DVN-I
Automotive Interior

Thu, 17 March 2022 Weekly Newsletter **NEWSLETTER #103**

Editorial

Distracted Driving: In-Depth, DVN Interior Workshop

This week's in-depth article looks at distracted driving. This central traffic safety issue is gaining importance as in-car distractions proliferate and non-integrated connectivity aggravates the matter. Aside from forthcoming regulations, this is a societal issue and the automotive industry is investing a lot in it, supported by tangentially peripheral sectors such as digital; sensor; software, and others. DVN Interior has been publishing on the topic—driver monitoring systems, for example—since the beginning.

The upcoming DVN-I Workshop in Köln on 25-26 April will include a complete session of lectures with this focus. More broadly, the Workshop's lecture docket is nearly full; the expo booth floor plan is close to final, and confirmed attendees represent numerous automakers and suppliers. Just to mention as they register, we are proud to have Bentley as a lecturer, and Lotus Tech Innovation Centre (formerly Geely Auto Technical Deutschland) attending with a team of experts. We'll keep you posted; register **here** if you've not already.

DVN Interior members are talking about it. Here Andreas Wlasak, Forvia Design VP click here

Thanks for being a faithful DVN-Interior member; we're ever so glad you're with us!

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

Distracted Driving Developments From All Sides

ROAD SAFETY IMAGE

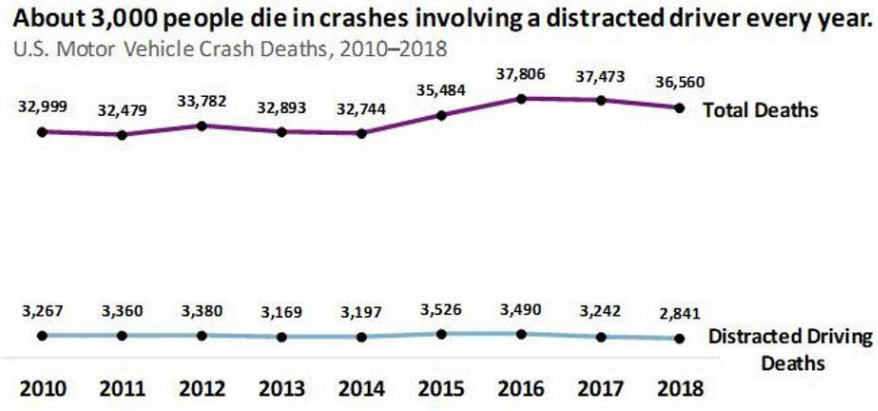
Driver monitoring systems (DMS) are one of the leading countermeasures for distracted driving, and are a frequent topic in DVN Interior—especially more so as regulations begin to require them legally, and increasing vehicular autonomy requires them technically. That's why there's a whole session devoted to this constellation of topics at the DVN-Interior Workshop next month, with contributions from the likes of the Fraunhofer Institute; Ansys; Elmos; Sigmasense, Lumentum, and Yole. Not yet registered for the Workshop? **Here's** where to get that handled.

Now, there are two main things necessitating DMS: L^2 and L^3 automated driving (really, anything sort of full L^5) require DMS to make sure the driver is positioned and focused to quickly and without mistakes take over the driving task when required. More, DMS has high value as a countermeasure for distracted, unfocused, and drowsy drivers. Today we look at DMS vis-à-vis distracted driving.

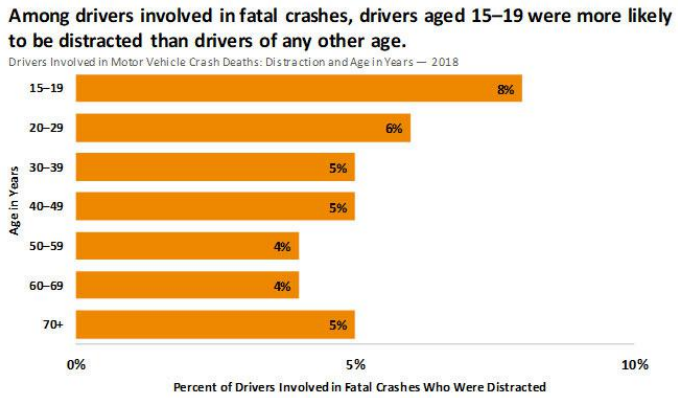
Distracted driving means exactly what it sounds like. Anything that pull's the driver's attention away from the driving task is, by definition, a distraction. Sending a text message; talking on a cell phone (whether handheld or hands free—the cognitive distraction is significant either way); interacting with a car's infotainment system or other controls; using a navigation system, and eating are some examples of distracted driving. Any of these can easily threaten the safety of that driver, their passenger, and other traffic participants.

