USE CASE

AIRCOM® ATN SERVICES

VHF DATALINK PARTNERSHIP

European Air Navigation Service Providers (ANSPs) have to deploy an ATN/VDLm2 network in order to comply with the EC regulation 2009/29. Most of those who have chosen the option to make their own ATN/VDL m2 network, have also chosen the “VHF Data Link Partnership” approach proposed by SITA, which is a win-win implementation model.

ISSUES

Datalink implementing rule deadline

ANSPs have to meet the EU deadline of Feb 2013 for Western Europe and Feb 2015 for all other EU countries.

Shared datalink network

Aircraft equipped with VDL radios will use the same communications channel for both ATC and AOC purposes.

Safety requirements

ANSPs have to ensure that their network quality of service meets safety requirements.

SOLUTION – VHF DATA LINK PARTNERSHIP

The VHF Data Link Partnership approach, as proposed by SITA, follows this implementation model:

SITA provides the datalink infrastructure components for the ANSP (VHF stations, ATN routers and monitoring systems).

The ANSP deploys, connects to its network, operates and maintains the VHF data link infrastructure, which is then used for both ATC and SITA airline customers’ communications (AOC).

SITA contributes to the ANSP costs for operating the VHF infrastructure.

BENEFITS

The VHF Data Link Partnership model offers these benefits:

- ANSPs become owners of a state-of-the art air-ground datalink communications infrastructure at a fraction of the cost that would be incurred if it were developed from scratch.
- The infrastructure is deployed in a cost- effective manner, and operating costs are shared with SITA.
- SITA benefits from a high-quality VHF network that operates at ATC performance and availability standards.
- The deployed VDL/m2 network serves both ATC and AOC communications, and operating costs are shared with the partner ANSP.

11% capacity increase with ATN/CPDLC implementation in Europe

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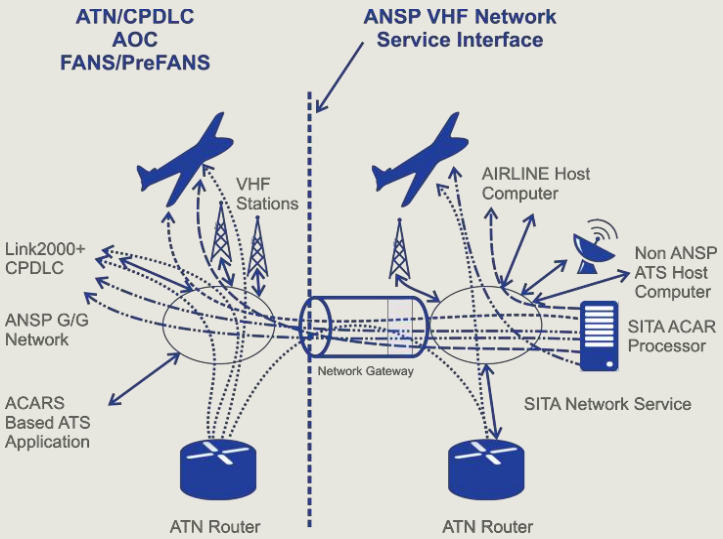
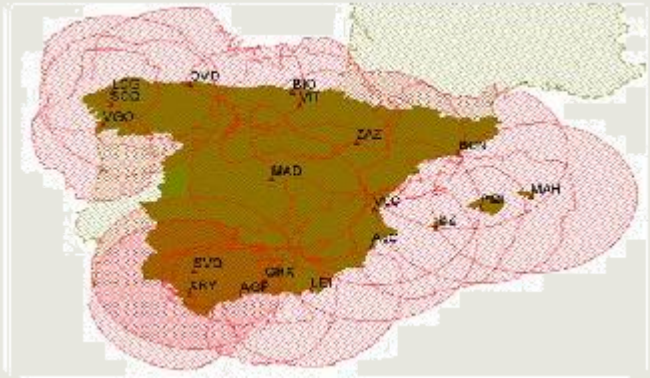
HOW DOES IT WORK?



Datalink traffic flows in a VHF partnership.



SOLUTION COMPONENTS

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1. VHF Ground Station (VGS)
The VHF Ground Station (VGS) hosts the VDL and POA (Plain Old ACARS) radios from Rohde & Schwarz, and VHF Ground Computer (VGC).

2. ATN router
The air/ground ATN router will manage ATN traffic and will route CPDLC messages to/from the ANSP ATM system.

3. Monitoring system
The AMOS monitoring system provides an SNMP-compliant solution enabling VHF stations and ATN router monitoring.

4. VDL Performance Monitoring System
The VDL Performance Monitoring System will enable ANSPs to measure VDL quality of service and performance indicators, thus ensuring that the VDL/ATN service is delivered according to the relevant performance and safety requirements.

CASE STUDY – VHF DATA LINK PARTNERSHIP WITH AENA (SPANISH ANSP)

- May 2005: Agreement to deploy additional five VGSs, both POA and VDL, resulting in 26 stations deployed nationwide; this increased to 27 stations in 2007.
- December 2009: New project launched in 2009 to implement D-ATIS and D-VOLMET centralized server, and to deploy a Link 2000+ Test Platform (CPDLC wks, FANS/ATN datalink server, ATN router, and avionic sim test tools)
- January 2012: New agreement to upgrade VDL infrastructure
- Upgrade VGCs with IP connectivity
- Upgrade of AMOS monitoring system
- Installed VDL QoS monitoring tools
- Deployment of 11 additional stations (during 2013)

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

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