



International Civil Aviation Organization

**The 2<sup>nd</sup> Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/2)**

Bangkok, Thailand, 28 – 29 March 2013

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**Agenda Item 4: Data Link Guidance Material**

**INMARSAT GOLD MONITORING TOOLS**

(Presented by Airways New Zealand)

**SUMMARY**

This paper presents information on the new monitoring capability available to Inmarsat which enables them to monitor ADS-C latency using new software tools available at the new RGS in Perth.

This paper relates to –

**Strategic Objectives:**

A: *Safety* – Enhance global civil aviation safety

**Global Plan Initiatives:**

GPI-17 Data link applications

GPI-22 Communication infrastructure

**1. INTRODUCTION**

1.1 Inmarsat has developed enhanced monitoring tools at the new Perth RGS that enables them to monitor ADS-C performance against the RCP guidelines in the GOLD.

**2. DISCUSSION**

2.1 Inmarsat has developed monitoring tools that allow the provision of graphical performance data using GOLD guidelines. **Figure 1** below is a RSP analysis of all ADS-C downlinks received at POR over a period in late February 2013.

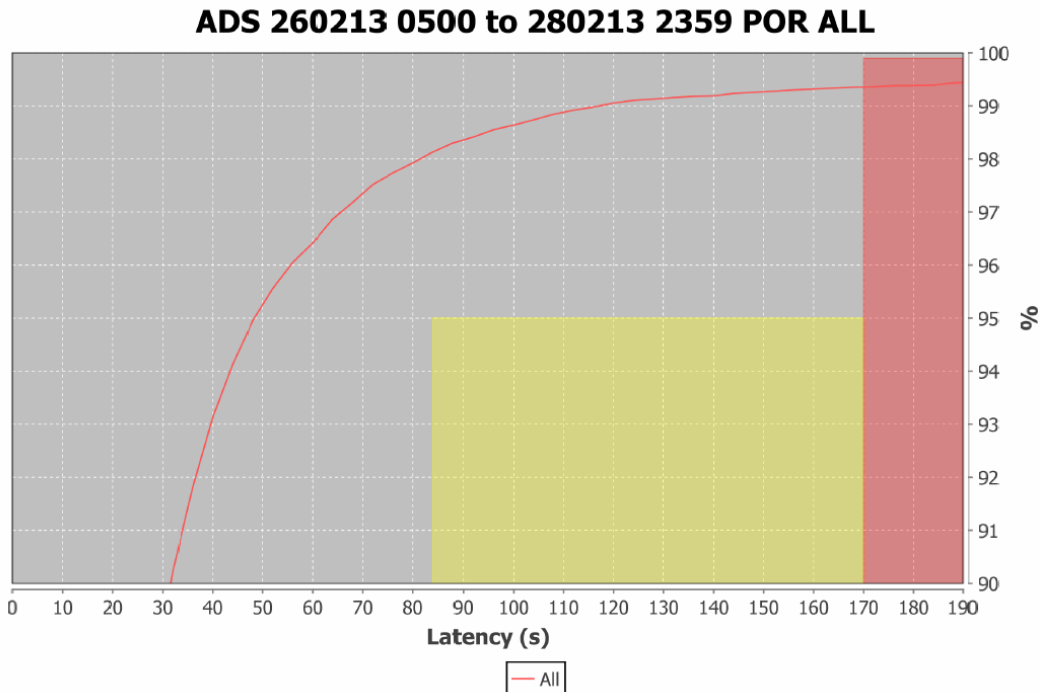


Figure 1: Inmarsat ADS-C performance analysis

2.2 When the Inmarsat performance analysis is filtered for NZZO messages a comparison can be made with data collected by NZZO for the same period. This is illustrated in Figure 2 below.

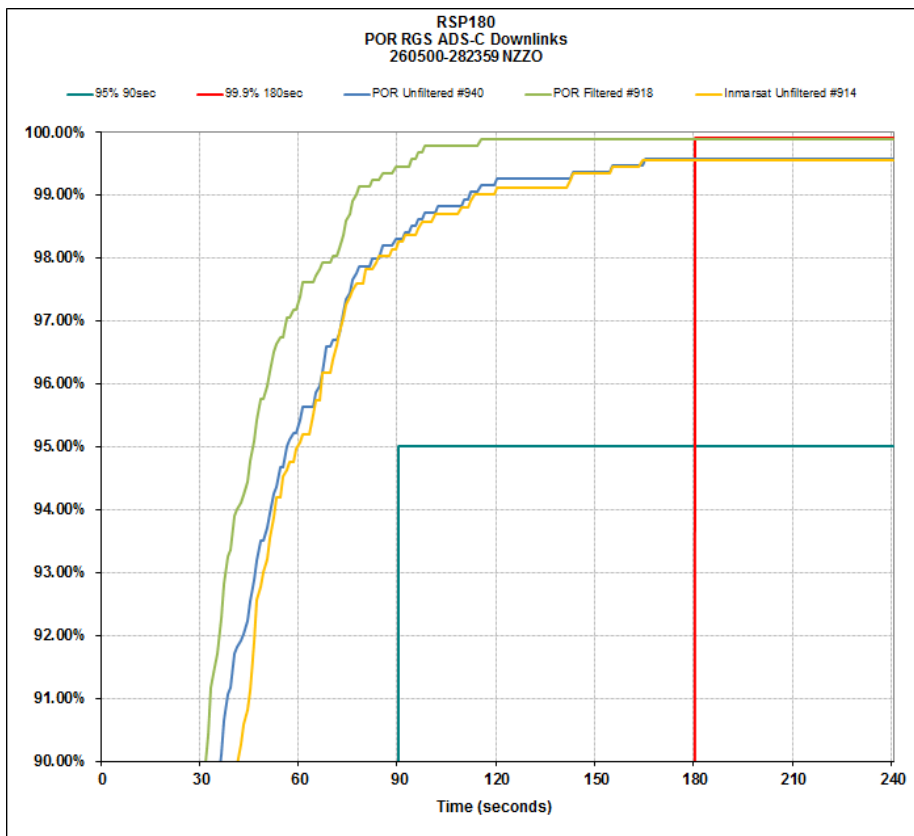


Figure 2: Inmarsat analysis compared with NZZO analysis for the same period

2.3 The NZZO and Inmarsat unfiltered data provides near identical results which would appear to validate the measurements. It should be noted that the Inmarsat data is unfiltered and does not include any latency between the RGS and the ATSP through the CSP network. It also retains duplicate ADS-C reports and data from known bad tails which are stripped from NZZO data before analysis. The difference between filtered and unfiltered NZZO data is shown in Figure 2. The NZZO filtered data removes 17 duplicated reports and 6 reports from a single known bad tail that had observed latency between 143 and 760 seconds which was enough to significantly skew the unfiltered data.

2.4 This Inmarsat capability may give ANSP that have not developed monitoring software the ability to obtain performance information that will satisfy their monitoring requirements.

### **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 matters as appropriate.

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