There are four main types of distraction: **visual** (eyes off the road); **manual** (hands off the wheel); **cognitive** (mind off the driving task), and **audio** (too much noise—crying baby, music too loud, etc).

Distracted driving has very bad consequences. Every year, distracted drivers account for about 2.5 million car crashes worldwide. Every day, more than 1,000 people experience injuries due to distracted driving crashes. In 2019, distracted driving was responsible for nine per cent of the fatal motor vehicle accidents. After using a phone while driving, the brain needs at least 13 seconds to refocus on driving. Many parents attend to their toddler (snacks, toys, etc) while driving. Drinking and eating account for two per cent of distracted-driving car crashes. And on and on and on.



NHTSA CHART



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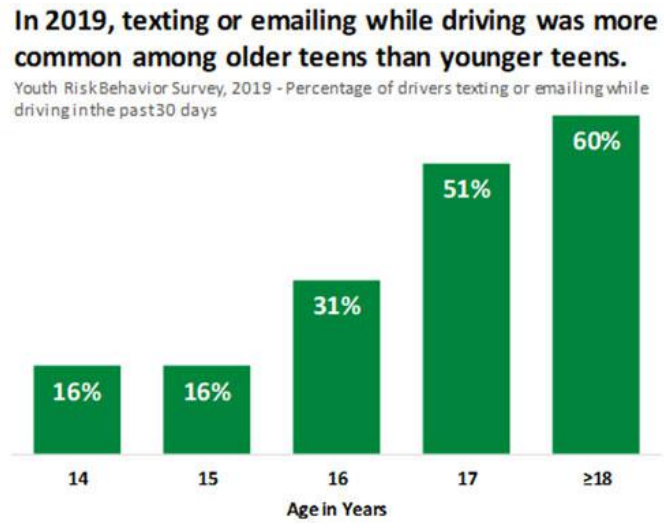


NHTSA CHART

AXLEWISE INFOGRAPHIC

Guardian, from Seeing Machines

Last year (DVN-I, 27 May 2021) we looked at Seeing Machines. They're based in Canberra, Australia, an their expertise is in human-machine interaction and artificial intelligence technologies to enable machines to see, "understand", and assist people. From a robotics lab at the Australian National

University just over 20 years ago, a group of researchers formed this company, which has built a driver alert system already installed in 250,000 vehicles worldwide.

Seeing Machines introduced their **Guardian system** to minimize costs in vehicle fleets caused by driver fatigue and distraction. Guardian is now operational in more than 400 companies globally. An online video does some **show-and-tell** about it. Fleet drivers are an interesting case; for many years it has been considered a skill and strength to be able to "endure" long hours of driving without giving in to the events of drowsiness or distraction. Now, perspective has changed as society doesn't accept this risk anymore, and distractions are proliferating (smartphones, infotainment, etc). Fleets are valuable test platforms and data-collection pools for systems envisioned as eventual personal-vehicle equipment.

SEEING MACHINES INFOGRAPHIC

In the Guardian system, face- and eye-tracking algorithms measure the driver's head position and eye closure. When safety parameters are exceeded, audio alarms and powerful seat vibration are immediately activated. Data and footage are immediately relayed to the 24/7 Guardian Centre through a secure connection for review. If needed, fleet management are notified and can respond in real time. All events captured by the system can be viewed in the company's online platform.

SEEING MACHINES IMAGE

The system comprises:

