars were re-constructed in their same locations.

2.2 ADS-B: As of now, there are 347 ADS-B ground stations, 36 Level-3 data stations, eight Level-2 data centers, and one Level-1 data center in service. They together form the national ADS-B operational network. In 2024, China built six new ground stations, most of them were in the Xinjiang region, to enhance coverage in mountainous areas.

2.3 SMR: China currently has 52 SMRs in service. All of them are X-band radars. That single old Ku-band radar was out of service. These SMRs served 27 busy large airports in 24 cities. In 2024, four new SMRs were built and put into operation, serving the airports in Chongqing and Lanzhou.

2.4 MLAT: China currently has 24 operational MLAT systems at 23 large and busy airports, in 21 cities. In 2024, China built and put into operation one MLAT system at Xi'an Airport, providing surface surveillance service for the new terminal building and new runway.

Surveillance Implementation

2.5 The ADS-B Level-1 Date Center Upgrade Project

2.5.1 The ADS-B Level-1 data center fuses real-time ADS-B data from the nationwide airspace of China and provides services to civil aviation management department, air traffic flow management department, and other relevant data users. Due to the continuous increase of data users, including those who use ADS-B data from the whole airspace and those who use ADS-B data from partial airspace, it is necessary to enhance its processing performance and system capacity.

2.5.2 In 2024, China began the construction of the upgrade project for the ADS-B Level-1 data center. This project is expected to be completed in the first half of 2026. Upon completion, the ADS-B Level-1 data center will have the capability to serve 40 whole airspace data users and will also have enhanced cybersecurity protection capabilities.

3. ACTION BY THE MEETING

3.1 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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