

Rohde & Schwarz welcomes all participants to SDR-WInnComm-Europe 2013

Manfred Fleischmann

President and CEO

Rohde & Schwarz GmbH & Co. KG

SDR WInnComm Europe, Munich

June 12, 2013



Rohde & Schwarz at a glance

History

- I Established in 1933 in Munich, Germany by Dr. Hermann Schwarz (left) and Dr. Lothar Rohde

Type of enterprise

- I Independent family-owned company

Global presence

- I In over 70 countries, approx. 60 subsidiaries

Net revenue

- I Approx. EUR 1.8 billion (FY 11/12, July through June)

Balance sheet total

- I EUR 2.84 billion (as of June 2012)

Export share

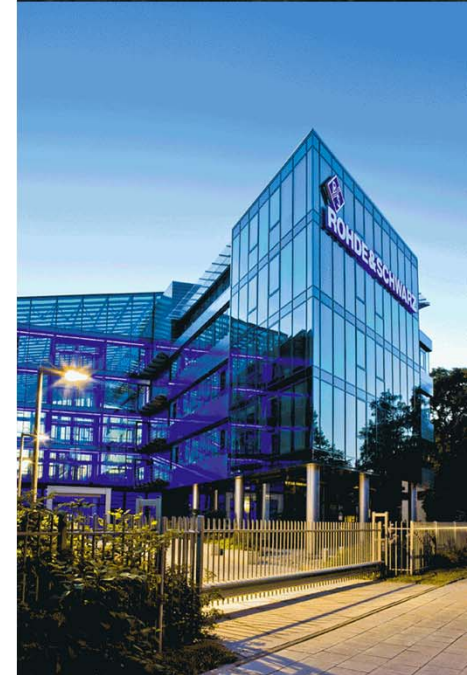
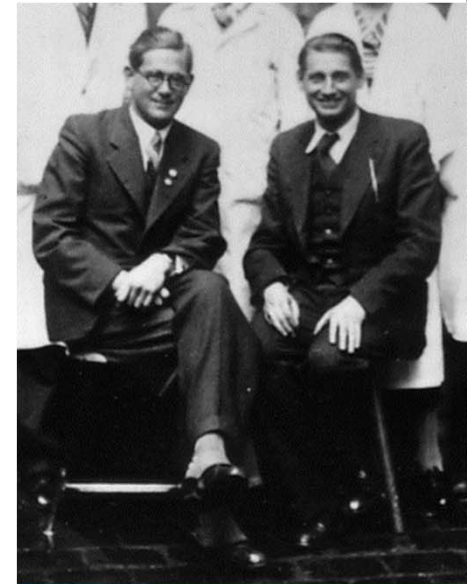
- I Approx. 90 percent