1. In-cab Guardian sensor: Camera tracks eye closure and head position to watch for fatigue and distraction.

2. Controller: a fanless computer. All peripherals and power are connected to it.

3. Forward-facing camera (optional): Captures footage of the road in front of the vehicle.

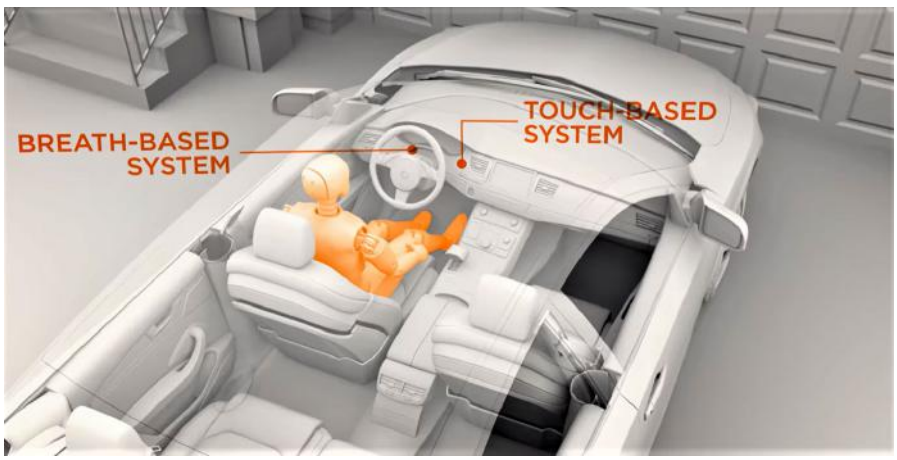
4. Vibration motor: Vibrates the seat when fatigue or distraction is detected.

Deep-learning algorithms rely on billions of kilometers of naturalistic data to assist fleets in reducing fatigue and distraction related dangers. Event footage is anonymized and annotated by humans to inform future product development of this solution to feed innovation ahead of the market. While Guardian makes significant, lasting changes to road safety, they strive to achieve a new level of safety through application of the most sophisticated driver monitoring technology and industry best practices, to deliver lifesaving technology to fleets who are serious about safety.

The monitoring system has to be robust enough to cope with face masks, glasses, wigs and facial jewelry.

A Different Kind of Distraction: Driving While Impaired

Drunk driving is widely recognized as an important factor of the 1.25 million people who die in road crashes worldwide every year. Due to underreporting, the real numbers of alcohol-related road casualties are higher than those in the official statistics. And there are plenty of other drugs besides alcohol that impair driving skill and situational awareness; slow reflexes, and interfere with situational awareness.



The U.S. auto sector is considering how best to comply with a mandate requiring the installation of technologies preventing drivers from operating vehicles when impaired by alcohol or drugs. The requirement will be phased in from 2024 to 2027.

DMS CAMERA IN VOLVO RESEARCH VEHICLE, UPPER LEFT. SECOND CAMERA IS ON FAR RIGHT OF WINDSHIELD.

More than 10,000 people died in crashes involving an alcohol-impaired driver in 2019, making up nearly 30 per cent of all traffic fatalities, according to NHTSA.

The Driver Alcohol Detection System for Safety (DADSS) program, a public-private partnership between the world's leading automakers and NHTSA, advocates for breath or touch sensors that can disable the vehicle upon detection of a driver with a blood alcohol concentration (BAC) at or above 0.08 per cent (the legal limit in most U.S. states). Breath-based systems measure BAC passively when the driver is seated at the wheel, while touch-based technologies measure BAC levels under the skin's surface by shining infrared light onto the fingertips or palm of the driver.

Schneider National will be the first trucking company to work with the DADSS program, and plan to conduct a trial deployment of DADSS in-vehicle alcohol-detection technology this year, outfitting eight of its cabs with the latest breath sensors and putting the system through hundreds of thousands of real-world operating miles.

This first-generation breathalyzer system is for fleet operators implementing a zero-tolerance alcohol policy for their drivers, says DADSS, with a consumer version of the system expected by 2024 and a touch system by 2025.

But while breath or touch sensors may be suitable for commercial vehicles, installing them into millions of consumer cars would not be a practical solution, says consultant Sam Abuelsamid, who covers the transportation sector for market intelligence and advisory firm Guidehouse Insights. "The U.S. auto industry has been very receptive to the requirement", he said. "However, if the mandate ends up specifying breath- or touch-based systems for consumer cars, then I think there would be pushback from the industry because those technologies are considered to be relatively expensive and less effective than camera-based technologies".

Breathalyzers or touch sensors could potentially add hundreds of dollars to the cost of a vehicle. Abuelsamid says "While this may represent only a relatively small increase in the cost of a commercial vehicle, it could be significant for an average consumer car". He notes breathalyzers would also require constant calibration to monitor alcohol levels accurately, and believes there could also be "significant pushback from the public, who may not accept having to blow into a breathalyzer every time to start their car". That stands to reason; especially in the United States where individual rights are widely regarded as more important than societal ones, there's going to be a sizeable proportion of the population who resent having to pay extra money and do extra steps even though they themselves never drive while impaired, or never even drink.

