



**Fourteenth Meeting of the  
Informal South Pacific ATS Co-ordinating Group  
FANS Interoperability Team (ISPACG FIT/14)**

Auckland, New Zealand, 5-6 March 2007

---

Agenda Item 9 :

**Increasing numbers of data link-equipped aircraft**

(Presented by Airservices Australia)

**SUMMARY**

This information paper provides information concerning the increasing numbers of data link-equipped aircraft that have operated in YBBB airspace since 2000.

## **1. INTRODUCTION**

1.1 Since the implementation of data link, there has been a steady increase in the number of data link aircraft operating in Australian airspace. This information paper provides an indication of the extent of this increase.

## **2. DISCUSSION**

2.1 In determining the extent of data link-equipage there are two figures that are of relevance:- the *number* of data link-equipped aircraft, and the *proportion* of data link-equipped aircraft. Whilst the actual number of aircraft using CPDLC has been available for a number of years, the proportion of data link aircraft has been an unknown quantity.

2.2 A means to determine the proportion of data link aircraft compared to total jet traffic is currently being developed. Provisional calculations indicate that in the Oceanic airspace east of Australia this figure is a little over 30% (October 2006). The proportion of data link aircraft operating between Asia and Australia is expected to be significantly higher, but has not yet been determined.

2.3 When determining the proportion of data link aircraft, the following conventions were used:

- Only aircraft that had flight planned through the Tasman Sea airspace above F280 were eligible to be counted;
- “Data link aircraft” were deemed to be aircraft that had filed “DAT/” in Field 18 of the flight plan;

## 2.4 CPDLC data

2.4.1 A number of graphs have been included below, showing the increasing numbers of logons received by Brisbane Centre, and the number of CPDLC Connections with different aircraft types.

