2nd Annual
Automotive HMI and Display Forum

13th - 14th November 2019
Hotel Eurostars Berlin
Berlin, Germany

For further information on speaker & delegates opportunities, please contact:
John Isaac / tel: +420 270 005 479 / email: johni@bisgrp.com
Who Should Attend

Presidents, Vice Presidents, Directors, Heads/Managers of:

- Cockpit
- Connectivity
- Customer Experience
- Driver Information
- Driver Interaction
- Driver Interface
- Ergonomic
- HMI
- Human Factors
- Infotainment
- User Interface
- User Experience
- Telematic
- Usability
- Driver Engagement

Confirmed Speakers

**Olof Preissner**  
Vice President, UX Design  
Luxoft Germany

**Dr. Cornelius Reinfeldt**  
Senior Software Engineer & Software Team Leader  
gestigon-Valeo Lübeck

**Narendra Ghate**  
Head of Research, UX, Service Design  
Tata Elxsi

**Gunnar Fröjdh**  
VP Sales Automotive Global  
Neonode Technologies AB

**Dr. Rüdiger Heimgärtner**  
Chief Executive Officer  
Intercultural User Interface Consulting

**Alexander Stocker**  
Researcher, Project Manager  
Virtual Vehicle Research Center

**Sebastian Rettlinger**  
Group Lead HMI  
MAGNA Telemotive GmbH

**Thomas Seldrum**  
Innovation Scientist and Global Key Account Technical Manager  
Dow Chemical Company

**Tibor Balogh**  
CEO and Founder  
Holografika Ltd

**Dr. Pablo Richter**  
Principal Expert  
Optical Technologies  
Continental Automotive GmbH

**Cyriel Diels (PhD, MSc)**  
Deputy Director | Intelligent Mobility Design Centre (IMDC)  
Royal College of Art

**Boris Jitsukata**  
Managing Director  
Goodpatch GmbH

**Oliver Carsten**  
Professor of Transport Safety  
Institute for Transport Studies  
University of Leeds, UK

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MY DEAR DRONE

In the Chair 1  
Philipp Reiter  
Partner & COO  
eye square GmbH

In the Chair 2  
Dr. Peter Rößger  
Founder & CEO  
beyond HMI

2nd Annual Automotive HMI and Display Forum  
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Hotel Eurostars Berlin / Berlin, Germany
Wednesday 13th November 2019

08:00 Registration and Morning Coffee

08:30 Business Card Exchange
An early opportunity in the conference to meet other conference attendees by systematically moving around the room. Make use of the opportunity to learn about companies, projects and backgrounds of other attendees and swap business cards in an informal environment.

09:00 Chairman’s Opening Remarks and Address

AUTOMOTIVE HMI: A LOOK INTO THE FUTURE

09:10 Panel Discussion
Role of HMI in Driver distraction – A Safer Autonomous Driving
- Current and future challenges and strategies to overcome
- Recent development in technologies that can minimize distraction
- Concerns that will increase with CAV
- User Interfaces can be designed to reduce driver distraction which still responding to consumer demands
- Balancing customer needs and driver distraction
- Next generation of automotive HMI and role of AI

Moderator: Philipp Reiter / Partner & COO / eye square GmbH
Panelists: Narendra Ghate / Head of Research, UX, Service Design / Tata Elxsi
Dr. Peter Rößger / Founder & CEO / beyond HMI
Tibor Balogh / CEO and Founder / Holografika Ltd

10:00 Case Study
The Monkey’s Brain in a Rolling Robot: HMI Issues and Autonomous Driving
- Background: a bit of Anthropology and Psychology
- Level 1/2: Mode Awareness
- Level 3: Situation Awareness
- Level 4: Loss of Competence
- Level 5: the Magical 25th hour

Dr. Peter Rößger / Founder & CEO / beyond HMI

10:30 Case Study
Enhancing the Relationship with your Car
- From Family 2.0 to Greenomics
- From Intelligent Assist to Mixed Reality
- How customer Expectations and Technology will influence
- The future HMI

Olaf Preissner / Vice President, UX Design / Luxoft Germany

11:00 Morning Coffee and Networking

AUTOMOTIVE UX & UI DESIGN: ENHANCING SAFETY & IMPROVE USABILITY

11:30 Case Study
The Role of Gesture Controls in Future Automotive UIs
- The strengths and limitations of gesture controls interfaces.
- In which contexts gestures are (resp. aren’t) a natural way to interact with a vehicle.
- How gestures may enhance automotive safety.
- How gestures naturally complement voice for multimodal user interfaces.

