



INTERNATIONAL CIVIL AVIATION ORGANIZATION

FIRST MEETING OF THE SAT FANS 1/A INTEROPERABILITY TEAM

(SAT FIT/1)

(Canary Island, Spain, 20-22 April 2006)

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I - HISTORY OF THE MEETING

1. Introduction

1.1 The First Meeting of the FIT Group was convened pursuant to SAT/12 Conclusion 12/18, and took place at the Canarias ACC from 20 - 22 April 2006.

2. Organization and conduct of the meeting

2.1 Mr. Sebastian Perez, AENA Canarias Regional Director, opened the meeting with expressions of appreciation and welcome to all participants. The speaker emphasized the importance of this FIT Meeting and the work at hand for the implementation over the SAT airspaces and Flight Information Regions (FIR) of new technologies based on Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) derived systems. He also emphasized the need for continuing close relations and co-ordination among States to improve services over the South Atlantic.

2.2 Mr. Santiago Gubern, ATC Expert at the Canarias ACC and member of the Spanish Delegation was elected as Chairman and rapporteur of the meeting.

2.3 The Secretary of the meeting was Mr. Tomas Vidriales, ATC Expert at the Canarias ACC.

3. Attendance

3.1 The FIT Meeting was attended by 27 participants from 7 ICAO contracting States (Argentina, Brazil, Cape Verde, Portugal, South Africa, Spain, and USA), 3 international organizations (ARINC, BOEING and SITA) and 1 airline representative (LAN Chile).

3.2 A list of participants and contact addresses is at **Appendix A** to this report.

4. Working languages

4.1 The meeting was conducted in English language. The meeting's documentation was also prepared and made available to participants in English language.

4.2 A list of Information and Working papers is at **Appendix C** to this report.

5. Agenda

5.1 The meeting adopted the following agenda:

1. Election of Chairman and Secretariat of the meeting
2. Review of the terms of reference of the FANS 1/A Interoperability Team as defined by SAT/12
3. Review of SAT FANS 1/A Operational Manual
4. Review of FANS 1/A implementation activities in the South Atlantic
 - a. ADS/CPLC programmes
 - b. Outcome of the FANS 1/A operational implementation workshop (Las Palmas, 16-17 April 2005)
5. System performance monitoring and maintenance
 - a. Interoperability requirements
 - b. Safety monitoring aspects
 - c. Problem identification, reporting and resolution procedures
 - d. Institutional issues
6. Future work programme
7. Any other business

II - REPORT ON DISCUSSIONS

2.1 Report on Agenda Item 1: Election of Chairman

2.1.1 Mr. Santiago Gubern, ATC Expert at the Canarias ACC and member of the Spanish Delegation was elected as Chairman and rapporteur of the meeting.

2.2 Report on Agenda Item 2: Review of the terms of reference of the FANS 1/A Interoperability Team

2.1.1 The meeting reviewed the FIT terms of reference defined by SAT/12 as shown at **Appendix B** to this report.

2.3 Report on Agenda Item 3: Review of SAT FANS 1/A Operational Manual

2.3.1 The meeting reviewed the SAT FANS 1/A Operational Manual (SAT/FOM) as reference documentation for participants guidance in addressing the FIT work programme.

2.3.2 As part of harmonization, during the meeting the FOM was discussed, and revised to include SAT/FIT information.

2.4 Report on Agenda Item 4: Review of FANS 1/A implementation activities in the South Atlantic

2.4.1 The FIT was informed of the traffic statistics and traffic growth in the year 2005 within the EUR/SAM Corridor and the traffic growth foreseen for the next 10 years. These statistics support the need to improve the ATM system with new tools as the ADS/CPDLC. It also considered the advantages of the ADS/CPDLC trials completed or in course in certain SAT FIRs. Experiences were shared to assist FIRs in FANS 1/A implementation. The meeting was required to take notice of the attendance list as expertise for coordination in future FANS 1/A implementation needs.

