


DELIVERING VOIP TECHNOLOGY TO THE USA

The US National Airspace System's communication infrastructure will benefit from upgrading to safety-focused and future-proof voice over IP technology

Frank Dunn, president and CEO, Rohde & Schwarz USA, Inc.

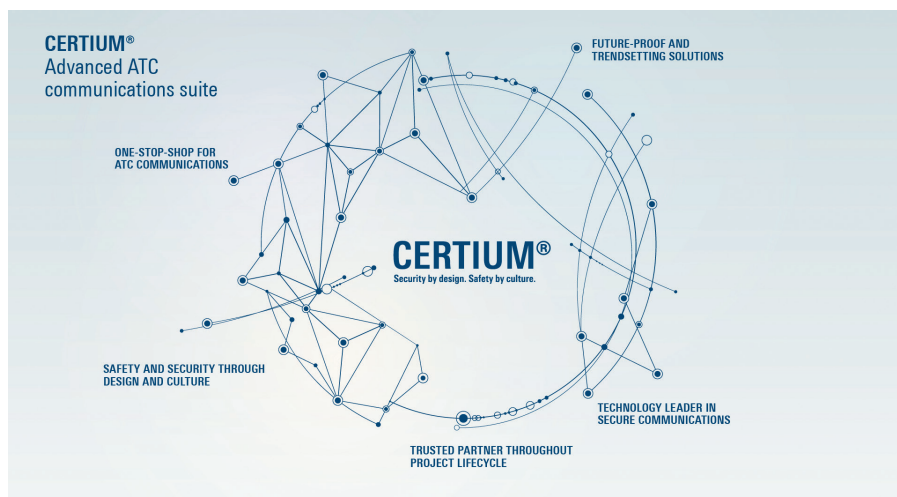
 As the FAA conducts the procurement for its Voice over IP (VoIP) Communications Enterprise program over the next few years, it can count on Rohde & Schwarz USA to upgrade its ATC voice switching infrastructure from legacy systems and equipment to a fully IP and standards based ED-137C-compliant infrastructure of air-to-ground protocol converters, ground-to-ground protocol converters and voice communications systems (VCSs).

Rohde & Schwarz USA (RSA), along with its parent company Rohde & Schwarz GmbH & Co. KG and selected partners, is well suited to support the FAA in modernizing its National Airspace System (NAS). Incorporated in the USA in 1978, RSA has a team of more than 600 engineers, program management, sales and application support, design, production and administrative personnel throughout North America. Headquartered in Columbia, MD, its regional offices located in Oregon and Texas provide R&D and manufacturing capabilities. RSA has the depth, breadth and local experience to work with the FAA to realize its Voice over IP Communications Enterprise (VoICE) goals.

The ideal partner for robust ED-137C-compliant technology

The first phase of the VoICE program seeks to replace the FAA's legacy radio control equipment with air-to-ground protocol converters (APCs) and its legacy telephony control equipment with ground-to-ground protocol converters (GPCs). The Rohde & Schwarz CERTIUM family of media gateways supports the migration of FAA interface types from analog to digital and enables integration of radios, VCSs and telephony systems into an IP infrastructure.

Global air traffic volumes are highly volatile. The global Covid-19 pandemic, recovering passenger numbers, rapid technological change, evolving cyber threats



and limited resources pose great challenges for air navigation service providers. Safety, security and efficiency need to keep pace and are key requirements for ATC. CERTIUM, the Rohde & Schwarz advanced ATC communications suite from the microphone to the antenna meets these demands.

Rohde & Schwarz gateways are ED-137C-compliant and can be customized for specific use cases while leaving room for future adjustments.

In the next phase of the VoICE program, the FAA can take advantage of the widely deployed full IP ED-137C-compliant CERTIUM VCS. A key advantage of the company's fully IP based VCS is a high level of scalability, allowing for system deployments ranging from a single controller working position (CWP) up to fully functional air route traffic control centers (ARTCCs).

RSA recently completed the site acceptance tests for the FAA's Future Flight Services Program FFSP under contract with Leidos. RSA installed the first quad-redundant ED-137C-compliant fully IP VCS in the United States.

The CERTIUM VCS solution provides full redundancy, including distributed deployment over various sites to support geographical redundancy, increased availability and scalability. With Rohde & Schwarz solutions based on products that are in operation worldwide, the FAA can leverage globally-proven CERTIUM capabilities for the VoICE program.

Global experience

Quality and electronic precision have been the hallmarks of Rohde & Schwarz for more than 85 years and its products and systems have earned it an excellent reputation for assuring safe operations worldwide.

The FAA will benefit from the company's position as a global leader in modern ATC communications products, systems and services. RSA is well suited to provide U.S. manufactured, secure, high-quality and capable VoICE solutions. The company has a long history of developing, producing, deploying and supporting large mission-critical systems.

In total, more than 200 airports and ATC centers currently rely on Rohde & Schwarz

ATC products and services. In addition to the FAA's Future Flight Services Program, there are several recent noteworthy projects.

Rohde & Schwarz has equipped the Mojave Air and Space Port's ATC tower with full IP ED-137-compliant VCSs, making it the first FAA certified ATC tower in the USA to use the company's ATC communications equipment. It has also recently implemented the CERTIUM VCS to integrate with an external ATM using the Role Allocation Protocol as part of a project for Airways New Zealand. The company has also deployed 260 CWP for DFS (Deutsche Flugsicherung) across four national area control centers (ACCs) in Germany – an ACC being the equivalent to an ARTCC in the USA. Finally it recently equipped seven ATC towers and two training facilities with full IP ED-137-compliant VCSs that include Rohde & Schwarz gateways for Taiwan Air Navigation and Weather Services.

Each of these ANSPs and airports has different equipment configurations, technical requirements and legacy systems. Multiple layers of redundancy, including an innovative quad-redundant VCS architecture provide customers with uninterrupted availability and



enhanced resilience against disasters.

Rohde & Schwarz has the financial strength, independence and management flexibility to support the FAA realize its VoICE goals. The company puts a premium on innovation and reinvests a large percentage of its revenue every year to develop and further enhance its products to meet evolving customer needs.

The ED-137C-compliant CERTIUM solutions from Rohde & Schwarz are delivered worldwide using proven, robust technologies that ensure dependable voice communications, reliability, sustainability and scalability. RSA is poised to partner with the FAA using this technology to help it realize its mission of providing the safest, most efficient aerospace system in the world. ❖

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