



**Twenty Fifth Meeting of the  
Informal South Pacific ATS Co-ordinating Group (ISPACG/25)**

**Eighteenth Meeting of the  
FANS Interoperability Team (FIT/18)**

**Honolulu, Hawaii, USA, 22-23 March 2011**

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**Agenda Item 4: Working Papers**

**FANS 1/A over High Frequency Data Link (HFDL)**

**Presented by the Federal Aviation Administration**

**SUMMARY**

This paper provides the final coordination draft of the *FANS 1/A over HFDL Recommendations* report developed by the Performance Based Operations Aviation Rulemaking Committee's Communications Working Group (PARC CWG).

**1 INTRODUCTION**

- 1.1 The PARC CWG has completed its final coordination draft of the report entitled, *Future Air Navigation System (FANS) 1/A over High Frequency Data Link (HFDL)(FOH) Recommendations*. The report is provided at [Appendix A](#).
- 1.2 The *FOH Recommendations* report supplements the *FANS 1/A over Iridium (FOI) and Performance Based Concept Recommendations* report, PARC, completed on 17 September 2010.

**2 DISCUSSION**

- 2.1 FANS 1/A provides benefits through the use of Controller Pilot Data Link Communications (CPDLC) and Automatic Dependent Surveillance-Contract (ADS-C) in oceanic airspace, typically through satellite communications (SATCOM) to advance safety and provide operational and environmental benefits. However, there are also benefits from FANS 1/A over HFDL.

2.2 The PARC CWG highlights the benefits of using HFDL in FANS 1/A operations. Some operators are equipped only with HFDL. Other operators are equipped with both SATCOM and HFDL. When an operator is equipped only with HFDL, leveraging this capability in FANS 1/A operations can reduce the effects of operational errors and pilot deviations when appropriate separation standards are applied, and reduce congestion on the voice channel providing improved access to operators that are not FANS 1/A equipped.

2.3 Additionally, FANS 1/A over HFDL provides air traffic control (ATC) communication coverage in the Polar region, where coverage is not provided with commonly used communication services that use high-earth orbit geosynchronous satellites. FANS 1/A over HFDL can also provide greater reliability of the total system and facilitate safer transitions to alternative separations when the SATCOM service does fail.

### 3 CONCLUSION

3.1 The PARC CWG recognizes that while FANS 1/A over HFDL offers significant benefits, it may not be suitable for some reduced separations, such as 25 nautical miles (NM) reduced lateral separation minimum (RLatSM) and five (5) minute reduced longitudinal separation minimum (RLongSM). As a result, certain provisions may be necessary to recognize aircraft with lesser capability yet still leverage it to gain operational and safety benefits.

3.2 Recommendation 2 in the *FOI and Performance Based Concept Recommendations* report to implement a performance-based framework includes the provisions to address near to mid term and long term initiatives supporting the Next Generation Air Transportation System (NextGen). The *FANS 1/A over HFDL Recommendations* report substantiates the need to phase in the performance-based framework and expedite those portions needed to realize near term gains in operational and safety benefits from FANS 1/A over HFDL operations.

3.3 For longer term gains in benefits, the *FANS 1/A over HFDL Recommendations* report includes a recommendation for the FAA to work with industry to ensure the standards for the next generation ADS-C application address the needs for both aeronautical operational control (AOC) and air traffic services (ATS) communications for more efficient and effective use of air-ground communications. This recommendation should be addressed by RTCA Special Committee (SC) 214 and EUROCAE Working Group (WG) 78 in cooperation with the ICAO Operational Data Link Panel (OPLINKP).

### 4 ACTION BY THE MEETING

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

Appendix A. PARC FANS 1/A over HFDL Recommendations

[Provided as separate file]

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