Abuelsamid says the most effective solution would be driver-state or driver-behavior monitoring systems with infrared cameras mounted on the steering wheel or dashboard to monitor a driver's behavior: "Cameras track the driver's eyes to make sure they are watching the road while also looking for signs of drowsiness, impairment, or loss of consciousness; if any of these signs are spotted, the car will warn the driver, and if the behavior continues, the car will then turn on its hazard lights, slow down, and pull over to the side of the road".

Interior News

Continental's Private Screen Cuts Distraction

INTERIOR NEWS

There's an innovative display from Continental that allows vehicle information to be displayed dynamically, either in a private mode or shared with all. Front passengers can use multimedia content such as videos or the infotainment system without distracting the driver from road traffic. If necessary, and the traffic situation permits, all vehicle passengers can optionally be given access to this content. Conventional displays, which up to now have been offered primarily for passengers, do not enable flexible switching to a private mode.

Continental's User Experience regional lead Jens Brandt says "Modern vehicles are increasingly becoming smartphones on wheels for drivers and passengers. Driver distraction is still one of the main causes of traffic accidents. With our new display solution, we are therefore aiming for a digital experience that minimizes distraction. The user experience is becoming a fundamentally distinguishing feature and game changer in the mobility of tomorrow. The crucial factor here is that we also provide the front passenger with new infotainment options".

During the development of the new display technology, Continental succeeded in using this technology for the first time for the special requirements of a vehicle and combining the light in privacy mode in such a way that less than one percent of light emission is received by the driver. This feature does not impair driver awareness while generating a high-quality display image for the passenger.

By switching the privacy function on or off, the display makes content visible either to only the front passenger or to all passengers. Brandt says "Thanks to our expertise in back-illumination and plastics technology, our privacy display includes a range of key components that we have developed and also manufactured ourselves. This enables us to meet the highest quality requirements both from vehicle manufacturers and users in terms of contrast, luminance, and image homogeneity. In addition, we will continue to increase energy efficiency until it is launched on the market, thereby making the technology even more sustainable". The market launch of the new privacy displays is planned for 2024.

STM's Door-Window-Tailgate Controller IC

INTERIOR NEWS

VOLKSWAGEN I.D. BUZZ CONCEPT (VW IMAGE)

STMicroelectronics is increasing the integration of automotive body electronics with their L99DZ200G door-zone system IC, which enables a single-chip front-drives-rear setup managing a front-door window, mirror, and lighting as well as the rear-window lift. It provides a set of benefits, in term of lower current, reliability, assembly time , reduced BOM, and shorter development time.

The L99DZ200G contains two H-bridge gate drivers, a gate driver for an external MOSFET to control mirror heating, a control block and high-side driver for electro-chromic mirror dimming, and five LED high-side drivers. Three of the high-side drivers can operate in constant-current mode to power lighting modules that have high input capacitance. The other two high-side drivers are suitable for controlling ordinary LEDs.

With its two H-bridge drivers, the L99DZ200G can control two spindle motors simultaneously and handle an additional cinch motor to close a powered tailgate or trunk.

Diagnostic and protection features include temperature monitoring and thermal protection, a dedicated failsafe block to pull down the gates of the external high-side MOSFETs, and open-load and overcurrent detection for all outputs. A current-monitor output pin is provided for each high-side channel. Overcurrent recovery and thermal expiration allow operation to resume automatically after a fault. There is also reverse-battery protection and system-safety features including a configurable window watchdog and programmable reset generator. Such integration architecture also reduces number of microchips,

another benefit when microchips are in short supply.

STM, a €10bn French-Italian multinational electronics and semiconductors maker, is headquartered in Plan-les-Ouates near Geneva, Switzerland.

Delo's UV Glues for Holo-Films in ARHUDs

INTERIOR NEWS

SMART VEHICLE WITH AR ELEMENTS (ZAPP2PHOTO IMAGE)

Delo's Photobond UV acrylates for optoelectronics enable fast and true-color bonding of the holographic films manufactured by Covestro. The automotive industry, as well as many others, will benefit from rapid roll-to-roll manufacturing and better integration of the films into holographic end-use applications.

ARHUDs (augmented-reality head-up displays) represent one of the most important future applications for holographic films like Covestro's Bayfol HX. With these films are integrated into the windshield, projections merge with reality so that the navigation appears to be displayed directly on the road. The films allow for brighter and larger images while reducing installation space. No matter the application, holographic films are thin, lightweight and completely invisible under so-called off-bragg conditions – whenever the coupled light does not meet certain requirements, like the correct wavelength. The films usually consist of RGB-sensitive photopolymers on a transparent carrier film and are embedded between two protective cover layers.