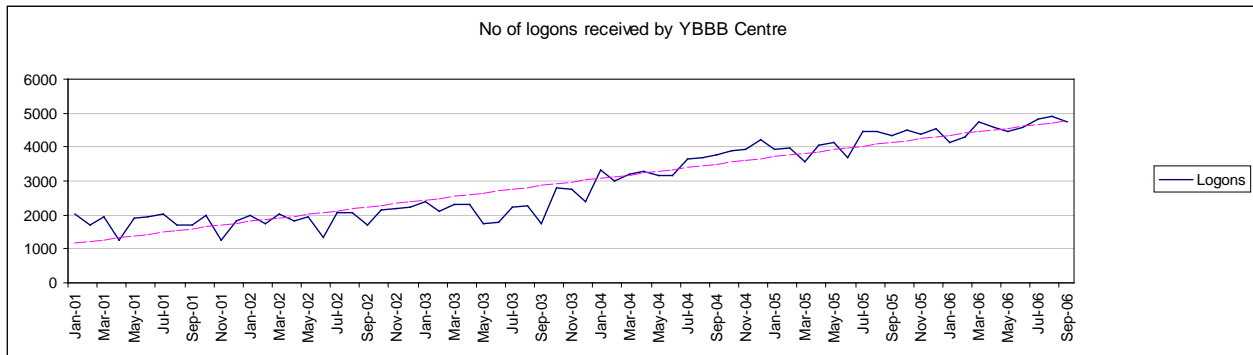


Figure 1. No of logons received from Brisbane Centre

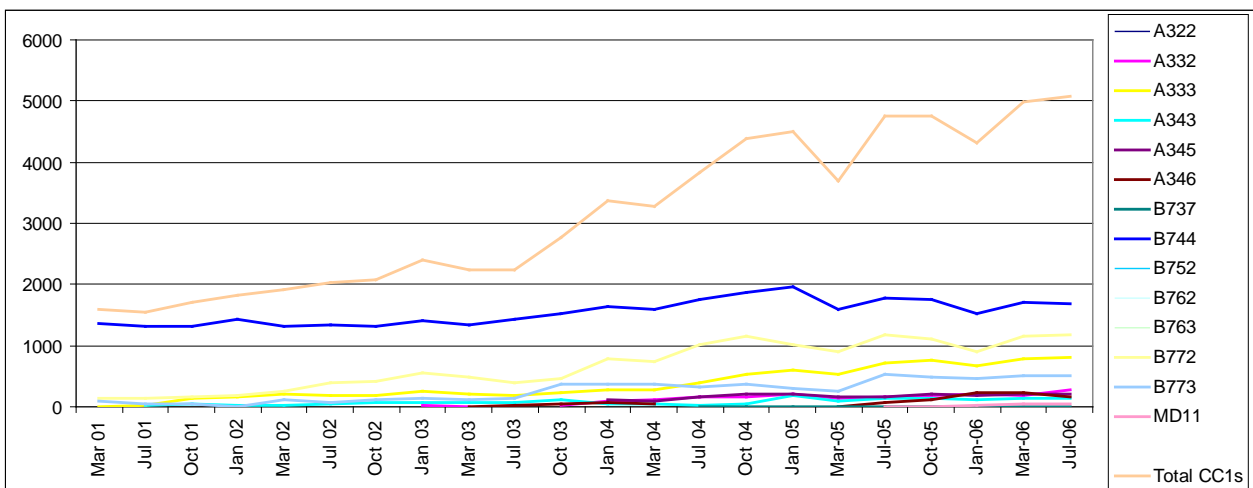


Figure 2. Number of CPDLC "Connection Confirms" for different aircraft types

2.4.2 As would be expected, the increasing number of logons and CPDLC Connections corresponds to a similar increase in the number of routine clearance requests received by CPDLC. Figure 3 and 4 show the trend in the number of climb requests and weather deviation requests received by YBBB. Note the seasonal trend in weather diversion requests.

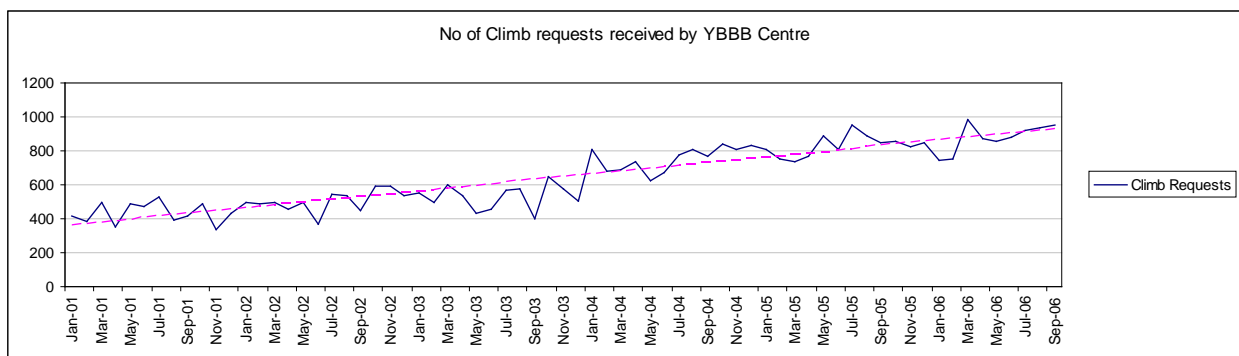


Figure 3. Number of CPDLC Climb requests received by Brisbane Centre

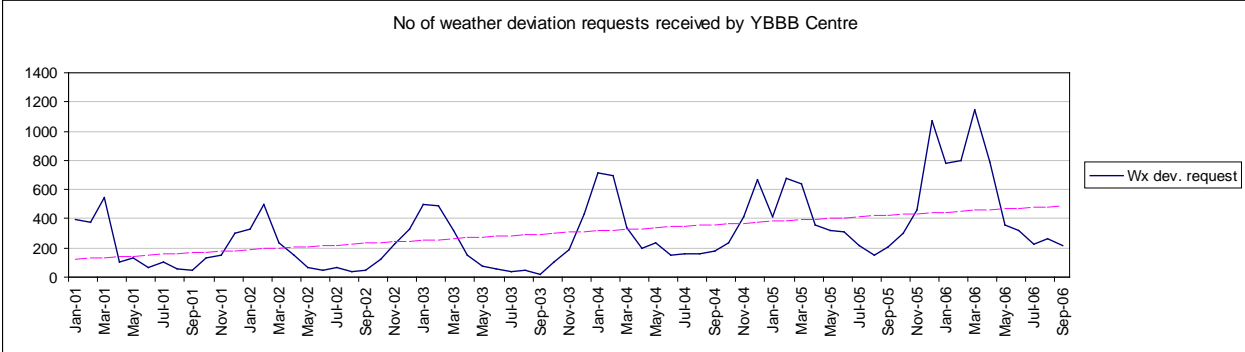


Figure 4. Number of CPDLC Weather deviation requests received by Brisbane Centre

2.5 ADS-C data

2.5.1 The number of ADS-C reports from aircraft has steadily increased since 2000. Figure 5 shows the increase in the number of ADS-C periodic reports received by Brisbane Centre between Jan 2001 and September 2006.