Employees

- I 9000 worldwide, with approx. 5500 in Germany

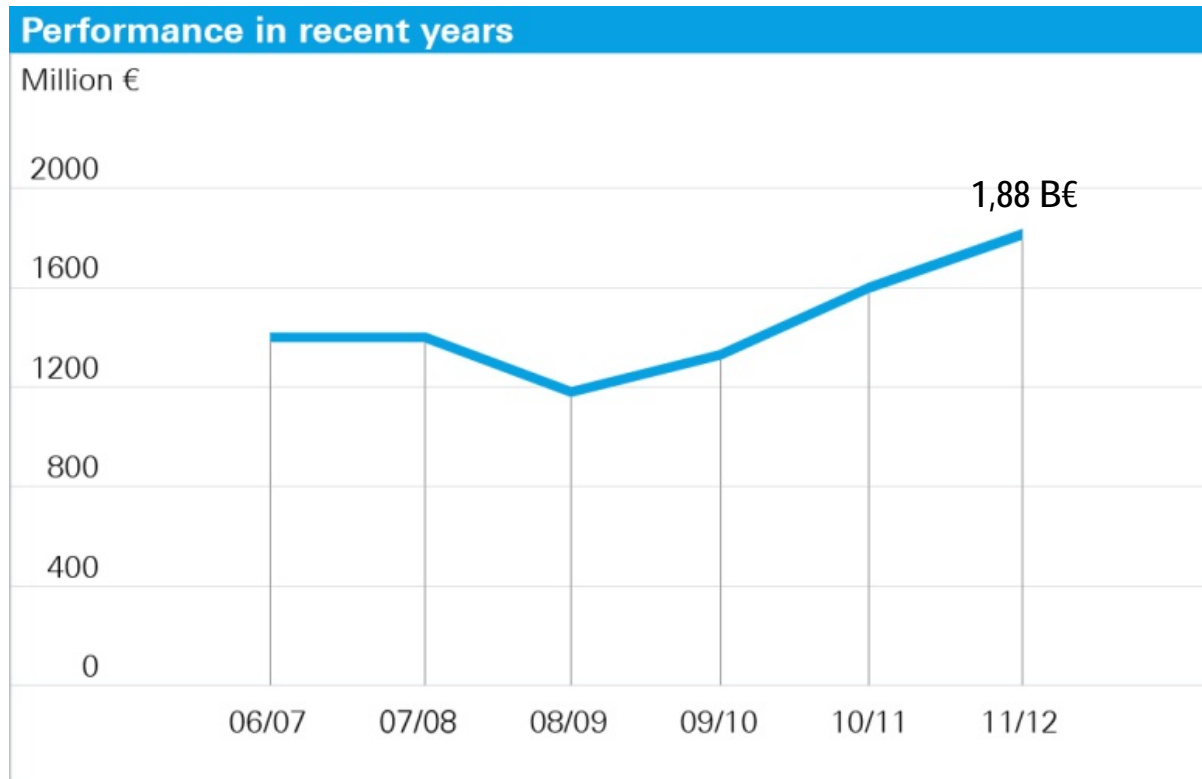
Success

- I A leading international supplier in all our fields of business



Record-breaking sales revenue in fiscal 2011/2012

Growth engine wireless communications T&M



- | Boom in smartphones and tablet PCs
- | Next-generation mobile radio with LTE

Our portfolio includes solutions for

Secure communications

- | Radios in use worldwide for all branches of the armed forces

Air traffic control

- | Radiocommunications at more than 200 airports and ATC centers

Broadcast

- | Transmitters installed in more than 80 countries

Management of the frequency spectrum

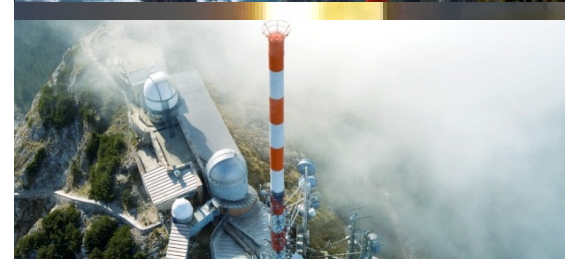
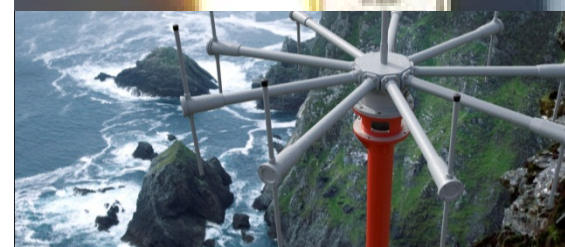
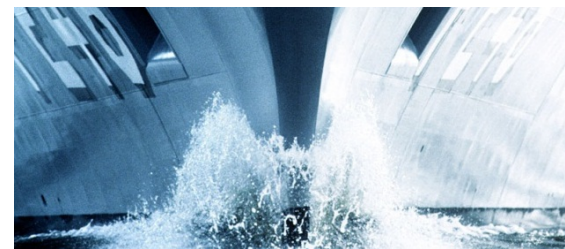
- | Instruments and systems for radiomonitoring and radiolocation in about 150 countries

Wireless communications testing

- | Development and production test solutions for every second mobile phone in the world

Service & services

- | Nearly 70 locations worldwide ensure that we are as close to the customer as possible



Engineering excellence: Tradition, passion and dedication

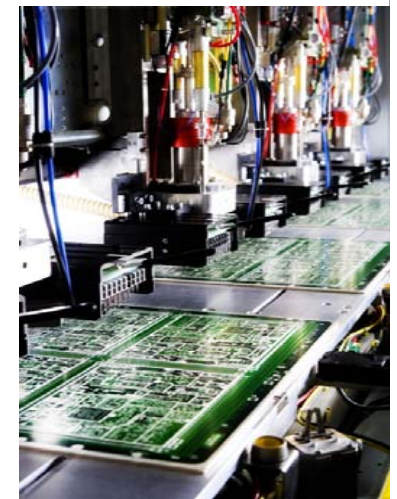
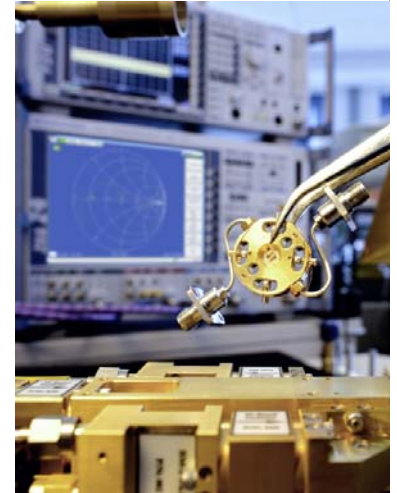
For 80 years, Rohde & Schwarz has stood for quality, precision and innovation in all fields of wireless communications. To maintain its high quality standards, Rohde & Schwarz keeps almost the entire value chain within the company:

I R&D

- 16 percent of the annual net revenue is invested in R&D.
- International teams of developers are close to customers and anticipating technological trends.

I Production

- We manufacture in our own plants to maintain quality, flexibility and independence.
- We operate separate areas with restricted access for security-related products.



How does the experience of Rohde & Schwarz contribute to the creation of a next-generation SDR?

