The SITA ATC Datalink and Voice Solutions enable Air Navigation Service Providers to deliver safety and efficiency benefits to equipped airspace users today.

AIR NAVIGATION SERVICE PROVIDER USE OF DATALINK TECHNOLOGY

Use of air-to-ground datalink has been endorsed by ICAO as a key enabler for the delivery of benefits foreseen in its vision of a performance based Global Air Traffic Management system.

Use of datalink contributes towards maintaining and enhancing air navigation services safety and efficiency in all flight phases. For example, data link can assist in addressing operational shortcomings such as controller-pilot misunderstandings, transcription errors, non-standard phraseology, and frequency congestion that are typically associated with the use of voice operations and procedures. Data link technology can also facilitate both communications and surveillance in oceanic and remote airspace.
SITA ATC AIRCOM SERVICES AND SYSTEM SOLUTIONS PORTFOLIO

The SITA ATC AIRCOM Datalink Services enable ANSP datalink applications access to suitably equipped aircraft. The SITA ATC AIRCOM System Solutions provide ANSPs with a low cost option to implement datalink applications.

The SITA AIRCOM Aircraft Communications Addressing and Reporting System (ACARS) datalink or Aeronautical Telecommunication Network (ATN) services may be used to provide the required network and datalink connectivity as appropriate.

SITA ATC AIRCOM DATALINK SERVICES

The SITA AIRCOM ACARS and ATN datalink Services provide worldwide coverage via both VHF and satellite media. These services are compliant with the applicable AEEC ACARS standards and ICAO Standards and Recommended Practices for VHF Digital Link Mode 2 and ATN.

SITA ACARS-BASED ATC SERVICES

The services include the following:
- Pre-FANS’ supporting applications such as Digital-Automatic Terminal Information Service (d-ATIS), d-VOLMET, Departure Clearance (DCL) and Oceanic Clearance (OCL)
- FANS-1/A supporting applications including Controller-Pilot Datalink Communications (CPDLC) and Automatic Dependent Surveillance-Contract (ADS-C)
- CFRS (Centralized FMC Waypoint Reporting System)
- CADS (Centralized ADS System) [for FANS-1/A ADS]

SITA offers CFRS and CADS centralized services to those ANSPs wishing to get position reporting via datalink without having to make an investment in an end system CFRS or ADS-C application implementation, respectively.

SITA ICAO COMPLIANT ATN/VDL MODE 2 SERVICE

SITA has been providing ICAO-compliant ATN/VDL Mode 2 communications services in Europe since 2005 within the context of the EUROCONTROL Link2000+ program.
SITA ATN/VDL MODE 2 PARTNERSHIPS WITH ANSPs

SITA has established partnership agreements with those ANSPs that wish to acquire, own, and operate the ATN/VDL Mode 2 datalink infrastructure in their area of responsibility. These partnerships include SITA supplying the VHF Ground stations and ATN routers.

OTHER SITA SERVICES SUPPORTING ATS

D-ATIS Gateway Service
SITA offers the SITA d-ATIS Gateway service that enables otherwise incompatible avionics and d-ATIS ground systems to communicate.

AIRCOM Cockpit Voice SATCOM Voice ATC Solution
SITA offers a satellite based voice service as an alternative to HF voice. The SITA SATCOM voice service has undergone evaluation by the ICAO group responsible for the North Atlantic region. SATCOM voice provides clear advantages over the traditional High Frequency (HF), the latter being subject to atmospheric conditions and providing low quality of service.

SITA ATC AIRCOM SYSTEM SOLUTIONS

These address datalink requirements in the:
- ATC Tower
- ATC En-Route Centers

ATC TOWER

AIRCOMevatis and AIRCOMevamet are the d-ATIS and d-VOLMET ground end system solutions enabling ANSPs to transmit ATIS and VOLMET information via both VHF voice broadcast (HF broadcast also for d-VOLMET) and ACARS datalink.

Controller benefits: The implementation of d-ATIS and d-VOLMET solutions relieves the controller of the tiresome and repetitive task of recording material for transmission. Meteorological data is automatically retrieved and updated on the user interface, while a synthesized voice automatically generates the ATIS/VOLMET message at the controller’s request.

