FIFTH MEETING OF THE SAT FANS 1/A INTEROPERABILITY TEAM (SAT/FIT/5)

(Lisbon, Portugal, 17 to 18 May 2010)

Agenda Item 3: Review of FANS 1/A implementation activities in the South Atlantic

THE IMPLEMENTATION STATUS OF ADS/CPDLC IN CANARIES FIR/UIR

(Presented by Spain)

SUMMARY

The objective of this working paper is to present the implementation status of ADS/CPDLC in Canaries FIR/UIR.

1. INTRODUCTION

The purpose of this working paper is to notify States of SAT about the implementation status of ADS/CPDLC in Canaries FIR/UIR.

2. BACKGROUND

The Spanish Air Navigation Service provider, Aena, has carried out ADS/CPDLC SACCAN FANS 1/A operational evaluation trials between the years 2002 and 2006.

From 5 July 2006, a new pre-operational phase was initiated which will last until **27 August 2009** with the complete coming into service of SACCAN and the provision of ADS/CPDLC services, in Canarias FIR/UIR.

A comprehensive document entitled "**GUIDANCE MATERIAL ON SACCAN FANS 1/A IN CANARIAS AIRSPACE**", which is supplied to all interested airlines, provides details about the SACCAN system and its procedures for utilization.

Aircraft operators may choose from a single ADS or a joint ADS and CPDLC link. This is due to the fact that not all FANS 1/A aircraft crews are trained for CPDLC procedures.

3. GENERAL DESCRIPTION AND CURRENT STATUS - CANARIAS ADS/CPDLC SYSTEM (SACCAN)

The SACCAN system, which is the ADS/CPDLC system installed in the Canarias ATC Centre, is a highly modular air traffic control system that adds full FANS 1/A compatible ADS/CPDLC features to the current operational automated ATS system (SACTA) installed in this facility.

The following main functions are available within SACCAN:

- ADS tracking;
- ADS-SSR integration tracking;
- Short Term Conflict Alert (STCA) and Minimum Safe Altitude Warning (MSAW) based on either ADS stand alone, SSR stand alone, or ADS-SSR integration;
- Detection of incorrect waypoint insertion.
- Conformance monitoring.
- Navigation Integrity Monitoring.
- Automatic management of ADS contracts which minimizes the air-traffic controller workload required to operate the system; and
- CPDLC efficient management by extensive use of windows and mouse clicks.

With the coming into operation of the SACCAN system the following improvements are expected:

- More direct flight paths;
- More optimal climb and descent profiles;
- Increased access to cruise altitudes closer to optimal;
- Reduced air-traffic controllers and pilots workload; and
- Increased level of safety.

Furthermore, a project of the SAT Group (South Atlantic Group) for the extension of ADS along the EUR/SAM corridor is expected to add significant safety and economic benefits to the air traffic flow between Europe and South America.

The SACCAN system located at Canaries ACC operations room and it is used to provide air traffic control service based in ADS/CPDLC (from 27th August 2009).

The following figure shows the main area of application of ADS/CPDLC - SACCAN:

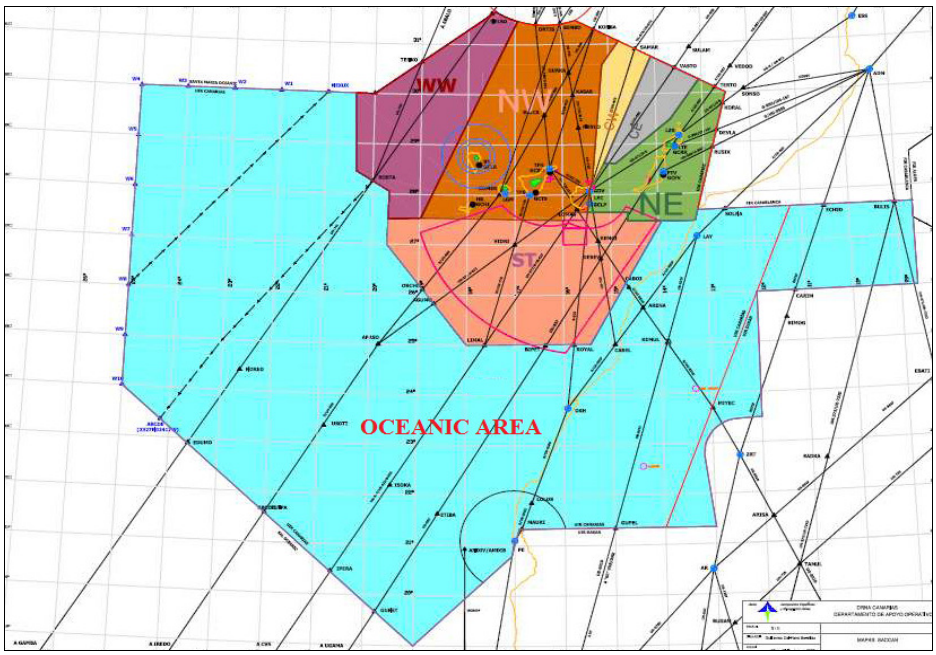

FIGURE 1 Oceanic Canary airspace

Finally, the following tables introduce the evolution of the FANS 1/A connections from September 2009 to January 2010 on SACCAN in relation to the number of aircraft flying in the oceanic area and those ones that, in its flight plan, reported ADS and data link capabilities (called in **Error! Reference source not found.** "FANS 1/A equipped flights").

General information	Jan. 2010	Dec. 2009	Nov. 2009	Oct. 2009	Sep. 2009
Nº connected flights	1233	1210	1165	1049	947
% with respect to total flights (Oceanic area)	32.67%	33.16%	32.70%	28.40%	27.59%
% with respect to FANS 1/A equipped flights (Oceanic area)	73.39%	81.59%	77.31%	66.60%	65.36%
Nº of flights with CPDLC exchange	1127	1065	1001	901	839

TABLE 1
General traffic information in the oceanic Canary airspace

4. ACTION BY THE MEETING

The SAT/FIT/5 Meeting is invited to:

a) Compare and update the present status of Spain (Canarias FIR/UIR) with the rest of FIRs.

b) Take note of the information provided in this working paper.