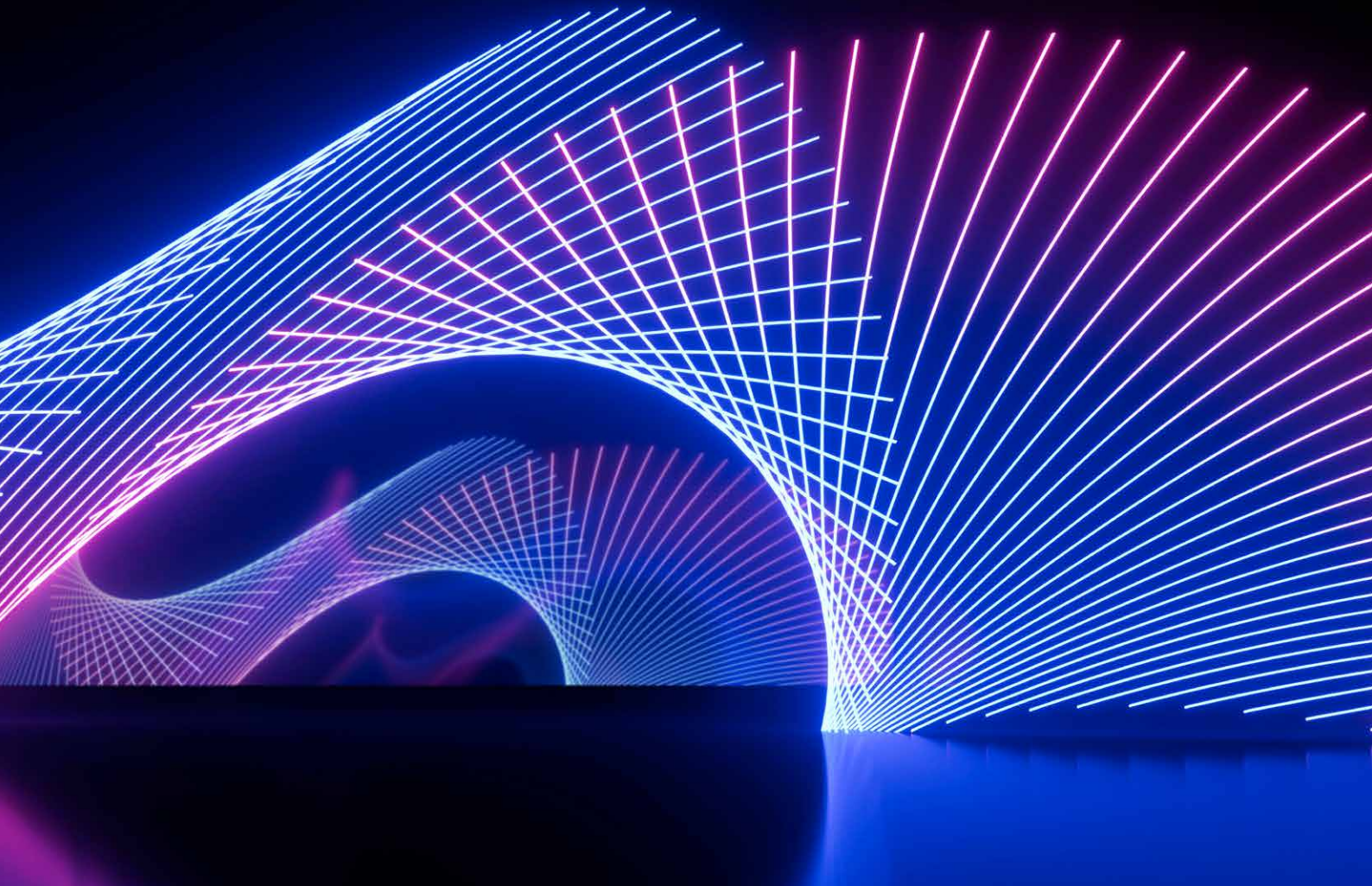


Empowering communications governance:

PARTNERING FOR A CONNECTED WORLD



ROHDE & SCHWARZ

Make ideas real





THE CHALLENGE: **A GROWING DEMAND FOR A LIMITED RESOURCE**

The electromagnetic spectrum is the backbone of modern communications – and demand is soaring. Regulatory authorities and the International Telecommunication Union (ITU) share the critical task of managing this vital resource effectively to ensure reliable connectivity, protecting against interference, and enabling innovation. At Rohde & Schwarz, we understand these challenges and provide the systems needed to address them.

We go beyond simply providing technology. We partner with regulatory authorities and the ITU to safeguard national security, promote economic growth, foster innovation in line with global standards, and deliver a more connected future.

WHY CHOOSE ROHDE & SCHWARZ?

Rohde & Schwarz offers a fully integrated ecosystem for mastering the electromagnetic spectrum and digital communications. Our solutions ensure accuracy and compliance across signal and network testing, advanced cybersecurity, and more – and they are all built compliant to ITU and global standards, and backed by our reputation as a reliable one-stop shop.