A precondition for high component quality is low optical interaction between adhesive and photopolymer. Because of this, the adhesives are chemically adapted in such a way that they do not shift the absorption into other wavelength ranges when they are combined with the photopolymer. Therefore, they must ensure color fidelity under all conditions. Until now, mainly silicones have been used to fix the film layers. Silicones are versatile and high-performance materials; however, this is offset by lower strength, slower curing and, in some cases, strong outgassing. During curing, they emit particles to their surroundings. Due to the potential impact on adjacent manufacturing processes, many automotive suppliers are striving for silicone-free production. The Delo Photobond UV acrylates tested show a highly improved outgassing behavior compared to silicones, and reach full strength within seconds under UV light.

Renault's New Austral Has Interior Cockpit Focus

INTERIOR NEWS

RENAULT IMAGE

Renault will launch the Austral, an electric compact crossover next year to follow the Mégane E-Tech Electric compact hatchback launched this year.

The Austral is the first Renault vehicle built on the third generation of the Renault-Nissan Alliance's CMF-CD platform. A tinted panoramic glass roof is available as an option, with an electric sun visor for improved thermal comfort in summer.

Key features of the interior are the cockpit top with a soft-touch look. Added to this is the ambient lighting, which extends into the door panels. High-quality materials such as real wood treated in the Japanese maki-e style further enhance the interior.

Like the instrument panel, the front and rear door panels are extensively padded with foam in the upper area. They also feature the same decor all around. The textile covers transition from black to light gray and, together with fine-grained imitation leather, provide an elegant touch.

Another feature is a hand rest on the center console made of satin chrome with a fine-grained cover. The info screen in the form of a horizontal "L" combines the landscape-format digital instrument cluster and the portrait-format multimedia monitor to form a total display area of 774 square centimeters.

Of this, 453 square centimeters are accounted for by the 12-inch multimedia display, and 321 square centimeters by the 12.3-inch digital instrument cluster. Add to this the high-resolution image projected onto the 9.3-inch HUD, and the Austral offers a total display area of 1,000 square centimeters.

The openR Link multimedia system is designed for maximum driving comfort and intuitive operation. It was developed in cooperation with Google and includes the Google Assistant voice assistant, which controls numerous vehicle and navigation functions by voice command.

ADAS includes drowsiness warning and traffic sign recognition with speed adaptation.

Polestar O2 Study, Monomaterial, and a Drone!

INTERIOR NEWS

POLESTAR IMAGES

Polestar has presented their O_2 roadster study O2 in the Design idiom of the Precept concept car. An **online video** shows the goods.

In terms of sustainability, the roadster study breaks new ground with a new thermoplastic monomaterial in the interior. The term "monomaterial" describes the large-scale use of a single base material for various elements. Recycled polyester is used for all soft components: Foams, adhesive, 3D knitted fibers and nonwoven lamination. This simplifies recycling while aiming to reduce weight and waste. The different materials are labeled so that they can be separated more easily for recycling.

An autonomous video drone is integrated behind the rear seats. Developed by Aerofugia (formed out of a merger between Geely, the Chinese owner of Volvo, and U.S.-based flying car developer Terrafugia in 2017) in collaboration with Aerofugia consumer electronics brand Hoco Flow, the drone can be used on the road to record the journey. To do this, an area of negative pressure was created behind the rear seats, allowing the drone to take off while the car is in motion. The drone autonomously follows the car at up to 90 km/h. After filming, it returns to the car autonomously. While stationary, the video clip can then be edited directly via the 15-inch center display and shared on social media—for those times when you urgently must go beyond showing all ten thousand of your "friends" what you had for breakfast.

Covestro: Climate Neutrality for All Products by 2035

INTERIOR NEWS

COVESTRO IMAGE

For almost two years, Covestro has been working to align fully with the circular economy. A next milestone is to achieve net zero CO_2 emissions by 2035 for the production (Scope 1) and from external energy sources (Scope 2). That's especially ambitious when being a plymer raw material provider.

Covestro's climate protection ambitions are:
• Net-zero CO_2 emissions from 2035 for Scope 1 and 2;
• Reduce greenhouse gas emissions by 60 per cent by 2030 for Scope 1 and 2;
• Offer every product in a climate-neutral version in the future;
• Be the first company in the industry to achieve climate neutrality, and
• Reduction target anchored in management system.

