

**2021 IEEE Standards Association (IEEE-SA) Ethernet
& IP @ Automotive Technology Day
3-4 November 2021
BMW FIZ Projekthaus Studio
Munich, Germany**

**PRESENTATIONS AND EXHIBITION
PROGRAM**

CENTRAL EUROPEAN TIME ZONE

Last Updated: 2 November 2021

(SUBJECT TO CHANGE WITHOUT NOTICE)

WEDNESDAY, 3 NOVEMBER 2021

9:00 -9:30 CET	Opening: Master of Ceremonies <i>Rudi Schubert - (IEEE Standards Association)</i> <i>Welcome Speech – Graham Smethurst (BMW Group)</i>
SECURITY	
9:30 – 10:00 CET	Automotive MACsec Architecture Oliver Creighton, Tobias Hauber, BMW Group Lars Völker, Technica Engineering GmbH
SERVICE-ORIENTED ARCHITECTURE	
10:00 - 10:30 CET	Communication Management in Automotive Service-Oriented Architectures Trista Lin, David Fernandez Blanco, Juleixis Guariguata Stellantis
10:30 – 11:00 CET	COFFEE BREAK
11:00 -11:30 CET	Time-Sensitive and Mixed-Critical Control Data Streams in Service-Oriented Architecture Based on Automotive Ethernet <i>Thomas Galla, Michael Ziehensack</i> <i>Elektrobit</i>
QUALITY OF SERVICE/TSN	
11:30 – 12:00 CET	How to Achieve Redundant Time Synchronization Using 802.1AS-2020 Features for Sensor Fusion and Autonomous Driving Scenarios <i>Razvan Petre</i> <i>Spirent</i>
12:00-12:30	Presenting the Exhibitors in the Conference Zone: Broadcom, Corning, Microchip, Rohde & Schwarz, Technica Engineering
12:30 – 14:00 CET	LUNCH

14:00 – 14:30 CET	The Challenges and Solutions of Mixed Data Rate Ethernet Networks <i>Manfred Kunz</i> <i>Don Pannell</i> <i>NXP Semiconductors</i>
14:30 – 15:00 CET	Arbitrating the Fight between 802.1Q TSN Shapers <i>Max Turner, Ethernovia</i> <i>Anna Engelmann, VW CARIAD</i> <i>Jean Walrand, UC Berkeley</i>
15:00 – 15:30 CET	COFFEE BREAK
15:30 -16:00 CET	Use of TSN for Wheel Sensor Data in a Zonal Architecture <i>Shrikant Acharya, Excelfore</i> <i>Martin Bornemann, Aptiv</i>
16:00 – 16:30 CET	The "Free Rider Principle" for Low-Bandwidth Flows in High Line-Rate Networks <i>Max Turner, Ethernovia</i> <i>Jean Walrand, UC Berkeley</i>
16:30 – 17:00 CET	BREAK
	EXHIBITOR PRESENTATIONS
17:00	Presenting the Exhibitors in the Studio: BMW, Granite River Labs, Intrepid Control Systems, KDPOF, NXP, Renesas, Ruetz Systems, Siemens, TSN Systems, Vector Informatik, ViGEM

NETWORKING DINNER
19:00 – 20:30 CET
Bldg. 110.1

Meet outside Projekthaus Studio
First Group: 18:30
Second Group: 18:45

THURSDAY 4 NOVEMBER 2021

9:00 -9:30 CET

Keynote: The next 10 years.
Hosts of previous Ethernet & IP @ Automotive Technology Days

PHYSICAL LAYER

9:30 – 10:00 CET

The 10BASE-T1S OA-3p Interface -Enabling Advantages for the All-Ethernet Vehicle

Martin Miller
Microchip Technology

10:00 – 10:30 CET

ESD Protection for Automotive Ethernet Applications

Lukas Droemer, Andreas Hardock
Nexperia

10:30 – 11:00 CET

COFFEE BREAK

11:00 – 11:30 CET

Technical Feasibility of Glass Optical Fibers for Automotive Ethernet

G. Mabud Choudhury (OFS), John S. Abbott (Corning Inc.), John Earnhardt (OFS), Masato Shiino (Furukawa Electric Co. Ltd)

11:30 – 12:00 CET

Does Cable Shielding Prevent all EMC Challenges?

Jamila Josip Borda and Michael Kaindl
BMW Group

12:00 – 12:30 CET

Testing PAM4 Signaling for 10GBASE-T1 Automotive Ethernet

Curtis Donahue
Rohde & Schwarz

12:30 - 14:00 CET

LUNCH

SWITCHES AND CONFIGURATION

14:00-14:30 CET

Status Quo of Dynamic Network Management with YANG-Based Configuration Models

Christian Herber
NXP Semiconductors

14:30 – 15:00 CET

Smart Switches in AUTOSAR Eco Systems: Roles and Software Architecture

Markus Helmling
Vector Informatik GmbH

15:00 – 15:30 CET	COFFEE BREAK
ARCHITECTURE AND DIAGNOSTICS	
15:30-16:00 CET	Reimagining Vehicular Communication using Programmable Data Plane Technologies <i>Naresh Nayak, Sebastian Schildt and, Dennis Grewe</i> <i>Robert Bosch GmbH</i>
16:00-16:30 CET	Analysis of a low-cost gigabit diagnostic interface <i>Thomas Königseder</i> <i>Technica Engineering GmbH</i>
16:30 CET	Closing Remarks
	Additional Presentation: What is the conqueror in the SOA platform for the future in-vehicle networks? - A study based on JASPAR's automotive use cases Takumi Nomura (Honda), Akizuki Katsuyuki (NEC), Yoshihiro Ito (Nagoya Institute of Technology), Taichi Itagawa (Denso), Takao Hasegawa (Aubass), Tatsuya Izumi (Sumitomo Electric), Yoshiyasu Watanabe (Toyo Corporation), Hideki Goto (Toyota), Yasuhiro Kotani (Denso)

ARCHITECTURE AND DIAGNOSTICS	SERVICE-ORIENTED ARCHITECTURE
PHYSICAL LAYER	SECURITY
QUALITY OF SERVICE/TSN	SWITCHES AND CONFIGURATION