International VDI Conference

HMI in Off-Highway Machines

June 26 - 27, 2019, Berlin, Germany

• User Centered Design & UX in Off-Highway Machine Cockpits
• HMI Software: Standardization and Device Connectivity
• Advanced Driver Assistance and improved Vehicle Safety
• Modular HMI Components & Instrument Clusters
• Future Developments in HMI

+ World Cafés
+ Panel Discussion on Design Thinking

Meet international Experts from:

An event organized by VDI Wissensforum GmbH
www.vdi-international.com/ 01K0937019
The Association of German Engineers (VDI) is one of the largest technical-scientific associations in Europe. Throughout the years, the VDI has successfully expanded its activities nationally and internationally to foster and impart knowledge about technology-related issues. As a financially independent, politically unaffiliated and non-profit organization the VDI is recognized as the key representative of engineers both within the profession and in public.

Supporting Experts

**Dr. Stefan Becker**, Supervisor Core HMI, Ford-Werke GmbH, Germany

**Kurt Loosli**, CEO, EAO AG, Switzerland

Reasons to attend

- **Meet** international experts from the off-highway industries
- **Discuss** the latest technologies and innovations
- **Listen** to international experts and their future vision for HMI
- **Discover** relevant contacts from different off-highway areas
- **Benefit** from our interactive World Cafés
- **Network** with your peers during the breaks and the evening reception
- **Prepare** for the Digital Transformation
08:45  Registration & Welcome Coffee

10:15  Chair’s Welcome & Opening Address
Kurt Loosli, CEO, EAO AG, Switzerland

10:30  Say Hi & Meet your Peers!
Have your business cards on hand and see who else is joining the event. Get to know your peers!

I. UX & User Centered Design

10:45  Taking into Account the Human Being behind the Machine
• Customer centric and user centric approach
• Enabling new & better products – Incorporating user input
• Methods applied in UX & HMI
• Use cases - Evaluating the UX / ergonomics level
Cristina Ilenescu, User eXperience, Usability & Ergonomics Engineer, AGCO, France

11:15  User Experience for Construction Machines – How UX contributes to increased Safety, Efficiency & Emotions in the Cockpit
• The operator in focus: User-centered interface design for construction machines
• UX patterns for supporting the operation of construction machines
• Modern UX Design as USP and key to success
Franz Koller, Managing Director, User Interface Design GmbH, Germany

11:45  Connected Farmer HMI: How might we design interfaces for the modern, digital farmer
• Who is the modern farmer and what is the HMI environment for the modern farmer?
• What is the value of HMI in farming?
• Lessons we’ve learned in designing off-highway HMIs
Jonathon Baugh, Experience Architect and Delivery Manager, Pillar Technologies, USA

12:15  Lunch

14:15  The Future of Off-Highway UX: HUDs, AR and beyond
• Overall considerations for off-highway user experience – OEM investment, display hardware, inputs and modalities
• Dealing with data – Sensor proliferation, AI and assisted recognition, vehicle errors
• Mainstream automotive technologies that will influence the future of off-highway UX
Lynwood Stanley, Vice President - Global Engineering Services, Altia, USA

14:45  Experiences from a related Application Field: Current Concepts and Future Trends in automotive HMI
• Cockpit architecture: Display configurations
• Input modalities: Touch vs controller
• Dialog: Stereotypes & graphical interaction
• Augmentation: Enriching information
• Voice control: „My co-driver”
Dr. Stefan Becker, Global Core HMI Supervisor, Ford, Germany

15:15  Networking and coffee break

15:45  Interactive World Café Session
During the interactive World Café Session, we invite you to directly engage with other experts. It is an interactively moderated discussion on different topics. Discuss and identify challenges within your sector as well as problems, needs and solutions. The focus is on the participants – Decide what exactly you would like to discuss and introduce your own experiences and cases.

17:15  End of conference day one

II. Future Developments in HMI

13:45  Concepts of FUTURE DIGITAL WORKSPACEs for industrial Vehicles
• Overview of user categories, interaction technologies and digital testbeds
• UX models and user journey as tools to develop adaptive HMIs
• Examples of HMI concepts already in evaluation
Prof. Dr. Frank Will and Dr. Jens Krzywinski, both; Technical University Dresden, Germany

15:45  Interactive World Café Session

Get Together
At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for in-depth conversations with other participants and speakers.
III. Future Developments in HMI

09:00 The connected Tractor: Voice-Enabled Technology in the Field
  - Types of users who want VE technology
  - Tractor owners’ most wanted features
  - Mic and speaker location requests
Dr. Carie Cunningham, UX researcher, DRIVE Lab, Nuance Communications, USA

