

CES 2020

Mobility Is the Heartbeat of Life: Continental at CES 2020

- **A clear view in every situation: intelligent technology makes the hood “transparent” / CES 2020 Innovation Award**
- **Secure and convenient: ultra-wideband technology for keyless vehicle access**
- **Natural 3D Centerstack display: 3D experience without special glasses with touch function**
- **Cooperation Portal automates and standardizes software integration**
- **Ac2ated Sound: Continental revolutionizes audio technology in the car**
- **Cyber-Security: first Automotive Security Operations Center from Argus and T-Systems to be launched**
- **New, modular and scalable contact sensor detects scratches and damages**

Las Vegas, USA, January 3, 2020. Mobility is one of the most important human needs and a healthy mobility ecosystem is the driving force behind society, the economy and the entire world. At the press conference on January 6 at the CES in Las Vegas, Continental will demonstrate the role the technology company is playing in the development of safe, convenient and efficient solutions in the mobility ecosystem. Based on the pillars of connectivity, data and high-performance computing as well as automated driving and user experience, Continental will show its latest innovations and technologies in a private exhibition area at CES 2020 in Las Vegas.

Dr. Dirk Abendroth, chief technology officer (CTO), emphasizes: “Digital technologies are driving smart and autonomous mobility. At the CES we thus demonstrate how we are shaping the future and how we are creating a wow-factor in mobility along the areas of software, high-performance computing, safety, user-experience or connectivity.”

Award-winning view through the hood - Continental ensures transparency

The “transparent hood” function is the first to be released on the market worldwide. It makes the area under the hood visible and allows the driver to see terrain and obstacles that would otherwise not be visible. Transparent hood is based on Continental’s Surround View system, which consists of four satellite cameras and an electronic control unit.

An intelligent image processing algorithm reconstructs the image below the vehicle and inserts this image exactly into the surround view displayed to the driver. Continental received the CES 2020 Innovation Award in the product category Vehicle Intelligence and Transportation for this innovative technology.

Secure and convenient: ultra-wideband technology for keyless vehicle access

Continental is working with partners to integrate Ultra-wide band (UWB) technology into future vehicles to make keyless vehicle operation more secure and convenient. When integrated into smartphones, UWB technology has the potential to enable new functions, such as secure passive entry or parking vehicles remotely with a smartphone. UWB will complement the existing short-distance radio standards in keyless vehicle access. The technology company has played a leading role in developing the basis of the UWB wireless standard in relation to vehicle access in the Car Connectivity Consortium (CCC) with key members including BMW and Apple and looks forward to working with more automakers to integrate the technology into future vehicles. The CCC is working on standardizing the use of UWB and digital keys in general to enable their use for all smartphone operating systems and models.

UWB makes keyless vehicle access more secure by preventing unauthorized access via relay (man-in-the-middle) attacks. In this theft strategy, the radio signal of the vehicle key is extended by radio technology in order to make the vehicle appear to be in close proximity to the driver. But the driver's location is pinpointed almost to the centimeter using UWB communication. This information is used to control access.

Natural 3D Centerstack display: 3D experience without special glasses with touch function

Continental is demonstrating the next generation of the Natural 3D Display, bringing the technology to the center of the cockpit as a key element of human-machine interaction for the first time. The Natural 3D Centerstack display also offers drivers and passengers a touch function. Introduced in 2019, the 3D Lightfield technology enables all passengers in the vehicle to enjoy a 3D experience without special glasses or head tracker cameras. Three-dimensional highlighting, accentuation and complex lighting effects convey information conveniently and safely.

Now Continental and its partner Leia are also integrating the technology in the center console display and for the first time in 4K resolution. In addition, the optimized display board can be operated by touch and provides haptic feedback, which further increases convenience and operating safety.

