DVN-I
Automotive Interior

Thu, 10 February 2022 Weekly Newsletter NEWSLETTER #98

Editorial

DMS Regulation Enacts Soon—Then Comes The User Experience!

HARMAN IMAGE

In our two last DVN-I Newsletters, we wrote that audio and interior lighting are no longer just what one listens to when driving, nor just what one sees when sitting in the vehicle. This week's in-depth article looks at the status of DMS (Driving Monitoring Systems). Regulation and consumer organizations are pushing the industry to improve safety with a mandatory application of these features. The planets seem to be aligned, as many companies—established suppliers and startups alike are competing with innovations to make it happen.

DMS started out as a safety feature to reduce accidents related to driver drowsiness and inattention. As they evolve to become more advanced, the industry will leverage this detection technology to improve more aspects of all vehicle occupants' health and comfort. Aside from detection of mission-critical criteria, similar technology could

detect mood-related criteria to improve the whole occupant experience during the trip.

DMS will be another focus of our next DVN Interior Workshop, this 25-26 April in Köln. The rubric of the event is ***Experience Interior • Technology for Safety, Comfort, & Fun***. Get set to exhibit, to speak, or just to attend! Find more information **here**.

Sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

DMS Status and Outlook

TESLA IMAGE

A DMS (Driver Monitoring System) is a real-time system that collects observable information about the driver that tests their ability to perform dynamic driving tasks safely.

These systems can detect distracted and drowsy drivers by accurately measuring eye and head position, driver attention, and fatigue.

The DMS also detects driver vigilance by measuring engagement in (pretense of) multitasking activities like eating, drinking, phoning, texting or otherwise doing nondriving tasks while driving, or even blinking and yawning during driving.
When the AI detects any of these distraction events, the DMS will invoke action i.e send signals or alerts in real time, alerting the driver to become more vigilant and take necessary actions to avoid accidents.

Why DMS?

About 50 per cent of new vehicle models allow drivers to engage adaptive cruise control and lane centering at the same time, according to an analysis by Consumer Reports last fall. Together, these systems can keep a car in its lane and a set distance

from the car ahead with minimal driver intervention—a convenience that many drivers appreciate, according to responses to a recent survey of CR members. But decades of research suggests drivers are less likely to pay attention when that automation is active, which could cause a crash if they aren't alert and ready to take over.

STOCK IMAGE

DMS would be already necessary in any vehicle, even those not at all automated, as distraction risk is growing simply because of the proliferation of tempting distractions: smartphones, infotainment systems—and drowsiness is as old as the automotive itself.

DMS is becoming now more important with the growth of partial automation. More and more vehicles are starting to feature driving assistance systems that can control some braking, accelerating, and steering functions, which make driving less stressful but increase the risk of driver distraction. Even if a driver understands and respects the limitations of these partial automations, their mind can still wander. And for a driver, it's harder to remain vigilant when you're watching and waiting for a problem to occur than it is when you're doing all the driving yourself.

European Regulation

In November 2019, The Council of the European Union voted to adopt regulations to mandate the presence of advanced safety systems in automobiles by mid-2022.

Under the new rules, all new motor vehicles will have to be equipped with DMS including, driver drowsiness and attention warning systems as well as advanced driver distraction warning systems. These advanced safety systems include camera-based driver monitoring to detect inattention or drowsiness in the driver and to issue a warning if driver distraction is identified.

US Regulation

The US House of Representatives passed the Moving Forward Act on July 1st, 2020, an infrastructure bill that costs $1.5 trillion to make roads safer. One of the safety measures included in the bill is to make installation of technology that detects inattentive or intoxicated driving required in newly-produced vehicles. The Stay Aware For Everyone [SAFE] Act of 2020 also emphasizes researching ways DMS can minimize road accidents caused due to driver distraction in the years to come.

Meanwhile, NHTSA has been deliberating how to assess driver-assist and semi-autonomous systems in its NCAP five-star crash-test labeling since 2015, with no resolution in sight—audits of NHTSA, going back more than a decade, have

consistently found the agency structurally unable to bring regulatory plans to fruition.