2.4.2 The following recommendations were formulated:

RECOMMENDATION 1/1:

THAT SAT MEMBERS BE REMINDED OF THE VARIOUS CONCLUSIONS OF SAT MEETINGS RELATED TO THE NEED OF A SHORT TERM IMPLEMENTATION OF ADS/CPDLC IN THE AREA.

RECOMMENDATION 1/2:

THAT SAT STATES BE ENCOURAGED TO COMPLY WITH THEIR ADS/CPDLC IMPLEMENTATION PLANS INCLUDED IN APPENDIX D TO THIS REPORT TO BE PRESENTED TO THE NEXT FIT MEETING.

2.5 Report on Agenda Item 5: System performance monitoring and maintenance

2.5.1 The FIT group will develop a regional implementation plan with the assistance of the States, ICAO and international organizations to be presented at the next FIT meeting scheduled for the next November 2006.

2.5.2 Mr. Johnny Smit (johnnys@atns.co.za) from South Africa, will be the focal point for the reception and coordination of the different proposals.

2.5.3 The implementation plan will agree on a common target date in the SAT routing areas for full implementation of FANS 1/A systems as an ATC operational requirement for future improvement in the area such as RNP 4, Random routing, etc.

2.5.4 Christian Staiger of LAN Chile (Christian.staiger@lan.com) will be the focal point and will contact with IATA and air companies to create a data base with FANS 1/A equipped aircraft.

2.5.5 The FIT meeting encourages IATA about the need to equip aircraft in order to accomplish the regional implementation plan.

2.5.6 As described in the FANS Operations Manual, the Central Reporting Agencies (CRAs) are organizations tasked with the regular dissemination of de-identified statistical data based on monthly status reports received from FIT members. The CRAs track problem reports and publish de-identified information from those reports for dissemination to FIT members. Problem resolution is the responsibility of the appropriate FIT members. The CRAs:

- a) prepare consolidated problem summaries, with references to particular States and operators removed, for dissemination to all interested parties;
- b) collect and consolidate FANS-1/A Periodic Status Reports and disseminates these to all interested parties;
- c) examine all data to identify trends;
- d) prepare an annual report for the FIT; and
- e) Johnny Smit will be the focal point for the reception and coordination of problems experienced.

2.5.7 The following recommendations were formulated:

RECOMMENDATION 1/3:

THAT THE SAT MEETING TAKE INTO CONSIDERATION THE NEED OF AN ADS/CPDLC REGIONAL HARMONIZATION AND IMPLEMENTATION PLAN.

RECOMMENDATION 1/4:

THAT THE REGIONAL HARMONIZATION OF ADS/CPDLC PROCEDURES BE ADDED TO THE MAIN OBJECTIVES OF THE FIT GROUP.

RECOMMENDATION 1/5:

THAT A REGIONAL DATA BASE BE CREATED TO IDENTIFY FANS 1/A EQUIPPED AIRCRAFT.

RECOMMENDATION 1/6:

THAT A CENTRAL REPORTING AGENCY (CRA) BE CREATED. THE PURPOSES AND FUNDING OF THE CRA WILL REQUIRE FURTHER STUDIES.

RECOMMENDATION 1/7:

THAT:

- 1) IN CASE THE REGULATOR IS DIFFERENT THAN THE SERVICE PROVIDER, SAT STATES SHOULD ENSURE PARTICIPATION OF REGULATORS IN THE NEXT SAT/FIT MEETING IN ORDER TO HAVE FULL COMMITMENT TO THE IMPLEMENTATION PLAN; AND**
- 2) MAIN AIRLINE REPRESENTATIVES SHOULD ALSO PARTICIPATE IN THE NEXT SAT/FIT MEETING.**

2.6 Report on Agenda Item 6: Future work programme

2.6.1 The FIT future work programme will be drawn from the tasks identified under the meeting's discussions on Agenda Item 5. These tasks are to be reviewed by SAT/13 meeting

2.7 Report on Agenda Item 7: Any other business

2.7.1 It was agreed that the next meeting will be celebrated in R. South Africa in November 2006. The exact date will be coordinated within the FIT group. The SAT group and FIT members will be timely informed of the final agreed date and venue.