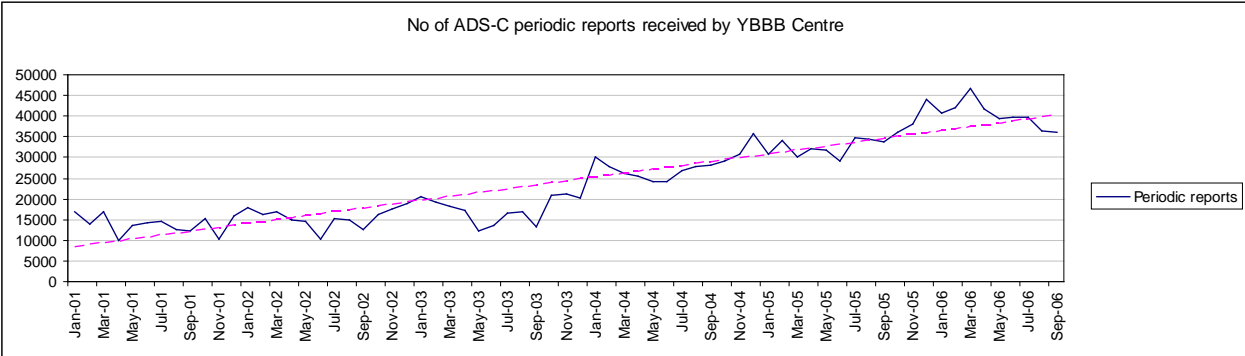
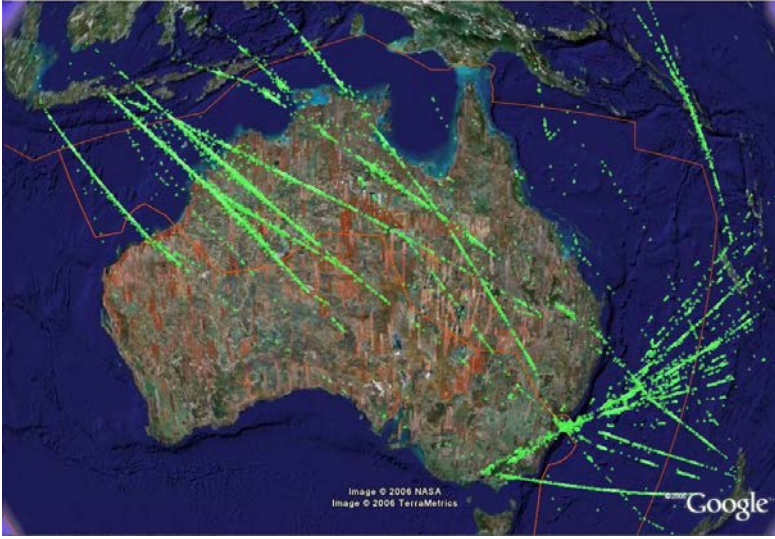
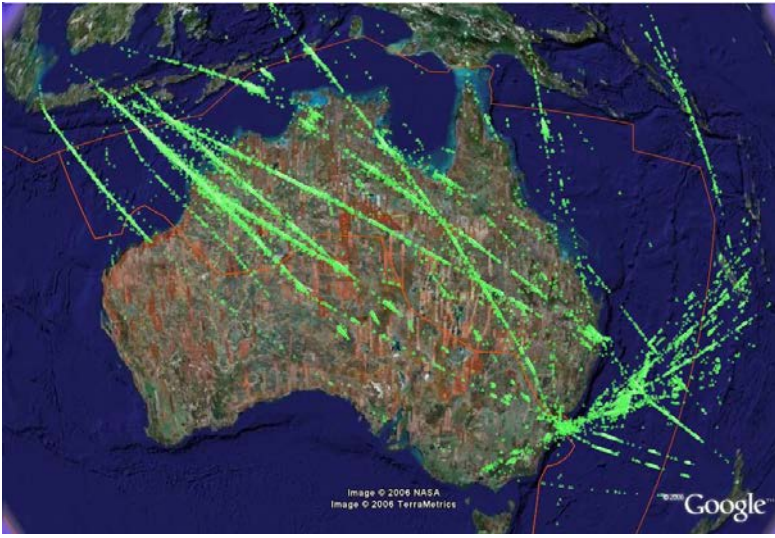