China

In 2018, Jiangsu was the first province in China to implement regulations requiring long-distance trucks and vehicles transporting hazardous goods to use driver monitoring. Notices including other types of vehicles are expected to follow.

UK

The Law Commission of England and Wales and the Scottish Law Commission have published a joint report, looking at the legal implications of autonomous driving and ADAS and how the law should be adapted.

The report recommends introducing a new Automated Vehicles Act, which draws a clear distinction between features which just assist drivers, such as adaptive cruise control, and those that are self-driving.

A key recommendation of the report is that the person in the driving seat would no longer be defined as a driver but a “user-in-charge”, who cannot be prosecuted for offences which arise directly from the driving task. They would have immunity from a wide range of offences – from dangerous driving to exceeding the speed limit or running a red light. However, the user-in-charge would retain other driver duties, such as carrying insurance, checking loads, and ensuring that children wear seatbelts.

Furthermore, the report addresses the issue that some vehicles may be authorized to drive themselves without anyone in the driver seat. Here any occupants of the vehicle would simply be passengers. Instead of having a user-in-charge, a licensed operator would be responsible for overseeing the journey. There would also be requirements for passenger services to be accessible, especially to older and disabled people.

Significantly, the Law Commissions also recommend new safeguards to stop driver assistance features being marketed as self-driving. This, they say, would help to minimize the risk of collisions caused by members of the public thinking that they do not need to pay attention to the road while a driver assistance feature is in operation.

Euro NCAP

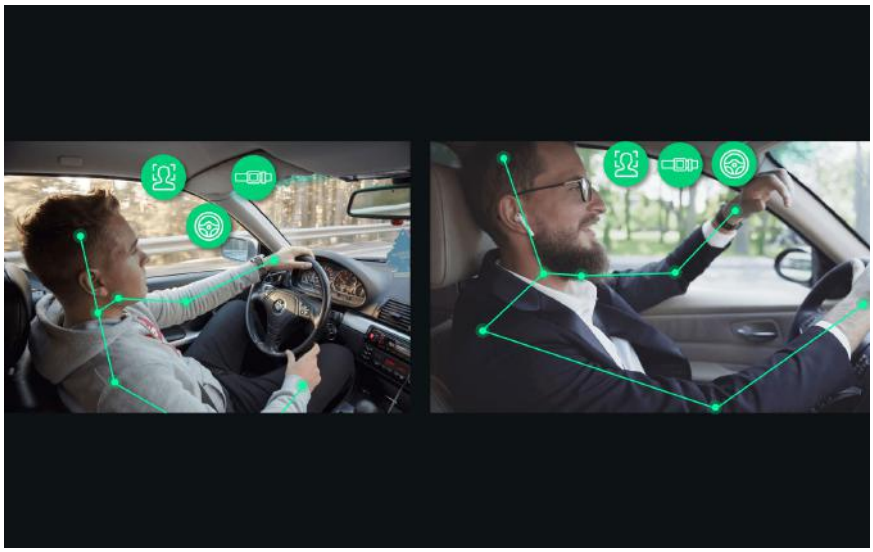
Euro NCAP has formed the OSM (Occupant Status Monitoring) group. The OSM group consists of different organizations and administrations that are involved in Euro NCAP. Two important organizations contributing to the work of the OSM group is ACEA, the European Automobile Manufacturers’ Association, and CLEPA, the European Association of Automotive Suppliers.

Both ACEA and CLEPA contribute with their expert knowledge on the automotive industry and influence the OSM group's decisions. In order to stay up to date on relevant developments, the OSM group also gathers important information from external organizations. One of these is the tier-2 group, through which DMS software developers like Smart Eye (Sweden); Seeing Machines (Australia); Affectiva (US), and Cipia (Israel) contribute their technical expertise to the OSM group by providing important behavioral indicators and initial testing proposals. Smart Eye is also included as a member and as a representative of Scandinavian organization FKG, offering the OSM group the perspective of Scandinavian automotive suppliers.

Based on both internal discussions and input from external organizations, the OSM group is developing the tests and assessment protocol that Euro NCAP will use to rate the driver monitoring technology in new car models.

