

**FANS Interoperability Team Meeting
(FIT/21)**

**Papeete, Tahiti
4-5 March 2014**

Agenda Item 5: Working Papers

NZZO FANS1/A Performance During 2013

Presented by Airways New Zealand

SUMMARY

This paper provides an overview of observed FANS1/A performance in the Auckland (NZZO) Oceanic FIR during 2013.

1. INTRODUCTION

- 1.1. Data obtained from post implementation monitoring is used to measure FANS1/A system performance against Required Communications Performance (RCP) and Required Surveillance Performance (RSP). Data is measured and presented using guidance from GOLD Appendix D. System availability measurement is based on reported outages by the CSP and un-reported outages observed in the FANS1/A data records
- 1.2. Significant changes occurred to the network in 2013 with the Inmarsat upgrade of the I3 GES successfully completed. In NZZO a number of new fleets are operating with FANS1/A data link.

2. DISCUSSION

- 2.1 ADS-C Performance. To meet the RSP180 requirement 99.9% of ADS-C downlinks are to be received within 180 seconds, and 95% of downlinks are to be received within 90 seconds. Overall from all RGS we observed 99.5% received within 180 seconds and 98.8% received within 90 seconds in 2013. ADS-C performance observed in NZZO is attached at Appendix A in graphical form.
- 2.2 CPDLC Performance (RCTP). To meet RCP240 Required Communications Technical Performance (RCTP) 99.9% of transactions are to be completed within 150 seconds and 95% are to be completed within 120 seconds. Overall from all RGS we observed 99.8% within 150 seconds and 99.6% within 120 seconds. Actual Communication Technical Performance data observed in NZZO is attached at Appendix A in graphical form.
- 2.3 CPDLC Performance (RCP). To meet RCP240 Required Communications Performance (RCP) 99.9% of transactions are to be completed within 210 seconds

and 95% are to be completed within 180 seconds. Overall from all RGS we observed 99.8% within 210 seconds and 99.6% within 180 seconds. The message set used to assess performance is as prescribed in the Global Operational Data Link Manual (2nd Edition). Actual Communication Performance data observed in NZZO is attached at Appendix A in graphical form.

2.4 Inmarsat Availability. There have been no issues with Inmarsat RGS stability during 2013. The upgrade of the I3 satellite RGS was completed without incident. Inmarsat Availability data is attached at Appendix A.

2.9 Iridium Availability. We observed more Iridium traffic operating in NZZO in 2013 however usage is still low when compared with the number of data points from Inmarsat and MTSAT SATCOM. We are currently struggling with the clarity of some of the many Iridium outage reports. The use of the description “degraded performance” in many of the reports makes it difficult if not impossible to assess if an actual outage has occurred. If one added the notified periods of degraded performance iridium falls well below required availability.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the FANS1/A performance observed in NZZO during 2013; and
- b) Discuss Iridium outages and agree a common measure to assess availability.



Appendix A : NZZO FANS1/A Performance during 2013 – Graphical Analysis

