Here’s what sets us apart:

- ▶ **Complete solutions:**
a comprehensive product, system and service solution portfolio.
- ▶ **Unrivalled expertise:**
decades of technological leadership and application knowledge in all aspects of the electromagnetic spectrum.
- ▶ **Valuable partnerships:**
We are dedicated to strong collaboration and provide long-term support



UNLOCK SPECTRUM POTENTIAL 06
EFFECTIVE PLANNING AND
LICENSING FOR EFFICIENT
UTILIZATION



SAFEGUARD CONNECTIVITY 08
MAINTAINING AND
PROTECTING THE SPECTRUM



FUEL INNOVATION 10
SHAPING THE FUTURE
OF COMMUNICATIONS



CONNECT THE WORLD 12
ENABLING DIGITAL INCLUSION
AND ADVANCING
GLOBAL STANDARDS

UNLOCK SPECTRUM POTENTIAL EFFECTIVE PLANNING AND LICENSING FOR EFFICIENT UTILIZATION

Regulatory authorities face the constant challenge of optimizing spectrum utilization. Inefficient spectrum use and wasted bandwidth slows economic growth and restricts access to critical services. Meeting the growing demand for wireless services and minimizing interference is therefore paramount.



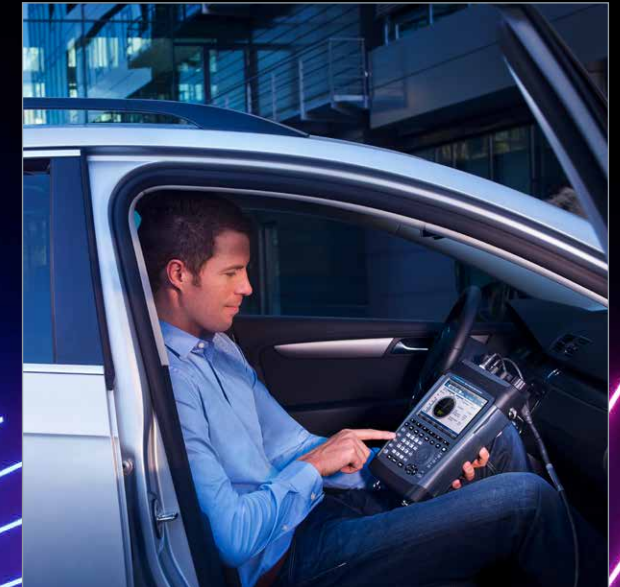
OFFER THE NECESSARY TOOLS AND EXPERTISE TO ADDRESS THESE CHALLENGES. FOR A COMPREHENSIVE UNDERSTANDING OF THE ELECTROMAGNETIC SPECTRUM, OUR SOLUTIONS PROVIDE:

- **Real-time spectrum insights:**
accurate occupancy measurements reveal exactly how frequencies are being used
- **Coverage and performance evaluation:**
data verifies if licensees are meeting their obligation to deliver reliable service

The precise insights our technologies deliver empower regulatory authorities to make informed, decisions based on hard data in their planning and licensing processes. They can ensure that the spectrum is used efficiently, and that each service has the required capacity.

SAFEGUARD CONNECTIVITY MAINTAINING AND PROTECTING THE SPECTRUM

Interference, illicit transmissions, and malicious attacks pose a significant threat to critical communication networks. Because frequency bands represent a constraint in spectrum allocation – like a highway with a finite number of lanes – disruptive signals degrade the capacity and efficiency of intended communications. Each instance of interference consumes valuable spectrum, diminishing data throughput and reducing signal quality. This jeopardizes essential services such as emergency response, power distribution, and financial transactions, as well as public safety.



ROBUST PROTECTION, RAPID DETECTION, IDENTIFICATION AND MITIGATION OF RISKS ARE ESSENTIAL TO ENSURING THE INTEGRITY AND AVAILABILITY OF VITAL FREQUENCY BANDS AND MAINTAINING RELIABLE CONNECTIVITY. COMPREHENSIVE MONITORING CAN ADDRESS THE ABOVE-MENTIONED THREATS AND USE ROHDE & SCHWARZ TECHNOLOGIES FOR:

- ▶ **Electromagnetic compatibility (EMC) expertise:** confirming devices transmit and receive signals correctly within designated frequency bands, mitigating interference and maximizing performance
- ▶ **Rapid interference hunting:** quickly pinpointing and resolving interference sources, restoring network reliability
- ▶ **Unauthorized transmitter detection:** identifying and locating illegal signals, protecting the spectrum from misuse
- ▶ **License compliance enforcement:** ensuring operators adhere to regulations, fostering fair competition and preventing harmful interference
- ▶ **Critical event security:** guaranteeing seamless communication during large-scale events, safeguarding public safety

By providing solutions for the identification, location, and resolution of radio frequency (RF) issues, we enable the creation of secure and resilient communications environments. Our technologies empower regulatory authorities to maintain safe and reliable connectivity on a national and global scale to benefit end-users.

