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
HOW DOES IT WORK?

SOLUTION COMPONENTS

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