IIHS Requires DMS for Semi-Autonomous Driving

The US IIHS (Insurance Institute for Highway Safety) will be the first independent safety agency to test the safety of handsfree driving systems. IIHS criteria to get a "Good" rating rely mostly on categorized driver monitoring criteria:



STATIC/DYNAMIC POSES (PLAYMENT IMAGES)

• Monitor the driver's gaze and hand position;
• Use multiple types of escalating alerts such as audio and visual to get the driver's attention;
• Slow the vehicle to a stop and notify the automaker or emergency services if the driver is unresponsive;
• Automated lane changes must be initiated by the driver;
• Adaptive cruise control does not resume from a long stop if the driver is not looking at the road;
• Active lane control should encourage the driver to share in the steering instead of handing it off to the system and tapping the wheel to indicate alertness, as all systems currently do;
• The system cannot be used if the driver's seat belt is unfastened;
• The system cannot be used if automatic emergency braking or active lane control are disabled.

IIHS says work needs to be done in implementing and assessing the strict ratings; they plan for the first series of ratings this year, but the timing depends on the limited availability of cars due to the chip shortage.

Initially, most ratings will likely fall in the "Acceptable," "Marginal," and "Poor" classifications—just like what happened when IIHS began rating headlight performance. No announcement has yet been made as to whether, when, or how the ratings will affect the TSP (Top Safety Pick) awards. Semi-autonomous systems such as GM's Super Cruise, Tesla's "Autopilot", and Volvo's Pilot Assist, in their current form, would not merit a "Good" rating under the IIHS criteria.

CADILLAC IMAGE

AAA / CAA

AAA and CAA (the American / Canadian Automobile Association) is a federation of motor clubs throughout North America. They recently published a study stating that DMS is necessary when cars add automation, and that none of the present DMS are good enough.

AAA IMAGE

This new study suggests camera-based systems work best way to make sure drivers will still pay attention to the road while their cars are doing most of the work.

AAA tested four vehicles with active driving assistance systems that also attempt to monitor whether the driver is paying attention. Its researchers compared direct, camera-based driver monitoring systems with indirect systems that can detect only whether a driver's hands are on the wheel. Systems without cameras were found to take up to 51 seconds longer to alert an inattentive driver than systems with cameras

—so driver could be distracted, paying attention to a phone or even asleep for more than a kilometer of highway travel.

AAA's researchers also say all driver monitoring systems still need to do a better job at preventing abuse and misuse. They tested vehicles on a 24-mile loop in Southern California under the following conditions:
• hands off the steering wheel, and the driver's head facing up and toward the road but with eyes gazing down;
• hands off the steering wheel, but with the driver's head and gaze aimed down and to the right, as if looking at the center console;
• Attempting to "beat the system" by varying head placement and eye gaze and occasionally moving or touching the steering wheel.

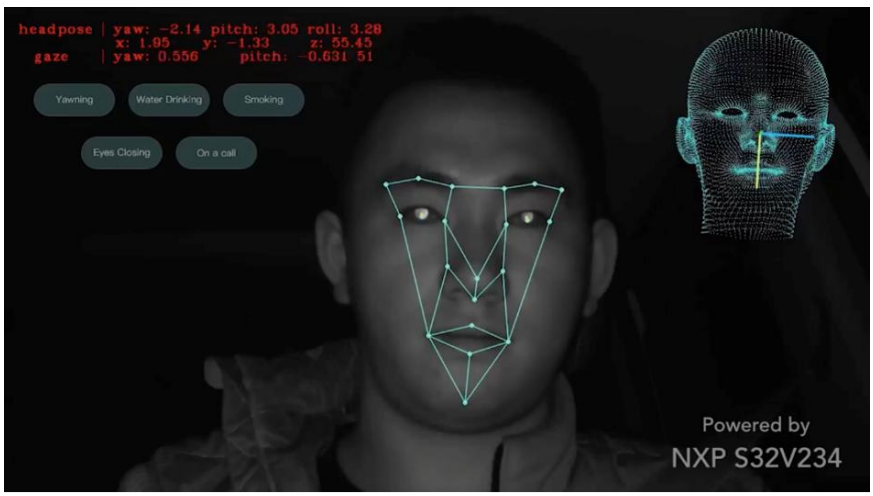
To determine whether external factors were at play—including a camera's inability to recognize a driver—AAA conducted the tests during daytime and nighttime, and used testers from diverse racial and ethnic backgrounds.