Dr. Cornelius Reinfeldt / Senior Software Engineer & Software Team Leader / gestigon-Valeo Lübeck

12:00 Case Study
The Patent Cocktail of UX+AI
- Navigation through a deluge of car features
- AI and adaptive learning to ease cognitive load
- Mis-match of user expectations and technological abilities
- UX ideas for building trust in autonomous vehicles

Narendra Ghate / Head of Research, UX, Service Design / Tata Elxsi

12:30 Case Study
Next-Gen Prototyping
- Using XR for designing and testing experiences in and around connected car
- Future UX Design process in Automotive
- The power of design

Boris Jitsukata / Managing Director / Goodpatch GmbH

13:00 Lunch Break

14:00 Coffee & Networking Break

14:10 Case Study
Exploring Trust in and Acceptance of Semi-Automated Passenger Vehicles: Results of a field study
- Individual perception of semi-automated driving functions and exploration of interaction patterns
- Focus on Level 2 vehicles: Lane assist and adaptive cruise control
- Combining approaches from Human Factors and Data Science

Alexander Stocker / Researcher, Project Manager / Virtual Vehicle Research Center

COCKPIT DISPLAYS OF THE FUTURE

14:40 Case Study
Holographic Waveguide - A Disruptive Technology for Augmented Reality Head-up Displays of the Future
Augmented Reality (AR), the enrichment of the real world with perfectly matched useful information. Accompanied by upcoming driving modes such as highly automated driving, the complexity of cars especially of their advanced driver assistance systems (ADAS) grows rapidly. Augmented content displayed via AR head-up displays enables to inform each driver intuitively in the best way and simplifies the interaction between drivers and complex ADAS systems. The new disruptive waveguide technology from DigiLens and Continental enables AR head-up displays that can be packaged easier. Continental reports from the first waveguide head-up display with windshield compensation

Dr. Pablo Richter / Principal Expert Optical Technologies / Continental Automotive GmbH

15:10 Afternoon Coffee Break & Networking

15:40 Case Study
3D Light Field HUD
- 3D LF HUD could offer real AR features, matching signs with the outside physical 3D world.
- The optical challenges are here in the far-field imaging, wide FOV, proper head-box while keeping the volume of system.
- Free-form optics and HOE combiners can give more freedom in design
- 3D LF systems can be candidates to realize true 3D cockpit displays

Tibor Balogh / CEO and Founder / Holografika Ltd

16:10 Workshop
Hands-on Implicit Automotive UX Research: Experience, Discuss and Learn about the Research Methods you Really Need
Customers will have to adapt many new technologies and interfaces in the future. Complexity and number of functions rise. Today’s drivers are more demanding than they used to be. Traditional methods assume that users can explain their needs and attitudes rationally with careful consideration and weighting of attributes like usability, functionality or engagement – like rational agents would. However, modern methodologies acknowledge that our perception, feelings and intuition affect our decisions. This implicit approach suggests a rather non-computational and sometimes non-rational user who uses heuristics only when asked.
Therefore, innovative methods need to be combined to get a holistic picture of a customer’s mind. Perception, implicit/emotional as well as explicit/rational dimensions of product experience need to be considered.
Methods like eye-tracking, free behavior analysis, reaction-time based questionnaires, emotion assessment or in-depth psychological interviews can help to reveal what we really want to know.
In the workshop we want to explore how users’ needs are built and which methods can help us to understand them holistically.
We will exchange ideas and talk about our experience with different research methods. We want to focus on the following questions:
- When applying traditional questionnaires: Which questionnaires from UEQ to AttrahIDiff can be recommended?
- What are the boundaries of traditional methods?
- Which implicit methods can enrich our insights? When do implicit methods make most sense?
- How can UX research from other fields be brought into the automotive field?