In the long term, Covestro wants to gear their entire production and product range to the concept of the circular economy and the progress of climate protection. Pioneering examples include the world's first climate-neutral polycarbonate, manufactured using raw materials from mass-balanced biowaste and residual materials as well as renewable energy.

A new addition to the product portfolio is a climate-neutral methylene diphenyl diisocyanate (MDI). It is used in large quantities worldwide as a raw material for the production of rigid polyurethane (PU) foam, a highly effective insulating material. The new MDI grades are climate-neutral from cradle to factory gate, thanks to the use of precursors derived from ISCC Plus-certified mass-balanced biowaste and residual materials. MDI is typically used for instrument panel or door panel carrier.

Carbon neutrality is the result of an internal assessment of a partial product life cycle from raw material extraction to factory gate, also known as cradle-to-gate assessment. The methodology of the life cycle assessment is based on the ISO 14040 / 14044 standards. The calculation takes into account biogenic carbon sequestration based on preliminary data from the supply chain.

The Design Lounge

How Softplast is Changing Interior Design

By Rob Miller

THE DESIGN LOUNGE

ABATEK IMAGES

Car interiors are experiencing a renaissance with luxury, comfort, and the use of new materials that can broaden the design range of vehicles as a whole. There are no second chances for an automaker to make a first impression with their interiors with consumers. The key is to create lasting visual impressions that last as long as the car does, causing consumers to fall in love with their interiors and maintain that love over time. And that is what each automaker wants to achieve with their car designs, especially in the interior.

Some new futuristic seating and trim illumination options are now appearing in the global marketplace. One new unique material is called Softplast. Abatek, a Swiss company based in Zurich, developed Softplast as a unique product with a rigid and closed surface that is still flexible with use. It is a highly customizable surface that is harder than silicone but softer than plastic. As a result, Softplast is exceptionally flexible in surface structure, design, and lighting. Size limitation is right now around 40 × 40 cm. However, larger sizes are possible and can be explored if needed. Originally conceived as an

alternative for plastic keyboards, this product has morphed into a perfect trim level theming product to provide illuminated custom high-resolution graphics suitable for seating and trim panels for the interior.

Over the last several years, Abatek has taken this technology and adapted it for logo and branding illumination, which allows this material to be integrated and sewed directly into seats or trim panels, allowing creative branding opportunities for the interior.

For example, Abatek has shown samples of a Volkswagen (VW) logo with white illuminated letters and stealth-looking black that magically lights up when needed. Looking at it, you would never think it is capable of being illuminated with such beauty and resolution. What is unique about Softplast and the surprise and delight illumination it provides is that the material is robust and can operate within a wide temperature range. In addition, it exceeds automotive specifications for interior use and can even withstand the rigors of exterior use, such as found on exterior badging.

To prove the point further, Abatek created Jeep, Lincoln, and Ram logos to further define Softplast's ability to illuminate even the most complex and detailed logos. In addition, Softplast is so unique it can be manufactured in any color or with unique textures similar to leather. It has a superb tactile feel and can be made with different durometers to match various applications.

Abatek is also developing a flexible thin backlight that will be less than 2mm thick, creating the perfect, flat-yet-flexible trim lighting for Softplast.

Another unique feature of this product is the detailed high-resolution aperture (resolution) that allows the light to come through. As a result, the graphics can be 3D on the surface to give a raised letter look or an embossed look. In addition, the graphics are crisp and sharp, adding to the unmistakable beauty of this technology.

Softplast is compatible with capacitive touch technologies to further the creature-feature use for interiors. Additionally, if haptic feedback is required, Softplast can incorporate this, giving the user a short stroke with a click feel.

Interior branding and other illuminated opportunities that need touch and feel are real winners for Softplast. Currently, HMI, interior seat lighting, and exterior badging are targets for Abatek.

Interior trim and finish have a significant impact on consumers. Finish, looks, and the creative use of light are essential aspects of an interior. Consumers quickly decide what they like and don't like. What can be achieved with Softplast is futuristic and almost luxurious in terms of styling. As our interior spaces evolve, so will new materials and their uses, and interior badging in various interior areas will continue to grow with the addition of content information that needs to be communicated to the occupant. It is an inspiring time for the automotive interior, and we can all look forward to the many new developments, applications, and material use in the coming year.

