

# Global Standardization of Voice over IP in the World of Air Traffic Management

## Reaching a Milestone with the VOTER Test Tool

### About EUROCONTROL

The European Organization for the Safety of Air Navigation (EUROCONTROL) is an intergovernmental organization composing of 41 member states and the European Community. EUROCONTROL is committed to building, together with its partners, a Single European Sky that will deliver the air traffic management performance required for the twenty-first century and beyond.

Founded in 1960, this civil-military organization has developed into a vital European repository of air traffic management (ATM) excellence, both leading and supporting ATM improvements across Europe.

### Air Traffic Management–Compliance Testing–VoIP Standardization

#### Project Description

Object of this project is to develop a VoIP test suite able to support global standardization on Voice over Internet Protocol (VoIP) in Air Traffic Management (ATM). Behind the technology migration, VoIP will help to significantly reduce overall communication costs by cutting the expensive maintenance and operational cost of analogue voice circuits. In addition it will bring the appropriate flexibility required for the implementation of the FAB (Functional Airspace Blocks) by enabling dynamic sectoral solutions.

Working in close collaboration with key partners like ICAO, EUROCAE, FAA, ANSPs and Industry, the VOTER test tool has been developed within the framework of the VoIP Implementation Support Group (VOTE) set up by EUROCONTROL. VOTER releases were evaluated by task force members representing both ATM Industry and Air Navigation Service Providers (ANSPs).

#### About the Test Suite

VOTER is a test software which provides the means to test the VoIP in ATM implementations based on Voice Communication Systems (VCS), Ground Radio Stations (GRS) and Voice Recorders (REC) products developed according to the EUROCAE Interoperability Standards for VoIP ATM components (ED137B).

Additionally, VOTER has the capability of executing timing performance measurements between VoIP in ATM components across IP networks.

## **How End-Users Benefit from VOTER**

With VOTER, air navigation service providers verify their implementations of VoIP in ATM services. Industrial manufactures test their Voice Communication Systems (VCS), Ground Radio Stations (GRS) and Voice Recorders (REC) products against the standard.

Generally speaking, VOTER users benefit from the confidence they will have in their implementations and equipment as well as from saving time by performing automated testing.

## **Acceptance of the Project by the ATM Community**

Currently, forty companies and organizations from the European and non-European ATM Community are licensed by EUROCONTROL for using VOTER. The test suite is recognized as the reference for VoIP in ATM implementations, thus the user community is constantly expanding.

## **Reasons to Choose Spirent as your Technology Partner**

Our goal is to see reliable telecommunications and to do so, we develop efficient test tools based on generally accepted industry standards. By developing cutting edge tools quickly to meet the demand of ever changing standards we remain responsive to our customers.

## **Why did EUROCONTROL go for TTCN-3?**

The standardized test language TTCN-3 was specifically designed for testing and certification and allows us maximum flexibility in creating our test solutions. It can be used for conformance testing of communicating systems and infrastructures which is essential for securing the evolution of VOTER.

## **Future Prospects**

As the European VoIP in ATM deployment is planned to be completed within the next 5 years, the VOTER test tool community will constantly expand. Non-European users are already licensed and it is expected that their number will grow too, following VoIP implementations in accordance with the ICAO Global Air Navigation Plan (GANP).

Beyond checking compliance to the standard, VOTER's strength is also based on its capability to evolve by adding new functionalities which enable automated interoperability testing, troubleshooting, on-line monitoring, etc.

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## About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information, visit: [www.spirent.com](http://www.spirent.com)

## Related Links

<https://www.eurocontrol.int/news/voice-over-ip-atm-ready-roll-%E2%80%93-just-10-years-after-launch>

<http://www.eurocontrol.int/press-releases/voice-over-internet-protocol-pole-position-global-atm>

Learn more about Spirent TTCN-3 Automation <https://www.spirent.com/go/TTCN-3>

Learn more about Spirent's TTWorkbench <https://www.spirent.com/Products/TTworkbench>



"Testing Technologies (now Spirent) was able to address the project in an open and committed way and is providing reliable support for the maintenance and the evolution of the VOTER test tool. The company was able to join and understand the ATM community and has delivered a high quality product. VOTER is a milestone on the way to the global implementation of Voice over IP services in the world of Air Traffic Management.", says Liviu POPESCU, Senior Expert, Directorate Network Management at EUROCONTROL".

## Contact Us

For more information, call your Spirent sales representative or visit us on the Web at [www.spirent.com/ContactSpirent](http://www.spirent.com/ContactSpirent).

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