USE CASE

# FUTURE AIR NAVIGATION SYSTEMS (FANS)-1/A SERVICE

## MAINTAINING AND ENHANCING AIR NAVIGATION SAFETY AND EFFICIENCY

The use of datalink contributes towards maintaining and enhancing air navigation services safety and efficiency during all flight phases. The SITA ATS AIRCOM FANS-1/A service enables air navigation service providers (ANSPs) that provide FANS-1/A service(s) to communicate with participating aircraft.

### ISSUES

**North Atlantic mandate**

The North Atlantic (NAT) Region datalink mandate is now effective. The first phase of this mandate came into effect on 7 February 2013 and second phase commences on 15 February 2015.

**Voice operations and procedures shortcomings**

Excessive controller and pilot workload, controller-pilot misunderstandings, transcription errors, non-standard phraseology and frequency congestion are typically associated with the use of voice operations and procedures.

### SOLUTION

The SITA ATS AIRCOM Future Air Navigation System (FANS)-1/A service enables Air Navigation Service Providers (ANSPs) that provide FANS-1/A service(s) to communicate with participating aircraft by facilitating access to the SITA datalink network, as well as access to other datalink service providers' networks that support FANS-1/A through delivering an Internetworking function.

The FANS applications include Controller-Pilot Datalink Communications (CPDLC) which ensures standard phraseology through the use of pre-formatted messages, and reduces the risk of misunderstanding, thus enhancing safety.
The Automatic Dependent Surveillance in position reports are sent automatically via datalink communications.

### BENEFITS

- The use of CPDLC and ADS-C can lead to **reduced flight times and delays**, resulting in reduced costs to the aircraft operator.
- Use of CPDLC facilitates standard phraseology through use of pre-formatted messages, and reduces risk of misunderstanding, thus **enhancing safety**.
- Use of ADS-C enables position information to be automatically downlinked.
- Use of CPDLC and ADS-C facilitates dynamic routing and therefore helps ANSPs to chose a **more fuel efficient** flight route.
- Use of CPDLC and ADS-C enables potential **reduction in separation minima**.
- Overcomes issues with VHF and HF voice operations.

**The vast majority of ANSPs delivering FANS-1/A services have chosen SITA**

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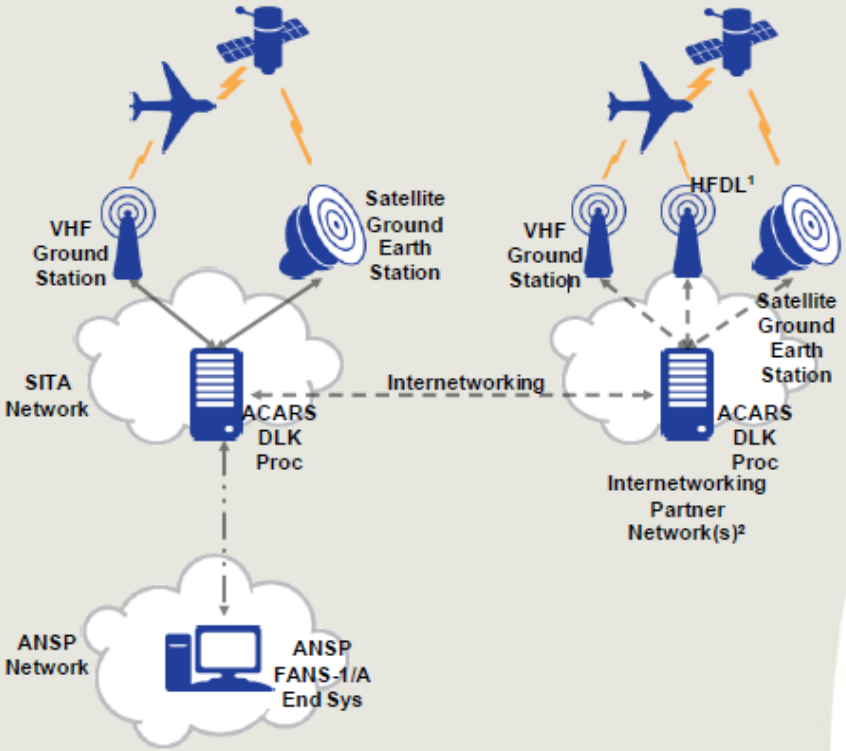
## HOW DOES IT WORK?




## SOLUTION COMPONENTS

**Required connectivity**

The connectivity required to access the SITA datalink infrastructure.

**Managed service**

The managed service elements include:

- AIRCOM operations service desk 24/7/365 support and monitoring
- AIRCOM specialist technical support
- Service advisories
- Monthly traffic and performance reporting
- Access to aircraft using SITA ACARS datalink service
- ATS Internetworking with other communications service providers, so as to allow access to aircraft using a non-SITA ACARS datalink service
- Customer configuring

## CASE STUDY

SITA is the selected FANS-1/A service provider for the majority of the current ANSP FANS-1/A implementations around the world.

SITA has gained extensive experience over the years, dating back to 1994-1995 when SITA worked in cooperation with Boeing, Airservices Australia and the United States Federal Aviation Administration (FAA) to achieve Part 25 Certification of the FANS-1 package.

SITA was the initial provider of datalink communications for FANS. SITA is an active participant in all of the associated regional coordination groups and FANS interoperability teams and it has contributed to the formulation of FANS standards.

For more information please contact us at **info@sita.aero**

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