



EUROCAE Working Group 67 - VoIP-based communication services for Air Traffic Management

In 2004, EUROCAE (European Organisation for Civil Aviation Equipment) Working Group 67 was formed to define requirements for VoIP-based communication for Air Traffic Management. Members of Working Group 67 include European Air Navigation Service Providers (ANSPs), suppliers of VCS equipment and ground-based radio systems, the US Federal Aviation Administration (FAA), EUROCONTROL and other equipment suppliers.

February 2009 saw the official release of three major EUROCAE WG-67 specifications (ED-136 to ED-138):

- **ED-136: VoIP ATM System Operational and Technical Requirements**
- **ED-137: Interoperability Standards for VoIP ATM Components**
- **ED-138: Network Requirements and Performances for VoIP ATM Systems**

Through its research and development activities, Frequentis has made a major contribution to these documents.

The aim of EUROCAE WG-67's activities is to harmonise inter-operability of VoIP-based voice communication systems in Air Traffic Management across the globe. The need to develop and agree international standards for voice and data communications networks is critical given the transition to globally integrated air traffic management through SESAR and NEXTGEN. Such standards will ensure a future-proof ATM communication infrastructure and guarantee long-term investment protection for the ANSPs. Many ANSPs worldwide have already included ED-136/137/138 references in their equipment purchase specifications.

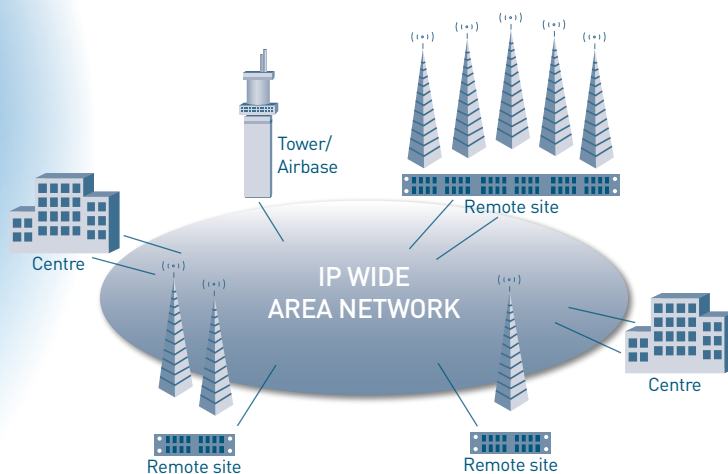
The ED-136/137/138 documents are vital components of the global standardisation process for IP-based ATM voice communication systems. Support for this goal is underpinned by current consultations between the main international bodies, including EUROCONTROL, FAA and ICAO. References to ED-137 documents will be included in the ICAO 'Manual for the ATN using IPS Standards and Protocols DOC 9896 edition 2.0'.

Frequentis is the first ATM system supplier to provide its communication products on the basis of EUROCAE ED-137 specifications

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Verification process

Several ETSI Plugtest™ events have demonstrated system interoperability between various suppliers. Successful field trials were held by the French (DSNA) and German (DFS) air navigation service providers in late 2009. In September 2010, the Icelandic air navigation service provider (ISAVIA), Frequentis and Parkair Systems conducted a field trial that demonstrated the practical application of VoIP in ATM - this included live controller-to-pilot communication. These tests also covered interoperability scenarios involving communication between the new IP-based equipment and the existing infrastructure, thereby verifying the step-by-step migration path to VoIP. All these tests confirmed the maturity of the ED-137 specifications for VoIP in ATM with regard to deployment in an operational environment. The validation process will be continued as part of SESAR Work Package 15.2.10.

Technology partnership between Frequentis and Cisco

Frequentis is also collaborating with Cisco Systems in a technology partnership, in order to meet the stringent performance and safety requirements of future air traffic management networks. As major contributors to the EUROCAE WG-67 specifications, Cisco and Frequentis expect the migration towards IP-based communication systems to be based on these documents. The companies also anticipate that ANSPs across the world will now begin step-by-step deployment of the appropriate solutions.

As world-market leader in the ATM communications and AIM domains Frequentis combines its experience from more than 1,000 projects within its products to offer futureproof solutions. Frequentis provides open-architecture, IP-based communication services compatible with the EUROCAE ED-137/ED-138 standards. Additionally, Frequentis is part of or supports the major research and specification activities that define the future communication concepts (SESAR JU, NextGen, etc.). This ensures that the outcomes of these activities are part of the products and solutions of Frequentis.

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