They found:

• Direct, camera-based systems issued alerts 51 seconds sooner than systems that check to see if a driver's hands are on the wheel;
• Although both types of DMS could be intentionally misused, camera-based systems were better at preventing misuse and abuse;
• During a 10-minute drive, camera-based systems allowed drivers 2 minutes of disengagement, compared with steering-wheel-based systems that allowed 5 minutes of disengaged driving;
• Camera-based systems didn't significantly differ in performance between daylight and nighttime conditions.

AAA researchers concluded that all vehicles with DMS should have some form of direct driver monitoring, and that camera-based systems work best. But the researchers expressed concern that the systems were easy to defeat intentionally—and that drivers could travel up to 5 minutes between warnings.

The Future



NXP IMAGE

As soon as the above-mentioned regulations are in-force, the industry will continue to invest, develop, invent better monitoring technology, making up for the current shortcomings.

In parallel, as DMS are becoming more advanced, the industry will not only be focusing on safety through driver detection but also driver health and comfort

monitoring.

Advanced systems are preparing to detect heart rate or breathing patterns and guide the driver to a hospital or inform his/her doctor if he/she shows any symptoms of a heart attack. In the upcoming years, driver monitoring systems will also have an improved understanding of human behavior like passenger's comfort levels, what they prefer when it comes to entertainment, etc. For example, gesture recognition will help increase the heating of the car or reduce the volume of the music you were listening to, or even let you have a conversation with your voice assistant.

In sum, while driver monitoring systems will primarily focus on safety, the functions will also extend to improving the whole driving experience.

Interior News

SenseTime Auto Cabin, DMS and Smart Interior

INTERIOR NEWS

SENSETIME IMAGE

AI company SenseTime, based in Hong Kong with roots in the academic world, focuses on optimizing traffic for individual road users and for entire cities. The goals are "safer, smarter and more sustainable". This is to be helped by the widespread use of sensors, 5G technologies, increasing networking of the vehicles themselves and fast data processing in real time with the support of artificial intelligence.

To protect a vehicle from theft, a driver identity check can be set up. Theoretically, this allows fully customized vehicle environments to be stored for each authorized driver, automatically adjusting, for example, temperature, seat settings, interior and exterior mirror settings, sound system volume and other preferences.

This detection system can also act as a DMS, detecting signs of driver fatigue or recognizing when a driver is distracted or exhibiting dangerous driving behavior. The system can detect and warn in time if, for example, a child is left alone in the car. Unauthorized passengers are also detected, making it basically impossible to steal the vehicle on its own wheels (no word, though, on what happens if and when an authorized passenger is not recognized for some reason).

A “SenseMARS Agent” is a virtual assistant that can recognize gestures, facial expressions and speech. This allows drivers and passengers to control the car's entertainment functions via voice commands, for example. The “SenseAuto Cabin-O

Health Partner” measures several health indicators such as heart rate, breathing rate and blood pressure in less than 30 seconds to protect driver`s health.

The smart "SenseAuto Pilot " provides a helpful overview of the entire course of the road and supports the driver and the vehicle's systems in making decisions and planning efficient routes. In addition, there are numerous useful extras like: Distance detection, coping with complex scenarios, lane departure warning or tracking, automatic lane change when overtaking or navigating and automatic driving onto a ramp.

Furthermore, the SenseTime technology opens up a potential for future V2X connectivity. Within a Smart City context, it should contribute to, among others, less congestion, lower fuel consumption, a comprehensive traffic management system or better information provision for emergency services.

Kurz + Swarovski's Crystal Design Luxury Decoration

INTERIOR NEWS

KURZ + SWAROVSKI IMAGE

Kurz, based in Fuerth, Germany, is a worldwide leader in thin film technology. Swarovski is a producer of glass headquartered in Wattens, Austria, with activities in jewelry, optical instruments, and grinding tools and machinery.

