



FANS Interoperability Team Meeting (FIT/18)

Honolulu, Hawaii, USA, 22-23 March 2011

Agenda Item 4: Working and Information Papers

FMC WPR in YBBB

Presented by Airservices Australia

SUMMARY

This information paper provides performance and other statistical information concerning the use of FMC WPR in YBBB airspace.

1. INTRODUCTION

1.1 Flight Management Computer Waypoint Position Reporting (FMC WPR) was implemented in the southern portion of the Tasman Sea airspace in YBBB in Jan 2010. This information paper provides a summary of FMC WPR performance and statistical information from Feb 2011.

2. DISCUSSION

2.1 In the designated portion of the YBBB airspace, FMC WPR may be used by flight crews for the purpose of:

- Routine position reporting;
- Notification of maintaining a new level;
- Notification of a revised estimate.

2.2 During February 2011, the following numbers of FMC WPR-generated ARPs were received:

Number of routine FMC WPR ARPs received:	483
Number of FMC WPR level reports received:	69
Number of FMC WPR revised estimates received:	14

Total number of FMC WPR ARPs received **566**

2.3 The ARP received by YBBB contains the time stamp from when the FMC WPR was transmitted by the flight crew. By comparing this time stamp with the time that the ARP was received, the “performance” of the system can be determined.

AFTN time stamp for when ARP was received: 20.02.2011 02:22:08:843
 ARP ANZ792 GEMAC 0221 F350 MIKEL 0258 SASRO MS44 295/106 -FMC 022116

2.4 By comparing the time stamp with the time that the waypoint was sequenced a “flight crew transmission delay” can be determined.

ARP ANZ792 GEMAC 0221 F350 MIKEL 0258 SASRO MS44 295/106 -FMC 022116

Average downlink transit time (*sec*) (all reports) 23.7
 Average flight crew transmission delay (*sec*) (position reports only) 74.7

Total average delay (*sec*) 98.2

Note. The flight crew transmission delay is an approximation. There is round up/down error due to the waypoint sequencing time being expressed in whole minutes, and there is no allowance for other tasks that the flight crew may have to complete prior to transmission of the FMC WPR.

2.5 The following graph displays the technical performance of the FMC WPR (transit time only) as well as the total performance (which includes the delay in the manual transmission of the ACARS report by the flight crew).

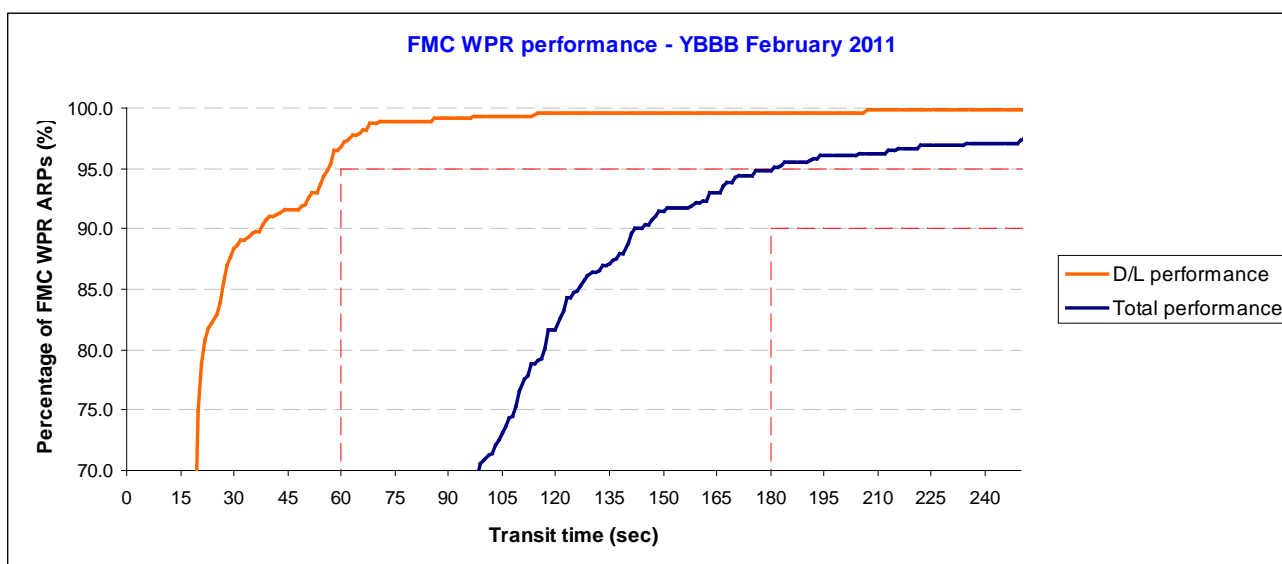


Figure 1. FMC WPR performance during February 2011



2.6 Errors

2.6.1 Occasionally an error occurs in an FMC WPR-generated ARP. The number of detected errors is small, and is generally due to either:

- A typographical error by the flight crew;
- Use of FMC WPR outside the FMC WPR-designated airspace

2.6.2 It is not possible to detect all typographical errors through data analysis. During February, 3 typographical errors involving a miss-spelt waypoint name or incorrect “Actual Time Over” were detected. In addition, one ARP was incorrectly addressed to YBBB instead of NZZO

2.6.3 During February there were two occurrences of FMC WPRs being sent by aircraft operating outside the designated airspace

3. ACTION BY THE MEETING

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