AURALL Air Traffic Control Voice Recording Standardization of VoIP for Air Traffic Management

How VOID Sistemas gains compliance to the EUROCAE ED 137B standard

Manufacturers for Air Traffic Management equipment such as VOID Sistemas face challenging requirements, as the equipment they make directly affects safety with human lives at stake, leaving zero margin of error.

Over 3 decades of experience in developing test solutions for the wired, wireless, positioning and navigation ecosystem enables Spirent to help their customers develop and operate innovative communication networks, devices and applications.

For the advancement of new technology and test methodologies, Spirent works diligently in conjunction with standard bodies, independent test labs and industry forums.

Background

The Air Traffic Management (ATM) telecommunications system is an environment that works continuously 24/7. It is therefore crucial that it remains robust and reliable to guarantee safety as well as maintain an optimized, economical workflow. Therefore, VOID Sistemas has developed AURALL, a powerful system for recording, database storage, administration, and management of any communications made through telephone, mobile phones and radio channels. AURALL is perfectly suited for recording in different settings like ATC/ATM, control centers, including mission critical, and emergency communications.

The Challenge

VOID Sistemas' mission is to provide excellency, efficiency, safety and reliability to new and current clients through the migration from the analogue Voice Communications System (VCS) of the TWR/ACC voice recording technology (AURALL HREC) over to VoIP. Thus, AURALL had to be validated to fulfill all demands and requirements imposed by the EUROCAE´s ED 137B interoperability standard for VoIP Air Traffic Control (ATC) and Air Traffic Management (ATM) components.

The Solution

The EUROCONTROL VoIP in ATM Test Suite (VOTER) provided the means to test the conformance and performance of the VoIP in ATM system AURALL according to the EUROCAE Interoperability Standards for VoIP ATM components ED 137B. Additionally, VOTER has the capability of executing timing performance measurements between VoIP in ATM components across IP networks. Due to this, AURALL could be successfully tested and validated using the VOTER software and as a result, is now ready to perform reliable, standard compliant VoIP communication.

The Conclusion - How End-Users Benefit from AURALL

The validated AURALL system provides EUROCAE ED 137B certified recordings efficiently, based on the standardization in compliance with its safety regulations. It provides expansion flexibility and continued data management as well as guarantees users their implementations and equipment will work perfectly.

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About EUROCONTROL

The European Organization for the Safety of Air Navigation (EUROCONTROL) is an intergovernmental organization composed of more than forty 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. More information at https://www.eurocontrol.int/.

About VOTER

VOTER is the EUROCONTROL VoIP in ATM Test Suite designed to test conformance and performance of the main components of a VoIP Air Traffic Management (ATM) system according to the EUROCAE ED-137 standard. It is based on the powerful test automation platform TTworkbench that has been developed by Spirent Communications Berlin.

Detailed information please find at https://www.spirent.com/Products/TTworkbench/TTsuites/EUROCONTROL-VOTER.

About VOID Sistemas

VOID Sistemas is a Spanish IT company dedicated to the development and implementation of products in the field of Telecommunications Control & Recording Systems and Emergency Alerting Systems services for more than 20 years.

The company is based in Madrid (Spain) and operates in different regions of EU, LATAM and Middle East, where they develop different telecommunications control projects. In addition, they have a network of certified partners that allows them to carry out projects with their clients around the world. More information at http://www.void.es/ and http://www.aurall.com/.

Next Steps

AURALL will continue to evolve its recording systems for the ATC environment, incorporating all new technological advances in security and integration capability (voice, telephony, VoIP, radio, etc.) while preserving its reliability. They will continue:

- Working on improvements in the Human-Machine Interface (HMI) on its mobile platform as well as the incorporation of touch technology.
- Designing new security mechanisms that allow the creation of admissible and reliable recordings for audits or the reconstruction of events and incidents.
- Improving the interoperability with other communications systems to ensure that AURALL can work with any other manufacturer of VCS.
- Enhancing AURALL functions for automatic control and recovery of data.
- Providing air traffic controllers and users with a better understanding of the information in the recorders and allow them to improve their operations.

"As manufacturers in voice, video and data recording technology, VOID Sistemas with their trademark AURALL represent a commitment to permanent innovation. The user-friendly VOTER tool helped us to easily validate our telecommunications system to make it meet and exceed the demands of the market and regulations. This allows us to provide our customers with solutions that guarantee secure, reliable and accurate recordings",

says Joaquín Galve Subías,
Maintenance Manager of SNA Zaragoza, ENAIRE Spain

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