CERTIUM VCS FOR SIMULATOR AND TRAINING SYSTEMS

Your task

Controllers need basic and continuous voice communications system (VCS) training to ensure flight safety. Air navigation service providers (ANSP) often install independent VCS simulator and training systems so that ongoing controller activities at the operational VCS are not disturbed. VCS simulator and training systems have the same user interface and operational behavior, but do not always need to provide the same reliability as the operational system. Flexible, scalable and cost-effective solutions are required.

Rohde&Schwarz solution

The challenges facing such simulator and training installations can be well addressed by deploying a highly scalable IP based communications infrastructure such as the CERTIUM VCS.

Scalability

VCS simulator and training systems are typically smaller installations independent of the main operational system. Small scaled-down VCS training systems have the same look and feel with respect to audio accessories, graphical user interface and operational behavior. Modern IP based systems with distributed network intelligence do not require a central switching unit, providing pay-as-you-grow scalability that allows small systems to start with one server and one controller working position.

Cost-effectiveness

Thanks to the high system scalability, ANSPs only need to invest in basic VCS devices to build a functioning non-redundant training or simulator system. Sharing the same IP infrastructure for voice and data applications, such as radar and flight plan data, creates synergies in procurement, operation and maintenance, all of which leads to significant cost savings.

Purchasing both the main operational VCS and the simulator/training VCS from a single source further reduces ANSP efforts.

Space-saving

The VCS has state-of-the-art IP technology and does not need proprietary central TDM switches. Instead, it makes extensive use of COTS hardware and lightweight endpoints that provide great flexibility in final system dimensioning. A small IP based VCS with a few controller working positions, gateways and servers only requires a few height units in a 19" cabinet.

The CERTIUM VCS features all the advantages of a true IP based VCS and provides ANSPs with everything they need.

Application

Romanian air navigation service provider ROMATSA equipped its simulation and training system for the Bucharest towers with the IP based VCS from Rohde&Schwarz. The fully IP based VCS provides the necessary scalability to deploy small-scale systems with identical features and operational behavior like the actual IP based VCS (also from Rohde&Schwarz). It handles the same air-ground and ground-ground communications services. While the controller has the same look and feel, the system behind it runs on a single COTS server along with hardware to emulate analog interfaces.

ROMATSA simulator and training system.

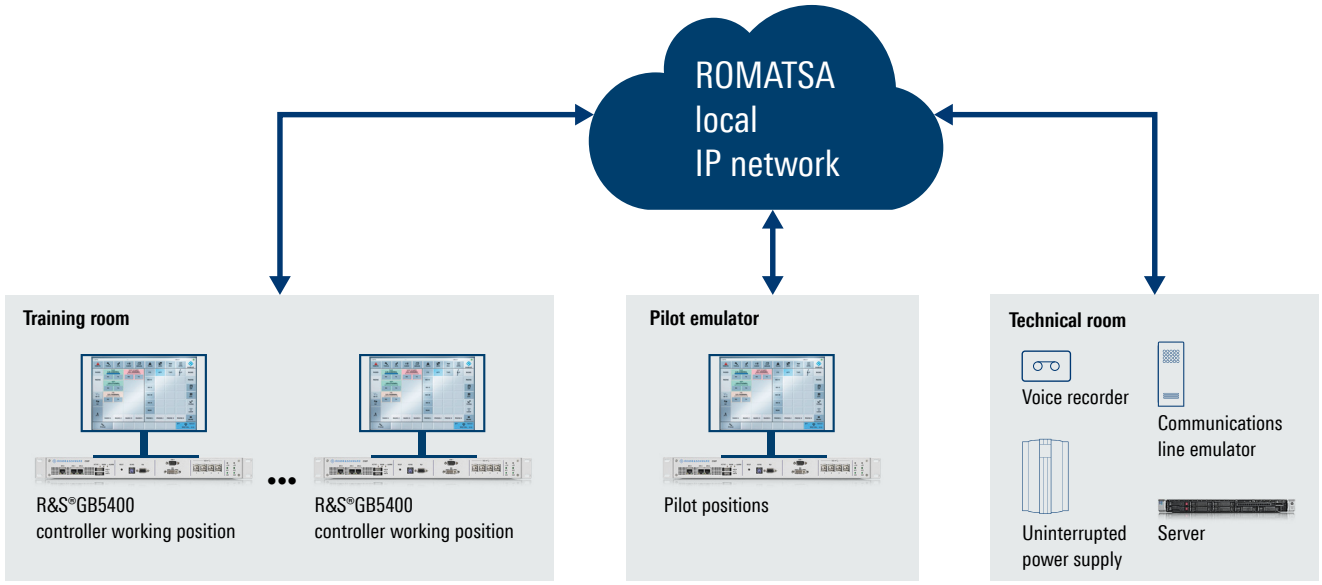
ROMATSA staff uses the simulator and training system for their basic and continuous training as well as for scenario simulation. Together with the other air traffic management (ATM) systems in place in the training center, real-life scenarios can be trained and critical situations replayed. Controllers and supervisors from ROMATSA receive the best possible preparation for real-life operation. The entire communications system is integrated with the ATM system of the ROMATSA simulator and training system into one common IP network infrastructure.

System overview:

- Rohde&Schwarz controller working positions
- Trainer working position
- Pilot working positions
- Air-ground line emulation
- Ground-ground line emulation for intercom

Rohde&Schwarz Topex SA integrated the system.

Rohde&Schwarz IP based VCS for ROMATSA simulator and training system



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