



International Civil Aviation Organization

**THE NINTH MEETING OF AUTOMATIC
DEPENDENT SURVEILLANCE – BROADCAST
(ADS-B) STUDY AND IMPLEMENTATION TASK
FORCE (ADS-B SITF/9)**



Jakarta, Indonesia, 18 -19 August 2010

**Agenda Item 7: Development of Asia/Pacific Regional ADS-B implementation plan and
sub-regional based ADS-B implementation plan**

THE DEVELOPMENT OF ADS-B IN CHINA

(Presented by China)

SUMMARY

Civil Aviation Administration of China (CAAC) is developing the ADS-B in China. This paper will give an introduction of the development of ADS-B in China and the future application of ADS-B in China.

1. Introduction

1.1 With the development and application of ADS-B technology in the civil aviation, ADS-B has become the surveillance method recommended by the ICAO (International Civil Aviation Organization) in the next generation of air traffic management and many countries are studying and applying this new technology. To adapt to the demands of future air traffic management and promote the development of the civil aviation of China, the Civil Aviation Administration of China (CAAC) has been dedicated to the research of ADS-B technology and its application in the civil aviation of China.

2. The development of ADS-B in China

2.1 In order to accelerate the research and application of the ADS-B technology, the Civil Aviation Administration of China (CAAC) set up an ADS-B research group in 2006, the members of which are experts from business management department of CAAC, scientific research institution and equipment suppliers. The group is in charge of evaluating the application of ADS-B technology in China and drawing up the line map of ADS-B development.

2.2 Based on the investigation and analysis of the ADS-B support of the facilities in the air traffic management and airborne equipments for aircrafts, CAAC formulated and issued the “CAAC ADS-B Technology Policy” in May 2007, in which the policies and implementations for the application of ADS-B technology are specified as a guidance for ADS-B’s layout, research, design, application and development. According to “CAAC ADS-B Technology Policy”, ADS-B technology acts as an important surveillance method over western airspace and a significant supplementary measure for the radar surveillance in eastern area. Meanwhile, its application in oceanic areas and airport surface will be promoted, with 1090ES being the primary data link.

2.3 In September 2008, CAAC issued the information bulletin of “ADS-B: flight operation” to encourage airline companies to fit their aircrafts with ADS-B, strengthen the common development and cooperation between airspace and airport surface, and accelerate the application of ADS-B technology in civil aviation.

2.4 In April 2010, CAAC issued the Chinese Technical Standards Orders of “Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz” for manufactures applying for Chinese Technical Standard Order Authorization for 1090ES ADS-B and TIS-B equipment and to regulate the minimum performance standards 1090ES ADS-B and TIS-B equipment first meet for approval and identification with the applicable marking.

2.5 In May 2010, CAAC issued the advisory circular of “Airworthiness and Operational Approval of Automatic Dependent Surveillance-Broadcast Application in Non-Radar Areas via 1090 MHz Extended Squitter” for the manufactures or modification units who want to get airworthiness approval for ADS-B airborne equipment.

3. The ADS-B projects in China

3.1 In April 2007, CAAC installed 2 ADS-B stations in Chengdu and Jiuzhai, which are based on 1090ES, accomplishing the surveillance over Chengdu-Jiuzhai route. At the same time, a system has been developed to collect ADS-B data and radar data and compare the performance between radar and ADS-B.

3.2 In March 2009, CAAC set up an ADS-B station to strengthen the management and control of the airspace above the South China Sea.

3.3 At present, CAAC is working on the project of the communication and surveillance over Chengdu-Lhasa flight route, which will be finished at the latter half of the year in 2010 with five new ADS-B stations established along this route.

3.4 CAAC also plans to set up ADS-B stations along Lhasa-Ali route and B215 route from Yinchuan to Urumqi, thus widening the surveillance coverage and improving the utility ratio of the airlines.

4. Prospect

4.1 CAAC is scheduled to build ADS-B stations nationwide in accordance with “the twelfth five-year plan”, realizing the complete management and control of all national lines as well as surveillance on oceanic areas; meanwhile, relevant automatic systems for air traffic management will be upgraded to receive, process and display ADS-B signals; In addition, the ADS-B technology and management standard will be formulated to achieve radar-like service under the ADS-B surveillance.