III. APPENDICES

APPENDIX A**LIST OF PARTICIPANTS****ARGENTINA**

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APPENDIX B**TERMS OF REFERENCE OF THE SAT FANS 1/A INTEROPERABILITY TEAM
(SAT/FIT)**

1. The SAT FANS 1/A Interoperability Team (SAT/FIT) has been established to oversee FANS 1/A system performance monitoring to ensure that the system continues to meet safety and interoperability requirements and that operations and procedures are working as specified.
2. The FIT main objectives are to:
 - a) Monitor and harmonize ADS/CPDLC trials being carried out by SAT States and adjacent States;
 - b) Review identified problem reports and determine appropriate resolution;
 - c) Develop interim operational procedures to mitigate the effects of problems until such time as they are resolved;
 - d) Monitor the progress of problem resolution;
 - e) Prepare summaries of problems encountered and their operational implications;
 - f) Assess system performance based on information in CRA periodic reports; and
 - g) Co-ordinate system testing.

APPENDIX C**LIST OF WORKING/INFORMATION PAPERS**

<u>Nb.</u>	<u>Title</u>	<u>Presented by</u>
	Information Papers	
IP/1	Information Bulletin	Secretariat
IP/2	Tentative Work Programme	Secretariat
IP/3	Agenda Item 4b): Outcome of the FANS 1/A Operational Implementation Workshop. Report on the FANS1/A Operational Implementation Workshop (Las Palmas, 26-27 April 2005)	Spain
IP/5	Agenda Item 4a): Review of FANS 1/A implementation activities in the South Atlantic FANS - ATN accommodation in Oceanic airspace	SITA
IP/6	Agenda Item 4a): Review of FANS 1/A Implementation activities in the South Atlantic. Performance Reporting in the SAT Region	SITA
	Working Papers	
WP/1	Draft Agenda	Secretariat
WP/2	Agenda Item 4a): Review of FANS 1/A implementation activities in the South Atlantic. ADS-C/CPDLC Programme in Canaries UIR/FIR (SACCAN)	Spain
WP/3	Agenda Item 5d): System Performance Monitoring and Maintenance Establishment of a Central Report Agency	SITA
WP/4	Agenda Item 5d): System Performance Monitoring and Maintenance. Concept of a Global FANS Central Report Agency	SITA

APPENDIX D**ADS/CPDLC IMPLEMENTATION SITUATION OF THE SAT STATES/FIRs****ANGOLA (LUANDA FIR, OCEANIC SECTOR)**

1. The airspace to cover with ADS/CPDLC is the LUANDA Oceanic Sector.
2. Currently, the airspace is covered only by HF, which is not performing well. The ADS system will be ready by the end of 2006.

A trial system provided by SITA will be in place in the next three months.

3. The new ACC room is undergoing to accommodate the equipment.
4. THALES is the system provider.

ARGENTINA (EZEIZA FIR, OCEANIC SECTOR)

1. The airspace where the ADS/CPDLC will be implemented is Oceanic Sector of EZEIZA FIR.
2. The system is expected to be on service in a period of two years. The first step will be a pre-operational phase.
3. The scheduled system implementation and operation is at this moment subject to the actual negotiation that is just in course with two industries.