The two companies partnered to develop luxurious interior decoration, leveraging Kurz's automotive interior decoration capabilities and Swarovski's crystal glass expertise. The 3D component is created in several variations using the Print Mold Decoration (PMD) process, with crystals that match the color of the look, combining touch operation and backlighting.

The design and decoration technology from Burg Design includes an indium-based metallization, highly transparent sensor technology from Kurz subsidiary PolyIC, and handmade touch-capable crystals from Swarovski. The black-red matte and glossy look is emphasized even more by the dark Swarovski crystals in a smoked glass look. This design boasts a subtle luxurious touch in earthy and copper tones. The golden color of the crystals is also matched to this.

The handmade, precisely cut crystals inspire with depth effects and multiple reflections. They can also be operated via touch thanks to smart sensor technology. The sensors integrated into the panel, consisting of ultra-thin metal-mesh silver structures, are invisible to the human eye. They are robust and can be flexibly adapted to a wide variety of component geometries. Last but not least, the sensors do not affect the recyclability of the components.

Kurz presents further innovative concepts for the car interior such as the digital design for a center console with shy tech expertise, sustainable and self-healing surfaces, 3D structures and integrated smart functions.

Antolin Intelligent Infrared Radiant Thermal Comfort

INTERIOR NEWS

ANTOLIN IMAGE

Electrification in the automotive requires overcoming several burdens, including autonomy. Vehicle propulsion systems are the fundamental energy consumers, but the heating, ventilation, and HVAC systems used to provide adequate thermal comfort conditions for passengers represent the second largest energy users in EVs. Under adverse winter or summer conditions, providing thermal comfort to passengers by heating or cooling the cabin can reduce vehicle range by up to 60 per cent. Heating is the real new challenge, as it was practically “free” (waste heat from the engine) with ICE propulsion.

Grupo Antolin focuses on using heated surfaces that provide thermal comfort employing infrared radiation. Any surface at a high temperature emits radiation in the infrared spectrum that can be used for the targeted heating of passengers at a given distance. IR spectrum allows personalized and focused heating, without the waste of energy involved in heating all the air inside the cabin.

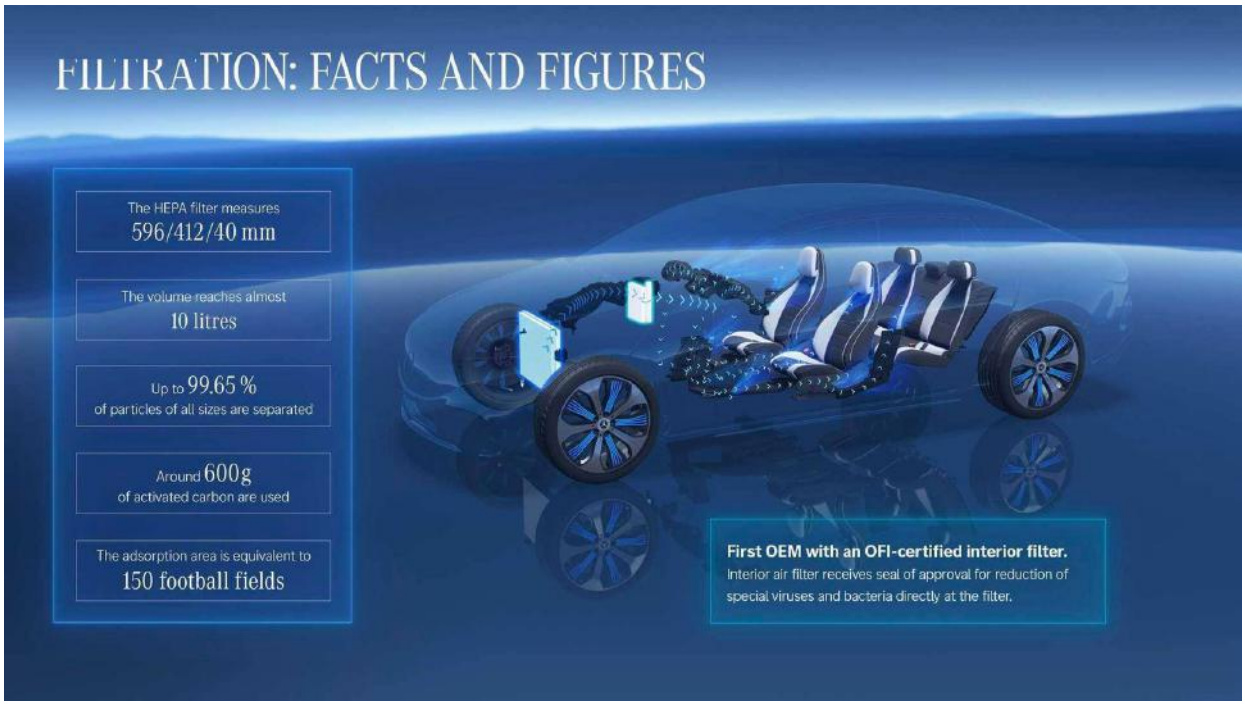
Integration of heating elements in the surfaces of interior parts requires extensive knowledge in the manufacturing of these parts, including combination of plastics and electronics. And by combining simulations adapted to the different environments and optimizing the management of the heating elements, Grupo Antolin has managed to significantly reduce energy consumption associated with passenger heating by up to 70 per cent depending on the use case. It also reduces “time to comfort”, with high value when starting a cold car in winter. It has also noise benefits, as there’s no need anymore for a noisy fan.