AIRCOM DATALINK & ATS AIRCOM EVOLUTION

1984 : VHF AIRCOM ACARS SERVICE
1990’s : SATELLITE AIRCOM, ATS AIRCOM, ACC INTERNETWORKING, ATS INTERNETWORKING
2001 : VDL AIRCOM
2005 : ATN AIRCOM
2008 : Iridium (INITIALLY ADC ONLY ATS USE SUBJECT TO REGULATORY APPROVAL)

AIRCOM Datalink and ATS AIRCOM evolution
**Flight crew benefits:** Flight crew ATIS access via datalink enables access during all flight phases and mitigates the risk of misunderstanding and transcription errors.

CATS is a d-ATIS and d-VOLMET centralized server, enabling ANSPs to provide a d-ATIS and d-VOLMET datalink service for several airports from a single ground system.

AIRCOMclever enables ANSPs to receive DCL requests from the cockpit and transmit DCL to departing aircraft via data link.

**Controller benefits:** DCL requests can be handled by the controller in sequence, and processed by a single keystroke, as convenient.

**Flight crew benefits:** The datalink service provides de-synchronization of the DCL procedure: the pilot can request DCL and then continue to prepare for the flight instead of monitoring the ATC frequency. Once clearance is received, the pilot will then send a DCL acknowledgment.

**Other benefits:** The datalink service increases safety by mitigating the risk of potential misunderstandings due to poor VHF voice quality. In addition, the use of datalink results in a significant decrease in ATC pre-flight frequency congestion.

**ATC EN-ROUTE CENTERS**

The AiRCOM ADS-CPDLC Gateway system is a ground system enabling ANSPs to exchange ADS and CPDLC data with both FANS and ATN datalink equipped aircraft.

EUROCONTROL and the German Air Navigation Service Provider, DFS, have procured from the Egis Avia/SITA Consortium the next generation of data link gateway systems, known as the Data Link Front End Processor (DL-FEP). The SITA/Egis Avia Consortium has already been contracted to supply the DL-FEP by the UK Air Navigation Service Provider, NATS, and the Swiss ANSP, Skyguide.

The AiRCOM ADS-CPDLC Workstation enables an easy and early implementation of ADS and CPDLC applications. The ADS-CPDLC Workstation implements both applications in multiple data-link environments, in a seamless way for the controller, such as:

- FANS only environment (supporting both FANS-1 and FANS-A).
- ATN only environment (as defined per ICAO SARPs).
- Mixed FANS and ATN environments.
**CPDLC benefits:** Use of CPDLC overcomes the inherent issues associated with voice communications and enables standard phraseology through use of preformatted messages and reduces risk of misunderstanding thus enhancing safety.

**ADS benefits:** Use of ADS enables automatic downlinking of position reports. In addition, in oceanic and remote areas, the use of ADS combined with CPDLC enables more flexible routing and potential separation minimal reductions, and can lead to reduced flight times, reduced delays, resulting in reduced costs to the airline.
SITA AT A GLANCE

The air transport industry is the most dynamic and exciting community on earth – and SITA is its heart.

- Our vision is to be the chosen technology partner of the industry, a position we will attain through flawless customer service and a unique portfolio of IT and communications solutions that covers the industry’s every need 24/7.
- We are the innovators of the industry. Our experts and developers keep it fuelled with a constant stream of ground-breaking products and solutions. We are the ones who see the potential in the latest technology and put it to work.
- Our customers include airlines, airports, GDSs and governments. We work with around 500 air transport industry members and 2,800 customers in over 200 countries and territories.
- We are open, energetic and committed. We work in collaboration with our partners and customers to ensure we are always delivering the most effective, most efficient solutions.
- We own and operate the world’s most extensive communications network. It’s the vital asset that keeps the global air transport industry connected.
- We are 100% owned by the air transport industry – a unique status that enables us to understand and respond to its needs better than anyone.
- Our annual IT surveys for airlines, airports and passenger self-service are industry-renowned and the only ones of their kind.
- We sponsor .aero, the top-level internet domain reserved exclusively for aviation.
- In 2011, we had consolidated revenues of US$1.517 billion (€1.09 billion).

For further information, please visit [www.sita.aero](http://www.sita.aero)

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