Twenty Fourth Meeting of the
Informal South Pacific ATS Co-ordinating Group (ISPACG/24)

Brisbane, Australia, 11-12 March 2010

Agenda Item: AI 17-5 ADS-B Implementation

Australian ADS-B Update

Presented by Airservices Australia

SUMMARY

This working paper provides an update on Australian ADS-B activities.

1.   INTRODUCTION

1.1   This working paper provides an update on Australian ADS-B related activity since ISPACG/22.

2.   DISCUSSION

2.1   The 12 months since ISPACG/23 has seen the deployment of an additional 12 ADS-B sites, resulting in Australia-wide ADS-B coverage above FL300, as well as continued growth in the numbers of ADS-B approved aircraft.

2.2   The complete list of Australian ADS-B sites is included in Table 1. Australian ADS-B coverage as of December 2009 is depicted in Figure 1.

Commissioned ADS-B site	
Alice Springs	Leonora
Ayers Rock	Longreach
Balgo Hill	Meekatharra
Billabong	Mornington Island
Birdsville	Mount Isa
Bourke	Newman
Broome	Nullabor
Bundaberg	Oodnadatta
Caiguna	Tennant Creek
Doongan	Telfer
Esperance	Thursday Island
Gove	Warburton
Jackson	Woomera
Karratha	

Table 1. List of operational Australian ADS-B sites

Figure 1. Australian ADS-B coverage

2.3   Airframes

2.3.1   As of 2nd March 2010, 1236 of airframes are ADS-B approved and receiving the operational and safety benefits associated with ADS-B surveillance. This is an increase of 479 from the 757 ADS-B approved airframes reported at ISPACG/23.

2.4   Lord Howe Island

2.4.1   The LHI ADS-B and VHF installations are due to be commissioned on 14th Mar 2010. At the time of writing this working paper, Oceanic controllers are completing their final ADS-B training.

2.4.2   After commissioning of the LHI ADS-B site, ATS surveillance services will be available for identified aircraft in the airspace surrounding Lord Howe Island. This includes the ability to apply a 5NM separation standard between ADS-B aircraft.

3.   Problems encountered

3.1   The biggest problem that is still being encountered is the incorrect entry of Flight Identification into the FMS/MCDU. In a similar way to the FANS-1/A logon, this identification must exactly match the aircraft identification contained in the ATS flight plan

3.2   If the flight identification is entered incorrectly ATC will use the phraseology: "RE ENTER ADS-B AIRCRAFT IDENTIFICATION" to notify the flight crew.

- If they are able to do so, the flight crew must then reset the flight identification to match the ATS Flight Plan;
- If they are unable to reset the flight identification in flight, the flight crew must advise ATC that they are unable to comply.

3.3   Failure to enter the flight identification correctly means that the ATS flight plan is not automatically updated with any ADS-B information that may be received. This results in:

- Screen clutter on air traffic control displays – multiple position symbols and track labels are displayed instead of just a single target;
- Increased controller and pilot workload to resolve the FLTID error;
- Increased pilot and controller workload in transmitting and manually processing position reports;
- Loss of any benefits associated with ADS-B that may have been available.

4.   Equipment problems

4.1   A small number of airframes have been detected transmitting erroneous positional data. Investigations indicate that the problem is associated with the installation of the ADS-B equipment into the aircraft. These airframes have been removed from the Airservices Australia ADS-B filter table, preventing this information from incorrectly being displayed to the controller.

5.   Additional information

5.1.   Additional information concerning ADS-B can be obtained via the following links.

Flight Operations Information Package:
http://www.airservicesaustralia.com/projectsservices/projects/adsb/operatortraining.asp

Additional educational material:

http://www.casa.gov.au/pilots/download/ADS-B.pdf

6.   ACTION BY THE MEETING

6.1   The meeting is invited to:

a)   Note the introduction of Australia-wide ADS-B coverage above FL300;

b)   Note the imminent introduction of VHF and ADS-B at Lord Howe Island