In this way, this global system would increase the range of electric vehicles by 29 per cent, according to the company release.

Dynamic lighting can help to optimal thermal sensation of the occupants by color modification, whatever the circumstances.

Interior Air & Sound Management in the new Mercedes EQS

INTERIOR NEWS



MERCEDES IMAGE

The new EQS has an Energizing Air Control package, using a HEPA filter (High Efficiency Particulate Air) to clean the incoming outside air. In recirculation mode, the air is filtered by the interior air filter of the automatic climate control system. Sulphur dioxide and nitrogen oxides as well as odors are also reduced thanks to the activated charcoal coating on the HEPA filter and the interior air filter. The HEPA filter uses the space under the front bonnet.

The system is based on filtration, sensors, a display concept and air conditioning. In combination with the intelligent fresh air/recirculating air switching, the particulate levels are also displayed in real time in MBUX. Using pre-entry climate control, it is also possible to clean the interior air before getting into the vehicle.

Filtration takes place in three stages. A coarse pre-filter retains leaves, snow and sand and traps larger particles. At the same time, it protects the HEPA filter from a high concentration of coarse particles. The separation in this HEPA filter uses a mechanical process by means of a synthetic membrane: The microfiber layer traps PM 2.5 to PM 0.3. Over 99.65 per cent of particles of all sizes are removed according to the filter's efficiency certified pursuant to DIN EN 1822.

In the third step, further fine particles as well as sulphur dioxide, nitrogen oxides and unpleasant odors are filtered out. Due to their pore structure, they have a very large inner surface area. Around 600 grams of activated charcoal are used in the HEPA filter. The adsorption area is equivalent to about 150 football fields. Activated charcoal is produced from coconut shells, which are a by-product of the cosmetics industry.

Energizing Comfort provides as well an immersive on-board sound experience, with three Energizing Nature programs: Forest Glade, Sounds of the Sea, and Summer Rain.

As with the other Energizing Comfort programs, other senses are addressed with lighting moods and images. A new feature of the short sleep program during a break is the expanded conditioning of the interior: It closes the roller blind of the panoramic sliding sunroof (optional extra) and moves the driver's seat into the rest position. This creates an atmosphere that is conducive to sleeping. The power nap (when recharging the vehicle) can increase the driver's performance and give him/her new energy.

And the Air-Balance package appeals to the sense of smell. A special fragrance was composed for this new EQS: № 6 Mood Linen. It bears number 6, as the first electric cars were added to the model range in 1906 with the "Mercedes Electrique" vehicles.

JLR, Amazon Alexa Voice-Activated Intuitive HMI

INTERIOR NEWS

Jaguar Land Rover announced the introduction of Amazon Alexa across its portfolio. Alexa is a voice experience tool, said to be intuitive to use for operating vehicle features and functions while keeping hands on the wheel and eyes on the road.