FUEL INNOVATION SHAPING THE FUTURE OF COMMUNICATIONS

The world of communications is changing rapidly, with the emergence of new technologies presenting a significant challenge to spectrum management. Innovations, often relying on wireless transmission, demand access to increasingly scarce radio frequency spectrum. Unlike previous generations of technology with predictable bandwidth needs, new applications like 5G, IoT, and dynamic spectrum access introduce variable and complex demands. These developments not only impact telecommunications, but also industries like automotive, healthcare, manufacturing and public safety.



TO KEEP PACE, EFFECTIVE AND PROACTIVE ASSESSMENT, EVALUATION, AND REGULATION ARE ESSENTIAL. WE SUPPORT REGULATORY AUTHORITIES IN NAVIGATING THIS DYNAMIC ENVIRONMENT THROUGH:

- ▶ **Objective performance assessment:** evaluating the quality and performance of network infrastructures
- ▶ **Standardized testing methodologies:** implementing reliable and replicable testing procedures for comparing networks
- ▶ **Early technology evaluation:** conducting field trials and assessing the impact of emerging technologies

Rohde&Schwarz offers regulatory authorities and the ITU the right systems to strengthen innovation based on data-driven analytics. This fosters fair competition and optimizes performance for consumers and businesses across multiple industries.

CONNECT THE WORLD ENABLING DIGITAL INCLUSION AND ADVANCING GLOBAL STANDARDS

Establishing and advancing globally harmonized communications standards requires ongoing international collaboration and innovation. Broad adoption of these standards is critical for interoperability, so that different devices and networks can communicate effectively. Without common standards, systems struggle to exchange information, and integrating diverse technologies becomes unnecessarily complex.



TO EXPAND ACCESS TO COMMUNICATION TECHNOLOGIES AND ESTABLISH GLOBAL STANDARDS, THE ITU RELIES ON A NETWORK OF STRONG PARTNERS. AS ONE OF THESE PARTNERS, ROHDE & SCHWARZ REINFORCES CONTINUOUS TECHNOLOGICAL ADVANCEMENT VIA:

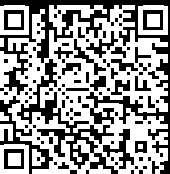
- ▶ **Swift adoption of new standards:** enabling the rapid validation and global deployment of new communication standards
- ▶ **Proactive knowledge sharing:** facilitating forums and workshops that bring together regulators, industry leaders, and experts to share ideas and best practices
- ▶ **Promotion of aligned standards:** supporting the ITU in ensuring interoperability and a connected digital ecosystem

As a trusted partner, we are proud to support the ITU's vision of a connected world – by providing the necessary capabilities to enable international cooperation and ensure reliable global networks.

PARTNER WITH ROHDE & SCHWARZ FOR A MORE CONNECTED FUTURE

Rohde & Schwarz provides comprehensive solutions for navigating the complexities of the electromagnetic spectrum. We offer a complete portfolio – from fixed stations to portable systems and software – tailored to unique requirements. Our partners benefit from the long-standing experience of our experts, who deliver impartial expertise and comprehensive support for training initiatives. Our close collaboration with the ITU ensures a trustworthy and well-informed perspective on current developments.

Contact us today for a consultation and discover more.



INNOVATING ACROSS THE ELECTROMAGNETIC SPECTRUM
Rohde & Schwarz helps telecommunications operators, broadcasters and government agencies maximize the value of the electromagnetic spectrum today and prepare for the advancements of tomorrow. From ensuring regulatory compliance to developing custom solutions, we deliver the expertise needed for innovative technologies to thrive in a rapidly evolving landscape.

- Network monitoring
- Satellite monitoring
- Spectrum monitoring
- Product and equipment safety
- Standardization and education
- Broadcast distribution
- Cellular testing

**EMPOWERING
COMMUNICATIONS
GOVERNANCE:
PARTNERING FOR A
CONNECTED WORLD**

Service at Rohde & Schwarz **You're in great hands**

- ▶ Worldwide
- ▶ Local and personalized
- ▶ Customized and flexible
- ▶ Uncompromising quality
- ▶ Long-term dependability

Rohde & Schwarz

The Rohde & Schwarz technology group is among the trailblazers when it comes to paving the way for a safer and connected world with its leading solutions in test & measurement, technology systems and networks & cybersecurity. Founded more than 90 years ago, the group is a reliable partner for industry and government customers around the globe. The independent company is headquartered in Munich, Germany and has an extensive sales and service network with locations in more than 70 countries.

www.rohde-schwarz.com

Sustainable product design

- ▶ Environmental compatibility and eco-footprint
- ▶ Energy efficiency and low emissions
- ▶ Longevity and optimized total cost of ownership

Rohde & Schwarz customer support

www.rohde-schwarz.com/support



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Rohde & Schwarz – Empowering communications governance

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