Figure 5. Number of ADS-C periodic reports received by Brisbane Centre

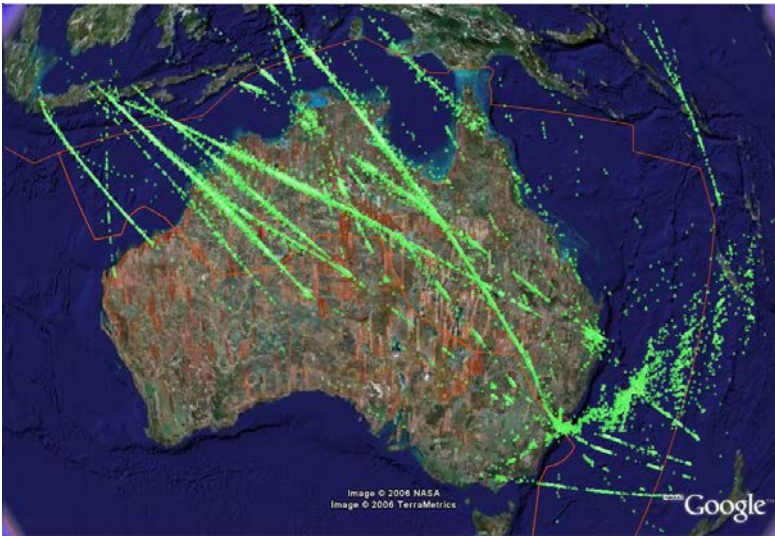
2.5.2 Table 1 shows plots of ADS-C periodic reports received by Brisbane Centre. These plots provide a visual indication of the increase in use of ADS-C.