BRAZIL (ATLANTICO FIR)

1. Brazil has been testing a prototype ADS/CPDLC system since 2003 to gain experience for the development of an operational system. Brazil opted to incorporate the ADS/CPDLC functionalities in the existing automated Brazilian ACC system, and has to guarantee the interoperability with the current ACC/APP automated platforms. This option has delayed the process. However, this will add flexibility for future ADS/CPDLC functionality, for use in the continental airspace.
2. The implementation date for ADS/CPDLC in Atlantico ACC is December 2008, when the following criteria have been met;
 - a) Specifications of technical documentation, engineering, testing and acceptance of the fully integrated automated ATC system with ADS/CPDLC functionality.
 - b) The adequate accommodation for the new ACC Atlantico.
 - c) Training human resources, validation of air traffic controllers.

CAPE VERDE (SAL OCEANIC FIR)

1. ATM system (SYSTASAL) fully equipped with FANS 1/A capabilities.
2. ADS-C and CPDLC successfully tested during site acceptance tests.
3. FANS 1/A service agreement with SITA in force since 2004.

4. Official trials and operational evaluation to be performed in 2006 and 2007.
5. Operational implementation feasible in middle 2007.
6. Seek agreement with Spain for common date for operational implementation in Canarias and SAL Oceanic FIRs.

GHANA (ACCRA FIR, OCEANIC SECTOR)

*** Information to be provided ASAP ***

MOROCCO (CASABLANCA FIR, OCEANIC SECTOR)

*** Information to be provided ASAP ***

PORTUGAL (SANTA MARIA, OCEANIC FIR)

1. Portugal will be prepared for CPDLC at the end of 2006. Operational Evaluation in Santa Maria will start in 2007.

SENEGAL (DAKAR OCEANIC FIR)

1. In Dakar ACC, ASECNA has started to implement an integrated system composed of SSR, ADS/CPDLC and FPASD (Flight Plan Air Situation Display).
2. This implementation is planned to be conducted in two phases:
 - Phase 1: Implementation of FPASD/ADS/CPDLC. Equipment already installed. Training of technical staff is in progress. Pre-operational use will start in early 2007.
 - Phase 2: SSR will be implemented in addition to the equipments of phase 1. The system is expected to be operational in December 2008.

SOUTH AFRICA (JOHANNESBURG OCEANIC FIR)

1. *Introduction:* ADS/CPDLC (THOMSON) prototype operational 1999.
2. *History of advancement of Johannesburg Oceanic Services*
 - 1993 - ATNS commercialized
 - 1993 - Indian ocean air navigation service providers negotiated random routings over the Indian Ocean where:
 - Common procedures were developed with other service providers for ADS/CPDLC.
 - South Africa, via the regional planning process of APIRG, has made ADS/CPDLC the primary means of communications in the oceanic regions which we are responsible for.

- 2004 - EUROCAT-2000 operational. Automatic position reports (APR) sent to FDP for Flight Data Record updating.
 - 2006 - The same advantages will be employed in South Atlantic Oceanic.
3. *Future projects*
- 2006-2007 - ATS Inter-facility Data Communication (AIDC)
 - Pre-Departure Clearance (PDC)
 - 2006 - Multi-lateration (MLAT) - TESTING
 - 2010 - ADS-B

SPAIN (CANARIAS FIR):

1. ADS-C and CPDLC capability (full FANS1/A implementation with SACCAN system, independent of actual ATC system).
2. Started Trials with Phase 1 (Aug 15 2002 - Nov 9, 2003). No operational activity with FANS1/A system (SACCAN).
3. Currently in phase 2 of trials (Nov10, 2003- Now): CPDLC operational with voice confirmation procedures. Limited message set. ADS-C on trials only. SACCAN has pseudo-plots based on data imported automatically from SACTA (FP changes from actual ATC system) and introduced manually (voice reports).
4. Airline participation: LUFTHANSA, LANCHILE, TAM, AIR FRANCE.
5. Near future will start Operational Phase with SACCAN with CPDLC with no voice confirmation, ADS-C monitoring and automatic ADS-C WP reporting.
6. Main goal is to merge FANS 1/A functionality into the current ATS system (SACTA).

TRINIDAD AND TOBAGO (PIARCO FIR)

*** Information to be provided ASAP ***