News Mobility

Bosch Buys Atlatec

NEWS MOBILITY

ATLATEC-BOSCH IMAGES

Atlatec is a company for HD mapping in the field of driver assistance and automated driving that emerged from the Karlsruhe Institute of Technology in 2014. Now Atlatec has 40 employees between headquarters in Germany and offices in Japan and the USA. They have leading automakers and tier-1 suppliers as customers.

Dr. Mathias Pillin, chair of Bosch's board of management for cross-domain computing, says "With the planned acquisition of Atlatec, we are expanding our expertise in the field of high-resolution digital maps and positioning ourselves even more broadly. Bosch is thus the only company that can offer its customers all the necessary building blocks of automated driving from a single source, from actuators and sensors to software and maps". The high-resolution 3-D maps are designed for L^{3-4} automated driving functions.

In addition to data recording and processing, Atlatec's portfolio also includes map creation. Atlatec has developed a scalable solution for map creation with its own sensor box and associated software. The collected raw data is also evaluated with the help of artificial intelligence and enriched with important information such as traffic signs, curve radii and structural features such as tram tracks. The company employs around 25 people in Germany, Japan and the USA. Atlatec will continue to operate as an independent company and become part of the Bosch Cross-Domain Computing Solutions division.

Will 5G Make Cars Better Connected?

NEWS MOBILITY

DEUTSCHE TELEKOM IMAGE

Verizon will partner with Audi to embed some vehicles with 5G. Observers say it's part of a movement to bring 5G to cars to enable personalized mobile services, new driver-assistance features, and connected innovations. The embedded technology in Audi cars will allow a vehicle to connect to the Verizon 5G Ultra-Wideband network. Connected with 5G, a vehicle can be an extension of a home. Passengers will be able to download or stream entertainment at higher speeds and with better quality than ever before, Verizon claims. Vehicles will receive firmware and software upgrades over the air, much like a mobile phone, to patch inevitable bugs and vulnerabilities and help ensure in-vehicle technology remains current and capable. Infotainment and navigation systems can be enhanced with HD/3D mapping and video, cloud-based user profiles, and mobile retail capabilities.

Alyssa Altman, the head of Transportation and Mobility at digital consultancy Publicis Sapient, says "The kids in the back seat can finish watching the movie they started at home as car entertainment becomes integrated with home entertainment. The front-seat passenger, who has had navigation and radio station duties taken away from them, could be more productive as the car dashboard becomes more dynamic and display-oriented. And innovations that can make the windscreen a 4K display to the passenger while remaining transparent to the driver mean that the front seat will be the cool seat again".

5G delivers low (millisecond-level) latency. Human reaction speed is a bit above 200 milliseconds, leading to crashes every day. 5G's five-millisecond latency is practically real-time, which can be used to provide the user with additional safety information before it is visible, for example, roadworks, fast-moving emergency vehicles, V2X in general, and visually hidden pedestrians about to cross the street.

Car manufacturers are just getting started in terms of integrating 5G. In the future, we'll see dense vehicular pooling (platooning) that can increase traffic density drastically, reduce fuel consumption, and reduce driver fatigue. Front-facing cameras and sensors could parse road conditions, making apps like Waze and Apple Maps even intelligent and notifying safety crews of concerns on the roads.

Your car could communicate for you to the dealership as you brought it in for repairs, significantly reducing the time and money you need to spend, Altman says. Onboard cameras could connect to cloud-based AI systems and process image data about drivers.

General News

Honda-Sony Strategic EV Alliance is Born!

GENERAL NEWS

VISION S INTERIOR (SONY IMAGE)

Sony Group and Honda have initiated a strategic alliance and signed an MoU that outlines their intent to establish a new joint venture for joint development and sales of “high value-added battery electric vehicles (EVs) and commercialise them in conjunction with providing mobility services.”

This alliance will see Honda bring their expertise in vehicle development capabilities, vehicle manufacturing, sales, dealer network and aftersales service management, while Sony will bring the development and application of imaging, sensing, telecommunication, network, and entertainment technologies, to realise a new gen eration of mobility and services that are closely aligned with users and the environment and continue to evolve going forward.

The first EV from the new JV is expected to go on sale in 2025. The JV is expected to plan, design, develop, and sell the EVs, but will not own and operate manufacturing facilities. This is where Honda will be responsible for manufacturing the first EV model at its plant. It is expected that a mobility service platform will be developed by Sony and made available for the new company.