IV. HMI Software & Device Connectivity

09:30 Dynamic HMI Design with Apps-based System in mobile Machines
  - Challenges in mobile machine HMI design
  - Utilization of an apps-based system in HMI software development
  - Dynamic behavior and adaptation of app user interface
  - Apps-based system operation and performance optimization
Tommi Forsmann, Principal Engineer, Parker Hannifin Manufacturing, Finland

10:00 Intuitive and multi-use Off-Highway HMIs – Platform integrated innovative Technologies
  - Controlling more with less – Multi-use elements are offering more options to operators
  - Multi-modality HMIs opening paths of individual task-sequences
  - Adaptive and intuitive technologies are key elements of nowadays HMIs
  - Transferring passive displays into active HMI-surfaces
  - Platform design to control variability, complexity and cost
Michael Jendis, Executive Director Commercial Vehicles, Preh GmbH, Germany

10:30 Networking & coffee break

11:00 Technology supporting good Interaction Design in Off-Highway Vehicles
  - Facing the challenges of more advanced off-highway vehicles – Why importance of interaction design, UX and HMI technology is growing
  - Creating good UX interfaces – A hands on approach in software, displays and communication
  - Emerging trends and the future of interaction design and connected systems
Markus Wallmyr, Global UX Leader, CrossControl, Sweden

11:30 Panel Discussion on Design Thinking
Oliver Gerstheimer, Managing Partner, chilli mind
Henrik Rieß, Creative Director UIDlabs, User Interface Design
Kai Gehrmann, Creative Director, Teams Design Hamburg

12:00 Lunch

V. Cockpit Control & Interaction

13:00 Control in the Future – Design and ergonomic Products for more Efficiency
  - How working places will change due to new IT technologies
  - Industry 4.0 – Influencing the way of steering and controlling, innovative control functions like speech control and much more
  - Ergonomics and design exemplified by 3 new innovative control systems products
Thomas Hahn, CTO, Spohn und Burkhart GmbH & Co. KG, Germany and Stefan Lochmann, CEO, Lochmann Kabinen GmbH and KML GmbH, Italy

13:30 Robust and individual configurable Outdoor Family HMI
  - Advanced HMI outdoor requirements – Ice, sunlight, dirt
  - HMI signals for functional safe applications
  - Plug & play: Using Standard Interfaces
  - Universal customer applicable functions with individual symbols, colours, illumination
  - HMI and the human touch
Claudia Benzing, Plant Manager, EAO Automotive, Germany

14:00 Networking & coffee break

14:30 New Level of Comfort and Safety in Off-Highway Cabins
  - Ergonomic workplace in practice
  - Active noise cancellation
  - Increasing productivity and safety through higher comfort
  - Reduced costs and increased revenue for manufacturers
Marc von Elling, CEO, recalm GmbH and Marko Boving, Senior Manager, Grammer AG, both: Germany

15:00 HMI Concepts for wearable Devices in a Repair and Maintenance Context
  - The increase in vehicle electronics – Making the machines more difficult to operate and maintain
  - Wearable devices – A valuable option to supply guided support for machine operators
  - User centred methods - Designing next generation repair & maintenance tools for this special environment
  - Use Case – Commercial vehicle service operations
  - Similarities & differences of methods
Luka Raljevic, UX Developer, DSA Daten- und Systemtechnik GmbH, Germany

15:30 Closing remarks
15:45 End of conference
The workshop provides an introduction to the implementation of ISOBUS Automation with TIM (Tractor Implementation Management). Participants get an overview of TIM architecture, functionalities and use cases, as well as of safety and security aspects. Based on the know-how from TIM definition and prototyping in AEF (Agricultural Industry Electronics Foundation) necessary hardware, software and infrastructure components for the development of TIM functionalities, their integration into Ag implements and market rollout are explained. After the workshop, participants will be able to prepare roadmaps for TIM development and production of TIM-ready machines.

Welcome & Introduction
- Why ISOBUS Automation is needed
- ISOBUS Automation aspects covered by TIM specification

TIM Architecture
- Hardware / Software components
- Authentication process & Exchange of certificates

TIM Specification
- Functionalities & Key infrastructure
- Authentication and security

System Boundaries and Responsibilities
- Security: Which aspects are (not) covered by the Specification?
- Implications for manufacturers based on the risk assessment
- Functional safety: Implications for manufacturers

Basic Prerequisites: What is needed to get started?
- Milestones of a TIM integration roadmap
- Designing a system architecture
- Availability of hardware and software components
- Development process & Infrastructure