**ADS-C periodic reports**  
**Jan 2000**

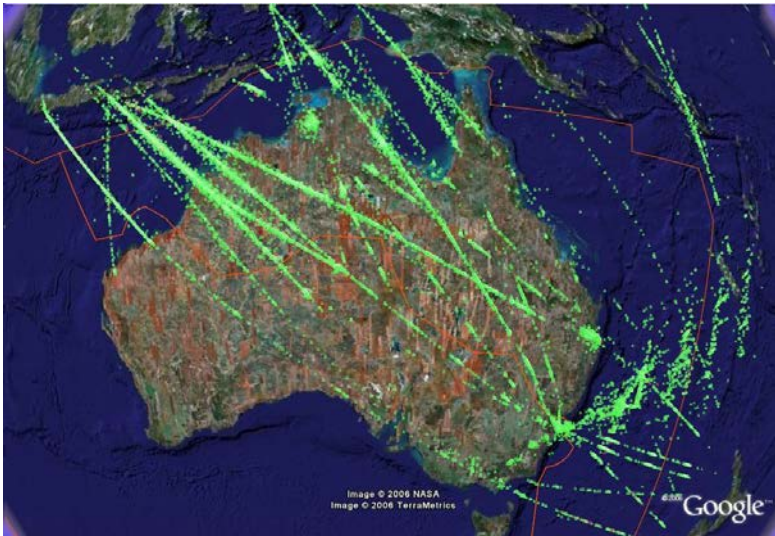


**ADS-C periodic reports**  
**Jan 2001**

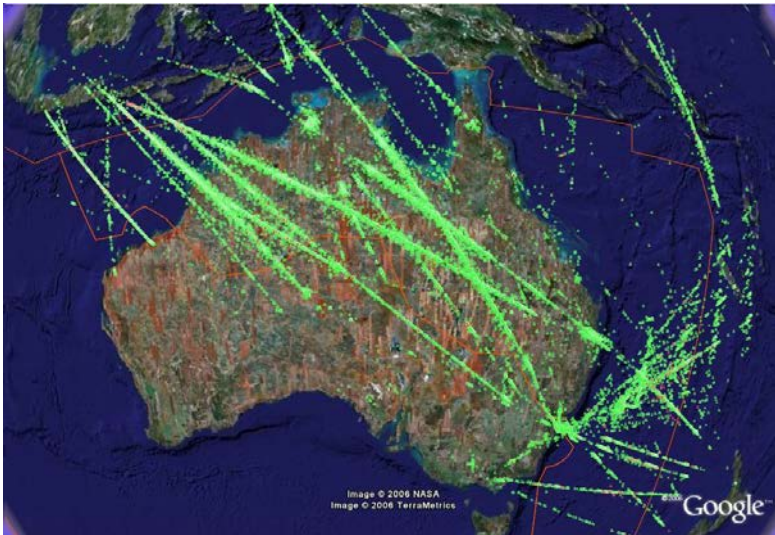


**ADS-C periodic reports**  
**Jan 2002**

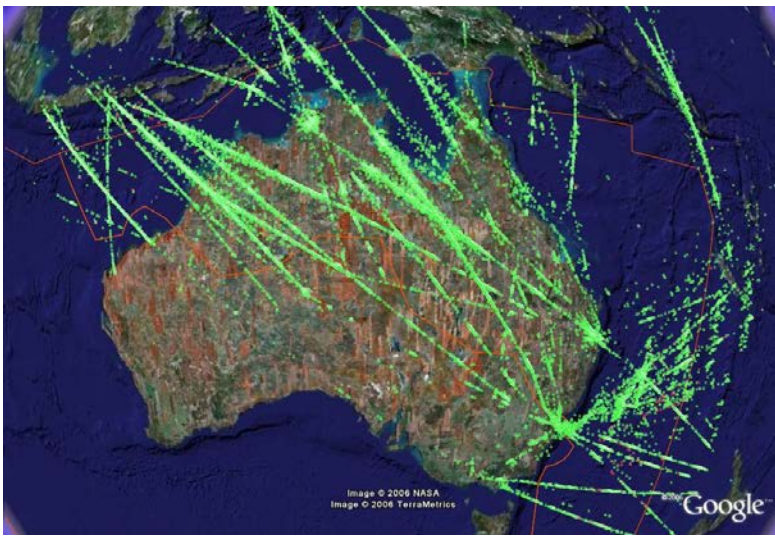




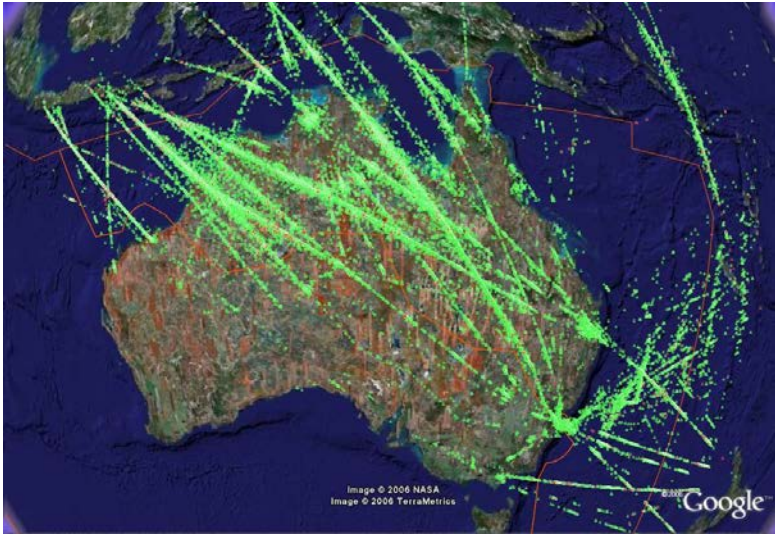
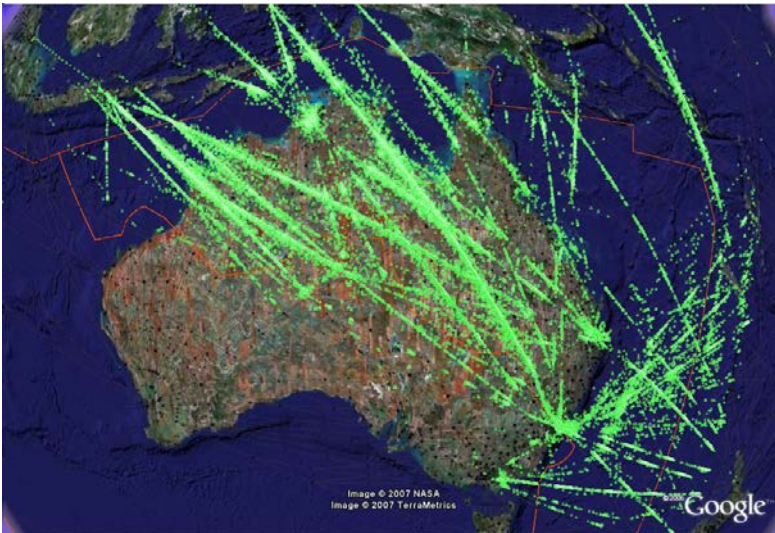
**ADS-C periodic reports**  
**Jan 2003**



**ADS-C periodic reports**  
**Jan 2004**



**ADS-C periodic reports**  
**Jan 2005**

 <p>Image © 2006 NASA Image © 2006 TerraMetrics Google</p>	<p><b>ADS-C periodic reports</b> <b>Jan 2006</b></p>
 <p>Image © 2007 NASA Image © 2007 TerraMetrics Google</p>	<p><b>ADS-C periodic reports</b> <b>Jan 2007</b></p>

**Table 1.** Plots of ADS-C periodic reports received by Brisbane Centre

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the information contained in this information paper.