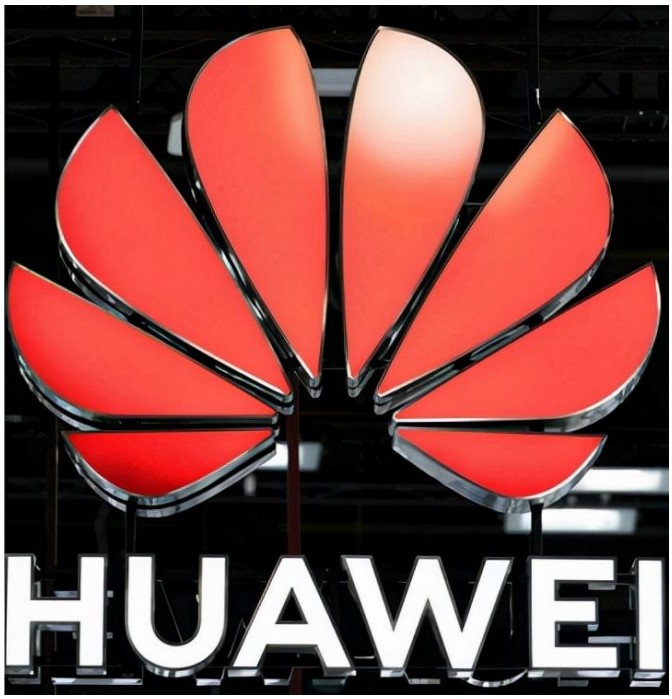
That’s probably the end of expectations on how, where and with whom, Sony could be manufacturing its successive concept cars presented at CES 2020 (Vision-S 01) sedan and CES 2022 (Vision-S 02 SUV). In parallel, Honda seemed to be lagging behind the industry concerning EVs.

Honda will be building the cars at its existing manufacturing facilities, at least for the initial new vehicle being launched in 2025. It is noted that Sony is expected to furnish a new "mobility service platform" for the cars as well, which we take to mean some kind of sweet infotainment package bundled with driver assistance technology.

There is no mention of how the agreement impacts Honda's future in-house EV plans (which involve, among other things, utilizing General Motors to produce an electric SUV using that brand's Ultium EV platform), or whether this New Company will carry a more original and marketable name.

Volkswagen Talks with Huawei on Autonomous Driving Unit

GENERAL NEWS



It would be a "marriage of two titans" according to the Chinese press. The rumors about a cooperation between Volkswagen and the workforce at ADS, Huawei's autonomous driving business unit, is persistent.

Analysts and industry insiders in China agree on it that such cooperation would make a lot of sense from Volkswagen's perspective. To catch up with Tesla, the global market leader in electric cars, the Wolfsburg company needs a stronger software division, even if they invested in Cariad. Huawei has not only invested heavily in research & development for driverless driving - around one billion US dollars last year alone - but also develops its own chips for cars.

“Instead of selling its know-how, Huawei might also seek to form a joint venture with Volkswagen”, thinks Cui Dongshu, secretary general of the Chinese Passenger Car Association (CPCA). "Huawei provides technical support, Volkswagen brings money and products, and both sides jointly develop a VW-Huawei version of autonomous driving," Cui told Chinese auto newspaper Weilai Qiche Ribao.

Last year, the Chinese high-tech group showed what it can do for the first time: The software and the chip set of the new electric car "Arcfox" of the Chinese manufacturer BAIC come from Huawei. It is a first large-scale test for the "Huawei Inside" model.

VW itself has founded its own software company Cariad, which has a branch in China. Diess has personally taken over the management of Cariad. According to his ideas, the subsidiary should have already developed 60 percent of the software in Volkswagen vehicles itself by 2025. So far, according to insiders, barely more than 10,000 lines of software code in the ID series came from VW itself.

So, cooperation with Huawei - in whatever form - would buy VW a little time. By last year, more than 2,000 highly talented Chinese software engineers were already working for Huawei subsidiary ADS in Shanghai. 1,200 of them specialize in programming algorithms critical to applications such as autonomous driving. Between 200 and 300 programmers each develop Huawei's individual products, such as the operating systems for Huawei's lidar sensor technology. The company's subsidiary ADS is to be expanded from 2,000 to up to 5,000 employees, according to reports. VW has recruited a huge team of 10,000 software engineers in recent years in recognition of the central role of computing in the future of the auto industry.