Requests such as ‘Alexa, navigate me to home’, ‘Alexa, play my chill-out playlist’ and ‘Alexa, show me nearby coffee shops’ can all be done by voice, without touching Pivi Pro’s infotainment touchscreen. Alexa also enables customers to check the news, the weather and manage their schedule or shopping list, just by asking. It allows software-over-the-air update. Pivi Pro’s features including navigation, media playback, phone calls, and compatible smart devices.

As part of Jaguar Land Rover’s Reimagine strategy, this represents a step-change in its connected services capability and will deliver a modern luxury new experience for customers. It will also accelerate Jaguar Land Rover’s transformation into a digital automotive industry.

The engineering teams from Jaguar Land Rover and Amazon worked in close partnership to ensure the seamless integration of Alexa with Pivi Pro. This collaborative approach to development ensures that customers will enjoy the same Alexa experience in their vehicles that they already know and love from home, and benefit from even greater functionality in the future.

Setup is easy: all customers have to do is link Alexa to their InControl6 account by scnning a QR code on the Pivi Pro touchscreen and then follow a few simple steps.

A First Look at the Renault Austral Cockpit

INTERIOR NEWS

RENAULT IMAGE

The successor to the Renault Kadjar is already in place and Renault is putting the finishing touches to the new addition of its own SUV range. The Renault Austral is scheduled to be launched in the first half of this year, and is currently undergoing the final test phase known as confirmation runs or acceptance tests. After that, the official premiere and market launch can take place.

A new teaser image from two Wednesdays ago shows the cockpit of the Austral. With large displays and an L-shape, the command center looks like the electric Renault Megane E-Tech. Like there, the technology comes from Google Automotive Services. The total area of the displays is 774 cm^2 and allows the operation of almost all functions of the vehicle via touchscreen. Behind the displays is Renault's new OpenR software, which was developed together with Google and therefore also includes functions such as Maps and Google Search. Smartphones can also be connected without cables via Android Auto or Apple CarPlay.

Other features are the futuristic steering wheel, which is flattened at the top and bottom—which could be toned down a little for series production, but even in its prototype form looks a great deal more user-friendly than Tesla's problematic yoke—and the high center console. The interior is modular. The compact SUV has a longitudinally sliding and folding rear seat, which is operated with a button in the luggage compartment. The interior also offers numerous storage spaces, such as in the sliding armrest or in the center console. The latter also includes an inductive charging station for smartphones. In total, the storage options in the passenger compartment of the new Renault Austral comprise more than 30 liters.

News Mobility

Holograktor, Mobility Into the Metaverse

NEWS MOBILITY

WAYRAY IMAGE

Wayray, based in Zurich, Switzerland, is launching Holograktor, the first car designed around their True AR technology and a new ride-hailing business model. The seamless connection of the real and virtual worlds will offer greater safety, comfort, services, and entertainment. The three-seat Holograktor can either be driven conventionally or by VR remote control.

This vehicle is a window into the Metaverse for drivers and passengers thanks to the WayRay holographic Deep Reality Display technology. You decide what you do when riding with personalized True AR content: rest, work, play, sing — whatever you want. Holograktor users will see the seamless connection between the real and virtual worlds through the windshield and side windows thanks to WayRay's Deep Reality Display technology. Even gaming objects appear integrated into car's actual

surroundings. You can even take your hands off the steering wheel and immerse yourself into a new virtual world — the Metaverse.

With VR Remote Control, a qualified driver operates Holograktor remotely from a compact driving station. Passengers can relax in the comfort of having a professional driver control the car while enjoying complete privacy.

They have implemented an in-house invention: AirKnife. It separates passenger airflow, preventing air particles (caused by talking or sneezing) from moving around the cabin to ensure that every ride is clean and comfortable.

This can even anticipate your next trip using neural networks, data tracking, and content shared with the car via an App, such as driving comfort preference, locations and addresses.

The company has already raised USD $100m in fundings, including investors such as Porsche, Hyundai, and Alibaba.

Eli Zero City Mobility: Not a Car!