Facilitator: Philipp Reiter / Partner & COO / eye square GmbH

17:00 Chairman’s Closing Remarks and End of Day One
Thursday 14th November 2019

08:30  Registration & Morning Coffee
09:00  Chairman’s Opening Remarks

**HMI DISPLAY DESIGN & ARCHITECTURE**

09:10  Case Study
**The Need for Commonality in the Design of HMI for Automated Vehicles**
- How long can we afford to wait for a common design for HMI for automated vehicles?
- It took about 50 years for there to be consensus on the basic cockpit for traditional vehicles
- Failure to reach agreement quickly will result in user confusion, inappropriate trust and potentially crashes
- What does an HMI design have to encompass – not just the status of the automated driving system and the managing of transitions
- A good HMI now is better than waiting quite a while for the best conceivable system
Oliver Carsten / Professor of Transport Safety, Institute for Transport Studies / University of Leeds, UK

09:40  Case Study
**Toolkit for Designing Intercultural Automotive HMI**
- Benefit and description of toolkit
- Application of toolkit for automotive HMI
- Demonstration of an example using the toolkit
- Discussion, implications and outlook
Dr. Rüdiger Heimgärtner / Chief Executive Officer / Intercultural User Interface Consulting

10:10  Case Study
**Future Mobility – or How New Entries Shape the Automotive Future with 5G**
- Edge computing/5G
- Speech assistant
- Cloud based HMI
Sebastian Rettlinger / Group Lead HMI / MAGNA Telemotive GmbH

10:40  Case Study
**Market Trends and Solutions for the Optical Bonding of Displays in the Automotive Industry**
- Display Bonding market trends
- Advantages of Optical Bonding
- Silicone benefits and solutions for Optical Bonding
Thomas Seldrum / Innovation Scientist and Global Key Account Technical Manager / Dow Chemical Company

11:10  Morning Coffee and Networking

11:40  Case Study
**Challenges of Automotive Touch Displays**
- Responsiveness of touch
- Most automotive touch solutions have the button replacement approach – is it safe?
- Accuracy vs cost – what is important for the user experience
Gunnar Fröjdh / VP Sales Automotive Global / Neonode Technologies AB

12:10  Case Study
**Effectiveness and Acceptance of Anticipatory Motion Cueing in Improving Comfort in Future Vehicles**
- Motion sickness is a major concern potentially compromising the ability to engage in non driving tasks
- Anticipatory motion cues may provide a possible countermeasure to enable such activities in comfort
- Optimisation and acceptable design of motion cueing in the context of future in-vehicle activities is however non-trivial
Cyriel Diels (PhD, MSc) / Deputy Director | Intelligent Mobility Design Centre (IMDC) / Royal College of Art

12:40  Lunch Time
13:40  Coffee and Networking Break

**Interactive World Café Session**
In the World Café, experts will engage with each other in a small discussion group, interactively discussing different questions on a topic, giving new impetus to highly topical topics and developing the ideas further

- What are the technologies shaping the environment for Automotive displays, and what new changes will they bring in the future?
- How soon will QLED and ULED be considered for the automotive market?
- What are the key drivers shaping the future of vehicle displays and how will the future of vehicle displays look like?
- AMOLED display technology - How to reduce the concern for the burn in issue with the blue phosphors
- New frontiers and opportunities for automotive OLED technology
Facilitated by
Boris Jitsukata / Managing Director / Goodpatch GmbH

14:40  Afternoon Coffee Break & Networking

15:10  PARALLEL ROUND TABLES

**Audience Participation (Choose & Join)**
In these interactive roundtable discussions, delegates will have the opportunity to pose their biggest questions directly to industry experts in small working groups on the topic of their choice.

**TABLE 1**
How to determine HUD optical performance in typical automotive ambient lighting conditions
Dr. Peter Rößger / Founder & CEO / beyond HMI

**TABLE 2**
Future applications for visual technologies in connected driving

**TABLE 3**
How to develop light-field automotive displays

**TABLE 4**
Automotive HUD and Lighting

**TABLE 5**
New materials and technology innovations for flat panel displays

15:50  Chairman’s Closing Remarks and End of the Day Two
About BIS Group

We are the Business Intelligence Services company based in Europe. We believe that knowledge is the most powerful asset, especially, in the context of time and money. This inspires us to work with top professionals, global leaders and experts active in Oil & Gas, Energy, Construction, Telecommunications, Pharmaceutical, Management and Financial Services. We are an exclusive platform supporting ambitious, progressive and forward-thinking companies and empowering them with the best market practices for today’s fast changing markets.

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Automotive Sector Group [https://www.linkedin.com/groups/8763019/](https://www.linkedin.com/groups/8763019/)

The Automotive Sector group has been created for keeping sector community updated about recent developments in the sector and strengthening networking within the community. Join in and benefit from valuable discussions and meaningful interactions!

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Are you a UAV Fan? **MyDearDrone** is perfect for you because it’s a free, original and best community to learn everything from news, reviews, guides and much more about drone and it’s technology. So come and experience the Quadcopter (UAV) world with us.

