

**55th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGION**

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AGENDA ITEM 4: AIR NAVIGATION

ADS-B TECHNOLOGY ASSESSMENT GUIDANCE

Presented by the People's Republic of China

INFORMATION PAPER

SUMMARY

This paper mainly introduces the specific content of the technical assessment work of ADS-B application using ADS-B assessment guidance materials before the formal operation of ADS-B in China.

ADS-B TECHNOLOGY ASSESSMENT GUIDANCE

1. INTRODUCTION

1.1 At present, China has built 308 ADS-B ground stations, 44 data processing stations and one data processing center nationwide. In order to ensure that these equipments play an important role in the official operation, it is necessary to complete the technical assessment of ADS-B ground stations, data processing stations and data processing centers by referring to the ADS-B evaluation guidance materials before the equipment is officially operated.

2. DISCUSSION

2.1 Preparation for ADS-B assessment work

2.1.1 Before the assessment work begins, an ADS-B assessment expert group needs to be set up to collect theoretical coverage analysis of ADS-B ground station, collect information on airborne equipment in China's airspace, and organize relevant equipment management document records.

2.2 Assessment of ADS-B ground station

2.2.1 Before the assessment of the ADS-B ground station begins, the flight inspection department should be contacted to verify the flight of the ADS-B, and the actual coverage map of the ADS-B ground station should be formed, and the records of the blind zone and the actual reporting point position of the aircraft should be recorded in detail. The assessment of the ADS-B ground station includes statistics on the operation status of the equipment, environmental monitoring, transmission, power supply, equipment performance and data reception and processing capabilities of the ADS-B ground station.

2.3 Assessment of ADS-B data processing station

2.3.1 The assessment of the ADS-B data processing station mainly includes evaluating whether the number of ADS-B data processing stations accessing the ADS-B ground station and the interface mode can meet the requirements, evaluating whether the ADS-B data processing station can receive and process the ground station about the different versions of ASTERIX CAT021 information, evaluating whether the ADS-B data processing station can complete the monitoring of the ground station status, evaluating whether the ADS-B data processing station can complete the data verification function, identify the authenticity target, and complete the identification of the problem aircraft, and evaluating whether the ADS-B data processing station can complete the ADS-B data fusion function.

2.4 Assessment of ADS-B data processing center

2.4.1 The assessment work of the data processing center mainly includes evaluating whether it can complete receiving and processing all the information from the data processing station, and evaluating whether it can provide the ADS-B integrated signal source information to the external system.

2.5 Assessment of Automation system applying ADS-B data

2.5.1 The assessment of automation system applying ADS-B data mainly includes whether the automation system can parse and process ADS-B data items, such as 24-bit address code, altitude, speed, position, ascending and descending rate, flight altitude selection, flight path intent and other information and use these information to complete and optimize relevant warning and other functions.

2.6 **The problem encountered during assessment**

2.6.1 At present, in the assessment of ADS-B applications, China has encountered the situation of signal position shift in the automation system due to airborne equipment. This kind of problem can be resolved with technical means, and management procedures will be developed to constrain such aircraft with problem airborne equipment in the future.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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