A tradition of cutting-edge
RF and microwave engineering

- | Antennas for communications, direction-finding and measurements
- | Front-ends, down-converters, mixers
- | Linear, low-noise amplifiers
- | High-power amplifiers
- | Oscillators, synthesizers
- | Robust mechanical designs with optimized RF shielding

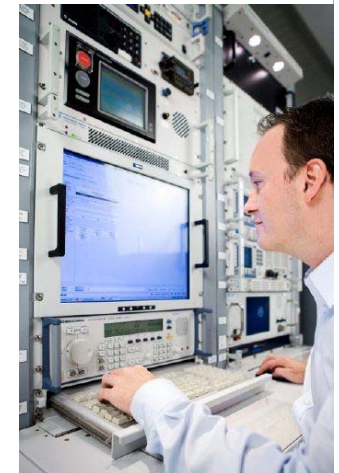
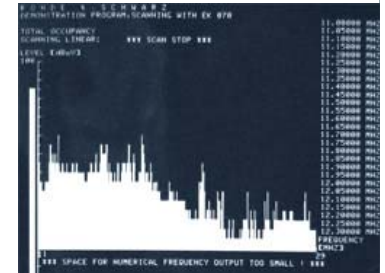


How does the experience of Rohde & Schwarz contribute to the creation of a next-generation SDR?

A tradition of cutting-edge
RF and microwave engineering

Software control of radios, instruments
and complete systems

- I Automatic link establishment for shortwave radios
- I Fast measurement routines using multiple instruments in single-box solutions
- I Complex systems for
 - radiocommunications
 - radiomonitoring
 - production and type-approval testing
 - EMC measurements



How does the experience of Rohde & Schwarz contribute to the creation of a next-generation SDR?

A tradition of cutting-edge
RF and microwave engineering

Software control of radios, instruments
and complete systems

Digital signal processing, encryption
and communications protocol stacks

- | Digital up-converters and down-converters
- | Linearization, pre-distortion, calibration
- | Physical layer modulation / demodulation
and coding / decoding
- | Protocol stacks from physical to application layers (for
defense, mobile radio and broadcast)
- | Encryption, red / black separation
- | Measurement and signal analysis algorithms



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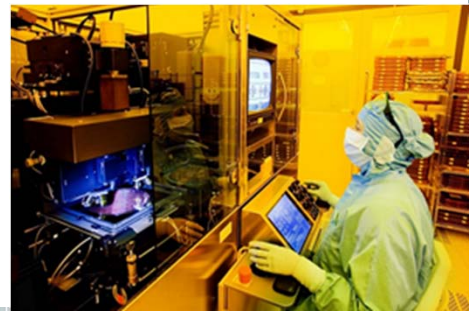
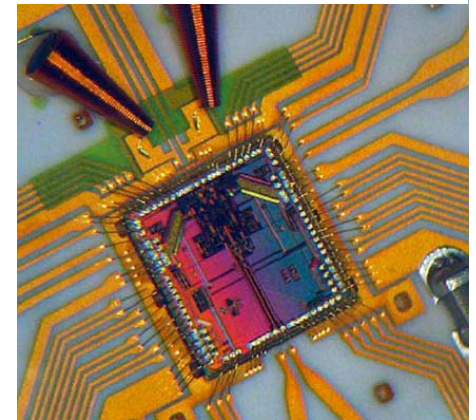
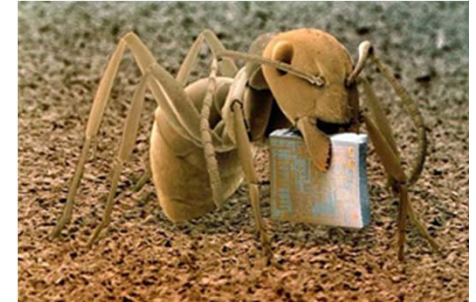
A tradition of cutting-edge
RF and microwave engineering

Software control of radios, instruments
and complete systems

Digital signal processing, encryption
and communications protocol stacks

Custom integration of essential functions

- | Analog-digital converters
- | Digital up-converters and down-converters
- | Synthesizers, PLLs, dividers
- | Mixed-signal modules



A next-generation SDR created from the experience of Rohde & Schwarz

A tradition of cutting-edge
RF and microwave engineering

Software control of radios, instruments
and complete systems

Digital signal processing, encryption
and communications protocol stacks

Custom integration of essential functions



The R&S® SDTR
Vehicular Tactical Radio

Vehicular Software Defined Tactical Radio

- | Multiband: 30 to 512 MHz (VHF, UHF)
- | Built for broadband waveforms ≥ 2 Mbps
- | Transmit Power 50 W PEP
- | IP und MANET capable
- | Multimode: legacy and HDR waveforms
- | Built-in Cosite-Filter(s)
- | SCA v. 2.2.2 compliant
- | Embedded SW-based INFOSEC with CIK (confidential, customizable)
- | Weight ca. 15kg
- | Dimensions
ca. 300 x 320 x 120 mm



We wish you a successful meeting with

- | interesting workshops
- | stimulating presentations and
- | active networking within the SDR community

Thanks for your attention

