The SITA AIRCOM ADS-CPDLC Gateway and ADS-CPDLC Workstation solutions enable easy and early implementation of Automatic Dependant Surveillance (ADS) and Controller Pilot Data Link Communications (CPDLC) applications.

**AIR TRAFFIC SERVICE (ATS) USE OF DATA LINK**

The first proposal to use data link for ATS came from the International Civil Aviation Organization’s (ICAO) committee on Future Air Navigation Systems (FANS) which issued a report in 1988 recommending the use of satellite communications and data link.

The FANS committee recommended a transition from conventional Air Traffic Control using analog Communications, Navigation and Surveillance (CNS) infrastructure to an Air Traffic Management (ATM) system using a digital CNS infrastructure.

Following the adoption of the FANS report, the ICAO created the ADS panel tasked with the standardization of both ADS and CPDLC applications, initially designed to be implemented within an Aeronautical Telecommunication Network (ATN) environment.

**FANS AND ATN**

As it was uncertain when ATN networks would be implemented, Boeing decided to develop a FANS-1 ADS/CPDLC package using the ACARS networks. The first FANS-1 package was certified in 1995. Airbus subsequently developed the FANS-A package. Collectively, these implementations are referred to as FANS-1/A and support ACARS-based ADS and CPDLC.

ATN CPDLC is currently being implemented in Europe under Regulation (EC) No. 29/2009 – the Data Link Services Implementing Rule (DLS IR).

The EU regulation applies from 7 February 2013 – the deadline by which CPDLC must have been implemented by all ANSPs in Western Europe. The same requirement will apply to all ANSPs in Eastern Europe from 5 February 2015.

**ADS-CPDLC Gateway system architecture**

**DATA SHEET**
ADS-CPDLC GATEWAY – AN EFFECTIVE ‘DUAL STACK’ SOLUTION

- Enables an easy implementation of both CPDLC and ADS applications.
- Supports simultaneous communication with both ATN and FANS-1/A aircraft enabling Air Navigation Service Providers to accommodate both ATN-based and FANS-1/A-based aircraft.

EUROCONTROL AND DFS – CONTRACT AWARD

Following EUROCONTROL, and the German Air Navigation Service Provider, DFS, a number of European ANSPs have contracted the Egis Avia/SITA consortium to supply the new generation of data link gateway systems, known as the Data Link Front End Processor (DL-FEP). This application is based on the SITA ADS-CPDLC Gateway and allows FANS-1/A aircraft accommodation in the ANSP’s ATN-based airspace.

ADS-CPDLC WORKSTATION – AN EFFECTIVE EASY AND EARLY IMPLEMENTATION APPROACH

- Air – Ground data link communication performance and assess whether they are suitable with minimum requirements for en–route and/or oceanic environments.
- Acquire necessary experience with ADS and CPDLC applications in order to specify appropriate requirements for such implementation in operational ATM infrastructure.
- Work independently from existing ATM systems.