Cooperation Portal automates and standardizes software integration

The importance of software for vehicles is growing rapidly. This development often poses challenges for automobile manufacturers, who have to integrate the exponentially growing amount of software into future vehicle generations. To significantly reduce this effort and increase the quality of the software to be integrated, Continental has developed an online platform that automates and standardizes software development and integration in the vehicle. The Continental Cooperation Portal automates the to-ing and fro-ing between software delivery, testing, and validation, as well as restoring data for all software suppliers in the event of errors, so that only error-free applications are transferred to the actual development system. Up until that point, the online platform will reduce the need for correction loops and free up capacity for implementing other electronic control unit functions. At the same time, Continental as a system integrator creates the conditions for the development of digitally connected vehicles whose electronic architecture focuses on high-performance computers (HPC) and reduces the importance of classic electronic control units, sensors and actuators.

Ac2ated Sound: Continental revolutionizes audio technology in the car

At CES 2020, Continental will be showcasing a new cooperation for its loudspeaker-free audio system for the automotive interior, which fills vehicles with lifelike three-dimensional sound. The cooperation combines two premium audio concepts. The innovative Ac2ated Sound concept eliminates the need for conventional speakers by causing existing surfaces in the vehicle to vibrate.

Cyber-Security: first Automotive Security Operations Center to be launched

It's no secret that networking comes with a huge responsibility for the entire automotive industry. That's why the specialists from the Continental subsidiary Argus Cyber Security have joined forces with the experts from T-Systems to present their first Automotive Security Operations Center (SOC) at CES 2020. In this Automotive SOC, vehicle manufacturers and fleet operators can continuously monitor the IT security of their vehicles on the road, detect attacks and react as quickly as possible.

New, modular and scalable contact sensor detects scratches and damage

The new Contact Sensor System (CoSSy) detects contact between a vehicle and a person or object at cutting speed. CoSSy helps to make applications like automated parking safer. The recording of sound signals by CoSSy can be used to detect collision impact at low speed so that the vehicle can be stopped immediately. Once installed, the CoSSy sensor signals can support many other applications, such as detection of vandalism (scratching), slow parking knocks, recognition of the road condition, driver identification by voice or detection of approaching emergency vehicles.

Continental at the CES

The Continental press conference will take place during the CES press days on Monday, January 6 at 10:00 a.m. at the Mandalay Bay Hotel, Level 2, Surf Ballrooms D-F. The Continental speakers are Nikolai Setzer, member of the executive board at Continental, Dr. Dirk Abendroth, Chief Technology Officer (CTO), and Werner Köstler, Head of Strategy & Business development in the Vehicle Networking and Information business area at Continental. The technology company will also be presenting its latest automotive innovations and technologies in a private exhibition area at the Renaissance Hotel from Tuesday, January 7 to Friday, January 10. A media tour exclusively for invited guests is planned for January 7. Please contact Sebastian Fillenberg or Sören Pinkow for further information.

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. Continental generated sales of €44.4 billion in 2018 and currently employs more than 240,000 people in 60 countries and markets.

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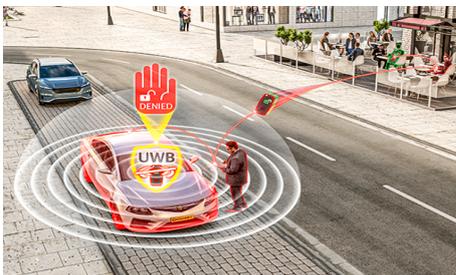
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Images and captions



Satellite cameras make the hood transparent and give the driver a view of the ground below.



Ultra-broadband wireless technology prevents relay attacks and makes keyless operation safer.



Natural 3D Centerstack display: 3D experience without special glasses and for the first time with touch function.



Automated and standardized software integration for high-performance computers with the Continental Cooperation Portal.



The Argus specialists teamed up with experts from T-Systems to present their first Automotive Security Operations Center (SOC).



CoSSy is a sensitive sensor system for various applications to distinguish between air-borne sounds, knocking noises, dents and scratches for example.