# AIRTEL IN SESAR2020 PROJECT 31

DIGITS - DEMONSTRATION OF ATM IMPROVEMENTS GENERATED BY INITIAL TRAJECTORY SHARING

The future ATM Operational Concepts proposed by SESAR and enabled by the various ATM elements and SESAR2020 ATM solutions, will require an underlying supporting infrastructure including air-ground exchange of trajectory data. Within SESAR2020, Project 31 ("DIGITS - Demonstration of ATM Improvements Generated by Initial Trajectory Sharing", led by Airbus) is demonstrating the benefits of Extended Projected Profile (EPP), a key enabler of the future European ATM system and a central component of the Single European Sky.

Airtel ATN Ltd., a member of the NATMIG consortium, is an active member of DIGITS in the area of air-ground infrastructure, which enables the benefits of EPP to be demonstrated and realised.

DIGITS will enable ANSPs to evaluate the benefits of Trajectory-Based Operations, to develop appropriate CWPs, to train controllers and to develop operational procedures. The project thus represents a major advance towards operational deployment and usage of Trajectory-Based Operations.

DIGITS is a Very Large Demonstration (VLD) project, whereby approximately 80 aircraft from 8 airlines on revenue flights will be equipped with EPP avionics and will interact with ground systems in an operationally realistic environment. The project will demonstrate Initial Trajectory Information Sharing in the airspace of DFS, ENAV, Maastricht Upper Air Centre and UK NATS. In addition, the project is supported by Eurocontrol Experimental Centre (EEC), which is providing critical test and validation infrastructure.
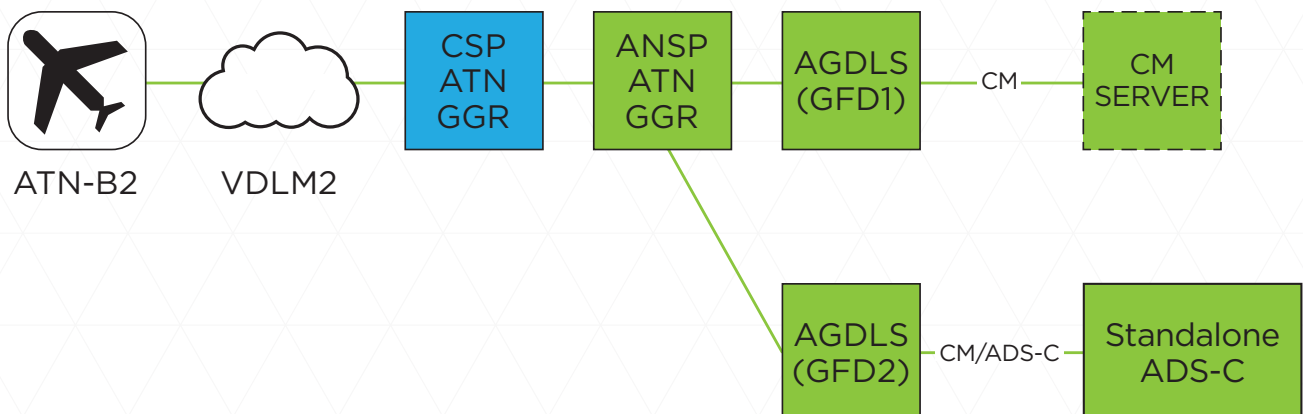
AIRTEL'S CONTRIBUTION TO THE DIGITS PROJECT INCLUDES:

Air-Ground Data Link Server (AGDLS)

The AGDLS (Air Ground Data Link Server) provides the communications path for ATN communications between the ATC System and aircraft via the ATN Routers. The AGDLS provides a Link 2000+ compliant ATN end-system with support for the ATN Applications (CM, CPDLC). The AGDLS is deployed in several ANSPs in support of air-ground data link, compliant with the European data link mandate.

For DIGITS, Airtel's Air-Ground Data Link Server has been upgraded to support ATN-B2 CM/CPDLC/ADS-C and is deployed at DFS and UK NATS, providing the mobile data link infrastructure enabling the CPDLC and ADS-C applications that form the essential services supporting EPP.

ATN-B2 Data Link Test Tools

Airtel is providing air and ground data link tests tools to the Eurocontrol Experimental Centre. These enable ground facilities at the ANSPs to be validated over operational networks in advance of integration with the Airbus avionics. In addition, the avionics can be validated in a standalone configuration before connection to the ANSPs.

CM Server

Airtel is providing a CM Server facility, which will be deployed at DFS. Its purpose is to simplify the operational procedures for pilots. For PJ31 flights, the pilot will additionally only log on to the CM Server PJ31 address. The CM Server is responsible for sharing the aircraft CM Logon information to the other ANSPs. (this is done using the CM-Contact Air/Ground exchange).

Standalone ADS-C

Airtel is providing a Standalone ADS-C facility which supports CM-Logon acceptance and establishment of ADS-C contracts. ADS-C contract establishment is controlled via external trigger event.

Summary

Airtel's experience in the development and operational deployment of data link software at network and application level means the company is very strongly placed to support its partners in the provision of the next generation of Communication infrastructure.

ABOUT AIRTEL

Airtel are a leading provider of Air/Ground Data Communication software, infrastructure and test equipment, delivering CPDLC compliance across Europe and in over 35 countries worldwide. Several European ANSPs and over 4,000 aircraft are data link enabled by Airtel ATN software and equipment.

Airtel test tools have validated data link communications for ANSPs across Europe as well as at Airports in the US.

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