

The dSPACE logo is displayed in a white rectangular box. The word "dSPACE" is written in a bold, sans-serif font. The "d" is red, and "SPACE" is blue.A photograph of a conference reception area. Several men in dark suits are standing around a tall, silver, cylindrical bar. They are holding glasses and talking. In the background, a large white banner with the dSPACE logo is visible against a grey wall. The floor is blue with white circular patterns.

Driven by Innovation

On January 29, 1886, Carl Benz applied for a patent for his 'vehicle powered by a gas engine'. Exactly 127 years later, on January 29, 2013, representatives from German car manufacturers and suppliers met at dSPACE's 7th German User Conference. There they discussed the latest development topics and trends – and revisited the roots of automotive engineering at the Mercedes-Benz Museum.



OEMs and suppliers present technological trends at the 7th dSPACE German User Conference





Keynote speaker Thomas Lieber, Volkswagen AG and Dr. Herbert Hanselmann, dSPACE



Auditorium with 180 attendees at Liederhalle, Stuttgart



Patent number 37435 issued in 1886 can be regarded as the birth certificate of the automobile. Newspaper reports on the first public outing of the three-wheel Benz Patent Motorwagen Type 1 appeared in July 1886. These events changed people's mobility for ever. Since its beginnings, the car has evolved from a purely mechanical construction to a complex mechatronic system. Technological progress plus changes in public expectations and environmental requirements are presenting manufacturers with one challenge after another. This often involves electronic systems and

their software, which are playing an increasingly important role in today's vehicles.

127 Years of the Car: Current Challenges and Ideas

Hot topics from the development of vehicle electronics and software were on the agenda at the 7th German User Conference 2013. Thomas Lieber, Head of Electric Traction, Volkswagen AG, kicked off the two-day lecture series with his keynote speech on 'Electromobility as a Trend and Its Effects on the Value Added Chain'. He painted a clear picture of how

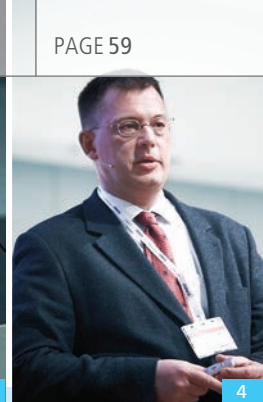
OEMs are handling challenges such as dwindling resources, metropolization and emission laws, and of the strategies, concepts and development tasks that result.

Other exciting projects in the fields of electric drives, driver assistance systems and safety-critical applications provided further insights into current development trends. The concept of boosting efficiency with development tools and methods was a particular focus of the papers. Of particular interest was the early positive user feedback on dSPACE's brand-new tools, SYNECT® (ABB, Audi) and VEOS® (Volkswagen). And as several presentations demonstrated, numerous customers have already given SCALEXIO®, the new simulator system, a firm role to play in their development processes.

"In the last decade, we completely networked the vehicle. This decade, the vehicle will network seamlessly with its environment."

Thomas Lieber, Volkswagen AG





Seminars and Networking

On the third day of the conference, the visitors could choose among seminars that investigated current topics in more detail. Product experts from dSPACE presented workflows and methods for the successful handling of data management, virtual validation, compliance with application, and system architectures. With long breaks between papers, the conference provided an ideal platform for conversation and networking. This was much appreciated by the attendees, who made full use of the opportunity. The Mercedes-Benz Museum was a stunning venue for the evening event, taking everyone on a journey through the history of the automobile as they talked and made new contacts before ending the action-packed day with a delicious buffet.

dSPACE sincerely thanks all the speakers, the exhibitors BTC, DMecS, Elektrobit, MathWorks, MES, and all the attendees for their contributions, which made this event such a success. You have inspired us to hold more conferences like this in the years to come! ■

Speakers:

1. **Robert Walesch, AUDI AG,**
2. **Richard Bergmann, AUDI AG**
Robert Walesch and Richard Bergmann described the HIL strategy at Audi AG and their use of SCALEXIO in ECU software validation.
3. **Steffen Stauder, TU Kaiserslautern**
Steffen Stauder showed how a mechatronic HIL driving simulator designed by dSPACE is advancing model-based controller and function development for mechatronic steering systems
4. **Thomas Wolf, WABCO Fahrzeugsysteme GmbH**
5. **Dr. Oliver Schütte, WABCO Fahrzeugsysteme GmbH**
Thomas Wolf and Dr. Oliver Schütte explained the objectives of the automated test process at WABCO, in which SCALEXIO and the Automotive Simulation Models (ASM) are playing a major role.
6. **Christoph Freier, Volkswagen AG**
Christoph Freier reported on a groundbreaking project on completely virtual ECU validation at Volkswagen AG, in which dSPACE VEOS was evaluated as a test platform.
7. **Stefan Riegl, MAN Truck & Bus AG**
Stefan Riegl showed how an engineering data backbone benefits the automation of integration tests with dSPACE simulators.
8. **Alessandro Recca, ABB Switzerland Ltd.**
Alessandro Recca presented the automatic testing of drive software for rail vehicles and showed how ABB is successfully using dSPACE's data management software SYNECT in its processes.
9. **Gerhard Kiffe, Audi Electronics Venture GmbH**
10. **Thomas Bock, Audi Electronics Venture GmbH**
11. **Dr. Mouham Tanimou, Robert Bosch GmbH**
Dr. Mouham Tanimou described a method that supports the easy exchange of data specifications between OEMs and suppliers, based on ASAM MDX (Meta Data eXchange Format). For MDX generation, Bosch is relying on dSPACE TargetLink® and the TargetLink Data Dictionary.
12. **Dr. Florian Wohlgemuth, Daimler AG**
Dr. Florian Wohlgemuth provided insights on an AUTOSAR-compliant development process for comfort and interior functions. Daimler is using the dSPACE TargetLink production code generator to generate the production code for the AUTOSAR ECUs.
13. **Dr. Heiko Zatocil, Siemens AG**
Dr. Heiko Zatocil presented an ISO 26262-compliant, model-based development process. Siemens is successfully using the production code generator dSPACE TargetLink for this.
14. **Philip Markschläger, Dr. Ing. h.c. F. Porsche AG**
Philip Markschläger presented early insights on the driving efficiency system Porsche InnoDrive and showed how dSPACE MicroAutoBox is used for prototypical energy management predevelopment.