NEWS MOBILITY

ELI IMAGE

Eli reimagines personal vehicles by creating advanced, efficient, and affordable Micro-EVs. Eli is a Chinese company, financed through **crowdfunding**. They are building their first Micro-EV model, the Zero Plus, and it’s fully road-ready for European streets.

It's a small, lightweight four-wheeled electric vehicle. It’s not technically a car because it fits into the definition of a quadricycle in Europe. Essentially, that means it is car-shaped, but it’s more like a cross between a motorcycle and an enclosed vehicle in terms of performance and safety (Like Renault's Twizy and Citroën's Ami). The Zero is tiny. You can touch every interior surface from your spot in the driver’s seat. It’s not as regulated as a true car, but it also doesn’t cost as much as a true car.

It’s about the bare minimum you’d need to be a vehicle. It has four wheels, two seats, and three doors (including rear hatch). The steering wheel and LCD screen are way more car than golf cart. The hatchback and cargo area offer real utility and the seats are comfortable bucket seats. Air conditioning exists as option.

It is powered by a 4-kW motor, with a speed of 40 km/h. This is an urban vehicle, designed to drive you in your “neighborhood (range of 80km).

General News

Faurecia – Hella Deal Completed, Forvia

GENERAL NEWS

FAURECIA & HELLA IMAGES

Faurecia will hold 79.5 per cent of Hella from now on. Their deal included 60 per cent of Hella shares from a pool of family shareholders, and 19.5 per cent from the settlement of a public takeover offer. It finalizes its acquisition of a controlling stake in Hella in a €5.3bn deal—one of the biggest in the European auto parts industry in the past three years. The pool of Hella family shareholders will hold the largest bloc of shares in the combined company, with a 9 per cent stake. The combined company will be known as Forvia, the two suppliers said last Monday.

At the time of first announcement, Faurecia said the transaction represented an estimated total enterprise value of €6.7bn for 100 per cent of Hella. Faurecia makes seating, interiors, cockpit and mobility systems, and electronics under their Faurecia Clarion unit. They have said the combined group will be better placed to sell electric mobility products and automated driving services to the industry.

Analysts say Hella's business making power and battery electronics and radar sensors for ADAS should be a good fit with Faurecia's portfolio.

Faurecia CEO Patrick Koller says the newly enlarged combined company, Forvia, will seek to generate €33bn in revenue by 2025.

Faurecia, based in Nanterre, France, ranks № 8 on the Automotive News list of top 100 global suppliers, with worldwide sales to automakers of USD $17.59bn in 2020. Hella, based in Lippstadt, Germany, ranks № 41, with automotive sales of $5.47bn. It is best known for lighting products, but also makes sensors, converters and power steering components.

According to Faurecia, the combination of the two companies, Forvia, creates the seventh-largest automotive supplier.

Why is Sony Entering the Autosphere?

GENERAL NEWS

SONY VISION 2 AT CES 2022

When Sony presented their first Vision vehicle at CES 2020, their move into automotive was questionable. Their Vision 2 at CES 2022 turns the question mark into more of an exclamation point.

In the meantime, Sony created its Sony Mobility unit, and Izumi Kawanishi, the senior general manager who will manage this new Sony Mobility business, said in an interview: "We see the risk of ignoring EVs as greater than the challenge they pose". The coming transformation of cars was in some ways similar to how information technology turned phones into smartphones, he added.

He also said: “With our imaging and sensing, cloud, 5G and entertainment technologies combined with our content mastery, we believe Sony is well positioned as a creative entertainment company to redefine mobility,” he said.

So far, Sony has built two EV "Vision" prototypes with a factory in Austria owned by Magna International, which also makes cars for other firms including BMW, Mercedes, and Toyota. The electric platform also comes from Magna. Other members of its Europe-based project include Bosch, French automotive Valeo and Hungarian autonomous vehicle start-up AImotive.

These statements summarize why Sony is making that major strategic move. Using existing assembly plant, using strong system suppliers, Sony will be able to turn an EV development project started two years ago into a real and profitable business.

Sony is one of a growing list of technology firms exploring automotive opportunities, including Apple, LG Electronics, Foxconn, and Alibaba Group.