



TENTH MEETING ON THE FANS 1/A INTEROPERABILITY TEAM (SAT/FIT/10)

(Abidjan, Ivory Coast , 1 to 5 June, 2015)

Agenda Item 4: *System performance monitoring and maintenance*

Analysis of the FANS services in the EUR/SAM Corridor

(Presented by SATMA)

SUMMARY

This paper presents to SAT the CFRA analysis (and conclusions) of the FANS services in the EUR/SAM corridor, according with the information available

1.DISCUSSION

According to terms of reference of the CFRA, FIT States members are requested to provide SATMA with support to perform CFRA functions; In that sense, a periodic delivery of required information regarding ADS/CPDLC issues was agreed in a formal compromise for CFRA Monitored States. In particular, the following Conclusion was established in FIT 9 :

“SAT/FIT/9/01 -Data Collection for FANS services performance analysis and CFRA functions

That:

- a) *In order to perform the analysis of FANS services in the EUR/SAM Corridor States provides SATMA the required data (listed in Appendix A to this report), taking into consideration information of the ATC System and/or Data Link Service Provider.*
- b) *Data related shall be forwarded to SATMA at the latest, on the last working day of each month.*
- c) *SAT States to notify to SATMA (as example in Appendix B to this report) any problem detected along the corridor/South Atlantic.*
- d) *SAT States make use of the SITA's Support in order to obtain Data Service Provider data to be sent to SATMA/CFRA.*
- e) *SAM and WACAF Offices organize a teleconference among SAT States/ANSP, CFRA, SITA and Regional Offices, in order to provide additional information about ADS-C/CPDLC post monitoring tasks. “*



Data have been provided by States, but regrettably, some part of the information has been received late and could not be considered for the analysis (Data received after January 2015).

On the other hand, conclusion SAT19/17 created the “NEW AIRSPACE CONCEPT IN THE EUR/SAM CORRIDOR task force” as responsible for the proposal of a Roadmap and the development of the new Airspace Concept for EUR/SAM Corridor, based on the application of RNP 4, ADS-C and CPDLC.

It is expected that during SAT20 this roadmap is approved, so the requirement of a total consolidation of ADS/CPDLC services in the corridor is out of doubt. Moreover it becomes a requisite. As a first step, granting a 50NM separation based on ADS/CPDLC in the corridor means a proactive implication to understand and avoid any FANS System atypical or unexpected behavior. Finding out exceptions and malfunctions should be an essential issue in order to recommend and enhance proper actions or even initiate coordinated surveys.

According to that, SATMA has extracted a summary of issues occurred in ADS/CPDLC system (Canarias FIR – SACCAN) that should be highlighted for a common study. That section of the study runs into generic potential problems identified in the system, classifying them into operational (Air side-Ground side), technical and related to interoperability. A deep and comprehensive reading should be of the main interest of all parts involved, and a point to be regularly debated in FIT meetings. An important part of the presentation annexed (Annex B) tries to deal with those issues.

The annexed presentation includes conclusions/results about actions performed by CFRA in 2015.

Below it can be seen two examples:

ACTION 1

The reception of a “DISCONNECT REQUEST” (DR) results in the aircraft disconnection of the active CPDLC data link, but also of the inactive CPDLC data link (next ATC centre), if it existed (except for B747-400 aircraft that ignore the DR message).

Canarias ACC has distributed a notice event so ATCO take into account that to terminate a CPDLC connection an “END OF SERVICE” should be sent prior to “DISCONNECT”.

- 1.- CPDLC: “NEXT DATA AUTHORITY”
- 2.- CPDLC: “FN_CAD”
- 3.- CPDLC: “END SERVICE” (5 minutes prior to border)

ACTION 2

Some companies are not filling properly the FPL regarding equipment onboard, as they are just including J1 CPDLC ATN but not including J6 and/or J7 to indicate CPDLC FANS 1/A equipment on board.

The CPDLC related keys to be included in the FPL are the following:



- J1 CPDLC ATN VDL
Mode 2 (See Note 3)
- J2 CPDLC FANS 1/A
HF DL
- J3 CPDLC FANS 1/A
VDL Mode 4
- J4 CPDLC FANS 1/A
VDL Mode 2
- J5 CPDLC FANS 1/A
SATCOM
(INMARSAT)
- J6 CPDLC FANS 1/A
SATCOM (MTSAT)
- J7 CPDLC FANS 1/A SATCOM
(Iridium)

A detailed document for the year 2014, based primarily on records from the ADS/CPDLC System of the Canarias FIR , has been performed and titled “Analysis of FANS services in the EUR/SAM corridor 2014”. This document (Annex A) will be attached with a summarised (Annex B) presentation during FIT meeting.

The “Analysis of FANS services in the EUR/SAM corridor (Canarias Airspace) 2014 Report” will be also uploaded to SATMA web page (www.satmasat.com).

2. ACTION BY THE MEETING

The SAT/FIT/10 Meeting is invited to:

- a) Analyze and discuss data to be sent to the CFRA;
- b) Follow scheduled periods for the data collection;
- c) Discuss and establish actions regarding “Potential Problems Identified”;
- d) Comment the “Analysis of FANS services in the EUR/SAM corridor 2014 Report”.

ANNEX A - ANALYSIS OF FANS SERVICES IN EUR/SAM 2014”

ANNEX B- PRESENTATION