Summary, Discussion and Conclusion
International VDI Conference

Sensors for Off-Highway Machines

Date and venue:
June 26 - 27, 2019, Berlin, Germany

Renowned speakers will present their results on the following topics:
- Technology Transfer from Cars
- Requirements & Advanced Sensing
- Solutions
- Functional Safety Standards
- AI, Neural Networks & Cyber Security
- Future of Work in OHW Machines
+ Interactive Sessions
+ Workshop: ISOBUS Automation using TIM

www.vdi-international.com/01K0935019

Parallel running conferences – Free of extra charge

International VDI Conference

Automation and Robotics in Agriculture

Date and venue:
June 26 - 27, 2019, Berlin, Germany

Renowned speakers will present their results on the following topics:
- Automation Market Update
- The Use of Robots in Arable Farming anno 2019
- Use Cases of successful Developments and Applications – Crops and Livestock
- Safety for outdoor Robotics
- Start-Ups: Transforming the Agriculture Sector
+ Panel Discussion: Robotics Shaping the Future of Agriculture
+ Interactive Round Table Session

www.vdi-international.com/12K0901019
Exhibition / Sponsoring

If you want to meet with and reach out to the first-rate experts attending this VDI conference and to powerfully present your products and services to the well-informed community of conference participants, please contact:

Christoph Brockerhoff
Project Consultant Exhibitions & Sponsoring
Phone: +49 211 6214-228
Fax: +49 211 6214-97 228
Email: brockerhoff@vdi.de

Terms and Conditions

Registrations: Registrations for conference attendance must be made in writing. Confirmation of your registration and the associated invoice will be mailed to you. Please do not pay your conference attendance fee until you have received our invoice and its invoice number to be stated for transfer. German VAT directives apply. Please state your VAT-ID with your registration.

Conference venue
Mercure Hotel MOA Berlin
Stephanstraße 41
10559 Berlin, Germany
Phone: +49 (0)30 39 40 43 0
Email: ha0f7@accor.com

Hotel room reservation: A limited number of rooms has been reserved for the benefit of the conference participants at the Mercure Hotel MOA Berlin.

Please refer to “VDI Conference”. For more hotels: www.vdi-wissensforum.de/hrs

VDI Wissensforum service package: The conference package includes the conference documents (online), beverages during breaks, lunch and the get together on June 26, 2019.

Conference attendance conditions and terms: By way of your registration you accept the conference attendance conditions and terms of VDI Wissensforum GmbH as binding. Any cancellation of your registration must be made in writing. We will charge you only an administrative fee of € 50.00 plus German VAT if you cancel your registration earlier than 14 days ahead of the conference date. Any cancellation that reaches us after this deadline will entail the conference attendance fee as stated in our invoice to be charged in full. The date of the post office stamp of your written cancellation will be the decisive criterion. In that case, we will gladly mail you the conference documents on request. Subject to agreement, you may name a substitute participant. Individual parts and sections of conferences and seminars cannot be booked. You will be informed without delay if an event has to be cancelled for unforeseeable reasons. In that instance, you will be entitled only to a refund of your conference attendance fee if already paid. We reserve the right to exchange speakers and/or change the program sequence in exceptional cases. In any case, the liability of VDI Wissensforum GmbH is restricted exclusively to the conference attendance fee.

Data protection: VDI Wissensforum GmbH captures and processes the address data of conference participants for their own corporate advertising purposes, enabling renowned companies and institutes to reach out to participants by way of information and offers within their own marketing activities. We have outsourced in part the technical implementation of data processing to external service providers. If you do not want to receive any information and offers in the future, you may contradict the use of your personal data by us or any third parties for advertising purposes. In that case, kindly notify us of your contradiction by using the email wissensforum@vdi.de or any other of the contact options mentioned.

Become a speaker

Become a speaker at our international VDI Conferences. Make yourself known in the industry and discuss best practice examples with other international experts. Among other topics, we are looking for speakers on HMI Technologies for the Automotive Industry.

Please submit your topic to:
Maria Baumeister
Product Manager International Business
Phone: +49 211 6214-284
Email: baumeister@vdi.de

Registration

Conference by VDI Wissensforum GmbH | www.vdi-international.com/01KO937019 | Phone +49 211 6214-201 | Fax +49 211 6214-154

HMI in Off-Highway Machines
International VDI Conference

HMI in Off-Highway Machines

Yes, I will participate as follows:

Participation Fee + VAT

☐ VDI Conference 26.-27.06.2019
  (01KO937019) € 1840

☐ Workshop 28.06.2019
  (01ST935001) € 950

Package Price (Please tick the boxes)

☐ (Conference + 1 Workshop) € 2500

I am interested in sponsoring and/or exhibition

☐ Participation Fee VDI-Members * Save 50 € for each Conference Day.
  * For the price category 2, please state your VDI membership number

Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:

☐ Visa  ☐ Mastercard  ☐ American Express

Card holder

Card no.

Valid until (MM/YYYY)

Security Code

Date  × Your Signature

Participants are eligible to attend the parallel conferences free of extra charge