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Conference Speakers

Narendra Ghate / Head of Research, UX, Service Design / Tata Elxsi
Narendra holds a Bachelors in Mechanical Engineering, Masters in Industrial Design from IDC - IIT Bombay, and an executive MBA from IIM Bangalore. Narendra Ghate is the Chief Designer at Tata Elxsi. In his current role, he spearheads the Research & Strategy, User Experience and the Service Design domains. In a career spanning over 23 years, Narendra has been associated with Tata Elxsi since 1997. He is one of the founder members of the design practice at Tata Elxsi and was instrumental in turning the Industrial design studio to be the largest design house in Asia. Narendra is leading a team of over 100 designers. He brings a wealth of experience and is responsible to deliver design projects in Experience Design, Branding and Graphics, New Technologies (AR, AI, VR), Service Design and Consumer Research for leading global clients. Narendra has provided leadership on varied projects in Tata Elxsi, ranging from designing futuristic car HMI solutions, predicting latest consumer behaviour trends to designing spaces, customer experience centres that combine space design, technology and content creation. Narendra is an eminent design thinker and has spoken in several international forums like Disney Imagineering USA, Car HMI Berlin, Car HMI conference Shanghai, BrandZGlobal Conference - London, and multiple CII, FICCI and NASSCOM events. He has been invited to speak of various companies like SAP, GM, GE, HLL, GSK, Akamai, etc. He has also been a jury member for various educational institutes like IIT’s, Shristi School of Design to name a few. A passionate traveler who loves exploring culture, people and their behaviour, Narendra’s multi-faced role gives him an opportunity to travel across the globe to solicit business, and present design solutions that can change people’s lives.

Thomas Seldrum / Innovation Scientist and Global Key Account Technical Manager / Dow Chemical Company
Dr. Seldrum holds a PhD in Solid State Physics from the University of Namur in Belgium. Thomas started at the DOW Chemical Company in 2011 and he is currently holding a position of Innovation Development Scientist. Since 2015 he is in charge of the application development activities in Europe related to the Automotive Displays bonding; this includes the optical clear resins used for the optical bonding of the display and the structural bonding of the display to the frame.

Dr. Pablo Richter / Principal Expert Optical Technologies / Continental Automotive GmbH
Dr. Pablo Richter has studied physics at the University of Tuebingen and Frankfurt in Germany and holds a PhD in physics. In 2005 he joined Continental as Group-Leader Head-up Displays. He then was project-leader for several innovation projects e.g. DMD- and Augmented Reality Head-up Displays. 2010 he was announced as Senior Technical Expert in the Expert-Field Optical Systems. 2017 he was announced as Principal Expert L4 for Optical Technologies. 2017 he was delegated to San Jose in California as Technical Project Leader Waveguide Head-up.* In 2019 he came back to Germany and has realized the first demo-car with the newest full-color holographic waveguide AR-HUD.

Tibor Balogh / CEO and Founder / Holografika Ltd
Tibor Balogh graduated as an electrical engineer at the Budapest Technical University and has extensive experience in the fields of holography, lasers, electro-optical technologies and engineering. Started his career in software engineering, then worked as an assistant professor at the Eötvös Loránd Scientific University - Budapest. He founded Holografika, pioneering 3D light field displaying, developing proprietary technology, known on the market as HoloVizio system. He was awarded the Joseph Petzval medal, the Kalmár award and the Dennis Gabor Prize for his work, was World Technology Award finalist in 2006, has several patents and publications. He is responsible for the overall management of Holografika, under his management the company was recognized Red Herring Top 100 Europe, WEF Technology Pioneer company, won several EU and national awards. He formulates the company’s business and R&D strategy, actively shaping developments in 3D technologies in the world.

Dr. Cornelius Reinfeldt / Senior Software Engineer & Software Team Leader / gestigon-Valeo Lübeck
Cornelius works as software developer for gestigon GmbH in Lübeck, Germany, which is part of the Valeo group. He entered the automotive industry in 2015, having worked in mathematical academia before. After working on eye tracking systems at Smart Eye AB for three years, he joined gestigon in the beginning of 2018, where he has since been part of the development team for image based detection algorithms s.a. gesture recognition and interior monitoring.

Philipp Reiter / Partner & COO / eye square GmbH
Philipp Reiter is COO and partner at eye square. Specifically, he is a qualified psychologist and specialized in cognitive information processing and implicit research methodologies. Philipp is particularly concerned with the optimal implementation of innovative neuroscientific measures ranging from EEG, to EDA in User Research.