

**SATELLITE INDUSTRY DAYS 2022 - PART 3 | CONFERENCE AGENDA**

## UNDERSTANDING THE IMPACT OF NEXT-GENERATION SATELLITE TECHNOLOGIES

CET/ AFTERNOON	TUESDAY, DEC 13 – PRESENTATIONS & PANEL DISCUSSION
15:00 - 15:10	<p><b>Welcome and introduction</b></p> <p><b>Dr. Yvonne Weitsch, Space Segment Manager, Rohde &amp; Schwarz</b>  <b>Robert Obertreis, ADT Marketing Program Manager, Rohde &amp; Schwarz</b></p>
15:10 - 15:30	<p><b>VHTS and digital ground - WORK Microwave</b></p> <p>The presentation provides insights into digital ground segment infrastructures for satcom and spacecom, in particular concerning the link between RF signals and the digital domain. It will help system integrators and operators understand how to best migrate from an analog to a digital teleport infrastructure. The presentation will also examine some important design aspects, for example weighing bandwidth versus dynamic range and noise floor for optimizing the performance of A/D- and D/A converters. Furthermore, it will explain why a digital IF gives engineers a much greater design freedom, in particular when it comes to wideband circuits for Ka and V band.</p> <p><b>Jörg Rockstroh</b></p> <p>As Director, Business Development, Jörg leads the strategy and innovation programs of WORK Microwave. In parallel, he holds the position of Director, Digital Products, where he manages the product roadmap for the company's digital Satcom portfolio. Prior to that he served in various engineering roles and was responsible for the development of the satellite modem product lines.</p>
15:30 - 15:50	<p><b>Enabling antenna terminal testing for New Space - Rohde &amp; Schwarz</b></p> <p>New LEO and MEO constellations will create vast new markets for end users, who will need user terminals. Antennas and especially phased array ones are key technologies for meeting the user demands for connectivity and operators' requirements for increasing agility across orbits and frequency bands. Efficient testing to ensure proper operation is crucial. This presentation will outline the challenges that arise from testing devices of different size, form, factor and weight, and how to efficiently counter these challenges with compact test solutions for mass market user terminals.</p> <p><b>Günter Pfeifer</b></p> <p>Günter is a product manager for OTA systems and chambers in Rohde &amp; Schwarz headquarters in Munich, Germany. After joining the company in 1997, he spent 18 years in the field of mobile communications as the product manager responsible for different R&amp;S radio communications testers. His expertise of mobile broadband topics lead to his involvement in 5G technology management, before joining the OTA product management team. Günter holds a degree in electrical engineering from the University of Applied Sciences in Kempten, Germany.</p>

<b>15:50 - 16:10</b>	<p><b>Evolution of satellite in-orbit testing in response to flexible high-throughput digital payloads - Calian</b></p> <p>An in-orbit test system is used to validate the performance of the transponders of a communication satellite after launch; advances in spacecraft payloads for software-defined and very high-throughput satellites due to larger bandwidths and higher frequencies have been matched for in-orbit test systems. In-orbit measurements are also a key component of live satellite maintenance. Accuracy and speed are key requirements for the complex tests and measurements performed in orbit. This presentation highlights some of the technical challenges encountered while testing complex satellite transponders in orbit and how advances in test and measurement equipment have allowed these challenges to be met.</p> <p><b>Peter Waskowic</b></p> <p>Peter is the Calian Director responsible for satellite communication products. Peter has over 25 years of experience with the company and his career has focused on the development of both hardware and software products, particularly for satellite test &amp; measurement, and monitoring areas. Peter's team goal is to deliver innovative, high performance products to customers. He is a Professional Engineer and has an M.Sc. in Electrical Engineering from the University of Saskatchewan.</p>
<b>16:10 - 16:20</b>	<b>Break</b>
<b>16:20 - 16:40</b>	<p><b>Software Defined Satellites - EUTELSAT</b></p> <p>Since 2022, the EUTELSAT QUANTUM satellite has been operational at 48 degrees East, providing technical capabilities unrivalled for client-based software-defined footprint definition and frequency allocation. This presentation will outline what QUANTUM stands for and how EUTELSAT's customers can use it according to their specific needs. Furthermore, it will show examples taken from QUANTUM CMRS (Communication Mission Reconfiguration Software), which enables users to design their mission payload configuration via a secure terrestrial connection.</p> <p><b>Andreas Voigt</b></p> <p>Andreas works for Service Operations in EUTELSAT's business unit Video as Senior Engineer. He holds responsibility as a knowledge resource and trainer, as well as being the most senior consultant for Incident, Problem and Change Management for EUTELSAT Control Centers. In addition to which, Andreas has been elected as Director for the Satellite Innovation Group (SIG), representing EUTELSAT. He leads the AI working group in SIG.</p>
<b>16:40 - 17:00</b>	<p><b>Airbus Vision for Satellite Communications in 5 &amp; 6G networks</b></p> <p>The presentation will cover the role of GEO, LEO and MEO systems in 5G and 6G networks, detailing the Airbus view that the end game is a fully interconnected "space wide web" of GEO, MEO and LEO all working together leveraging regenerative on-board processing with high speed routers, packet switching, and laser and RF inter-satellite links between the "nodes" in the space wide web.</p>

	<p><b>Glyn Thomas</b></p> <p>Glyn is a Senior Expert in flexible, processed and HTS payloads for both commercial and governmental applications. He is responsible for overall payload strategy within Airbus Defence and Space, covering GEO, MEO and LEO.</p> <p>Glyn was deputy chief engineer of the Airbus Defence and Space payload equipment division from 2010 to 2014. He previously managed research and development where he generated a number of key patents in the fields of flexible communications payloads. Glyn graduated from St. Andrews University with a degree in Theoretical Physics and also holds a Master's degree in Microwave Solid State Physics.</p>
<b>17:00 - 17:30</b>	<p><b>Panel discussion with all experts</b></p> <p><b>Moderated by Thomas Wrede</b></p> <p>Thomas is the Founder and Managing Director of Technology Vision Consulting UG, a company specialized in project studies, standardization and prototype developments in the fields of satellite communications and wireless technologies.</p> <p>Thomas has over 35 years of professional experience in the communications industry. In his 28 years at the satellite operator SES in Luxembourg he has been deeply involved in the development of digital satellite television, in-home signal distribution concepts, digital satellite radio, satellite return channel technology, Internet via satellite, and High Definition as well as Ultra High Definition (4K/8K) television. Thomas currently represents SES in the DVB Commercial Module as chair of the CM-S subgroup.</p>
<b>17:30</b>	<b>End &amp; farewell</b>