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Weekly Newsletter

DVN-I
Automotive Interior

NEWSLETTER #194

Editorial

First View: Auto Suppliers At CES

DIGITIMES IMAGE

CES 2024 just opened two days ago. There's tons of tech on display, a mix of advanced innovation and actual stuff you can buy today for your next actual car. Honda brought new EVs, their new "Global EV Series" models, with emphasis on key technologies that emplify the significant transformation Honda is currently undergoing. Hyundai already showed a preview of their Mobion concept car, which allows all its wheels to turn independently and now is being shown at CES. Major tier-1 suppliers are showcasing innovations and developments. The DVN Interior Team, represented by Daniel Stern and Philippe Aumont, are there as we speak, and reports will come in the next two editions, plus an extensive report to be published early next month.

In today's DVN-I Newsletter, we take a closer look at some trends in individualization, luxury, and HMI in cars and bring you a first look at automotive suppliers' expo booths at CES. Automakers' interior offerings are changing more and faster than probably ever before, especially in EVs, and the Xiaomi SU7 is yet another new Chinese electric car; we highlight it this week. We bring word of Marelli's Cabin Digital Twin and BMW's 'Mixed Reality Driving', and much more. We hope you enjoy our work! And don't forget to make plans for the **April 23-24 Köln Workshop**.

We're glad you're here with us! Not yet a member yet? Come **join in**.

Carsten Befelein
Consultant, DVN-Interior

In Depth Interior Technology

In-Car Trends: Individualization, Luxury, HMI

MERCEDES-BENZ IMAGE

Individualization

New car customers are used to customizing their cars with options and additional equipment. More and more manufacturers are willing to deviate from specifications and cater—for a chunk of money—to special requests. Some of them are routine: a paint colour not on the availability chart, or special embroidry. And sometimes the requests are quite bizarre.

Mercedes offers three different forms depending on the budget. Firstly, an extended equipment list as a manufactory program for Mercedes, Maybach, G-Class and AMG, which is integrated into the vehicle configurator. Depending on the model series, this includes extra colors for the interior and exterior, such as foiling and emblem packages. In the next stage the interior features hand-stitched nappa leather in mystic red and black with orange contrasting stitching.

With personal customer catering, the most exclusive form of customization, customers have a free choice of colors and special requests, provided the ideas are legally and technically feasible. Decades ago, Mercedes offered individual special equipment such as a center armrest as a cosmetics box with Braun Sixtant razor, refreshment bar, car telephone, television, radio and tape recorder. In current cars, extensive entertainment systems have long been part of the standard equipment list.

The tailor-made Mercedes is often fitted with exquisite leather in an individual color, elaborate and additional leather upholstery for the headliner or seat/door panels, embroidery such as initials or family crests in the headrests or specially made floor mats. Consultation takes place at the Center of Excellence in Sindelfingen or at the Maybach Atelier in Shanghai.

At Porsche Exklusive Manufaktur, leather types, colors and decorative stitching can be individually selected for individual models, plus fabrics and leather types for the interior. BMW Individual offers a wider range of colors for the fast M vehicles from Munich, as well as a two-tone paint finish, matt look, and cashmere fabrics for the seats. Lamborghini calls their program Ad Personam. For some models, customers can upgrade their

vehicle with individual colors, materials and embroidery in the interior—in compliance with the specified quality standards.

Rolls-Royce's Bespoke program lets customers choose the color and material of leather, fabric, wood and embroidery. Even silk is possible if the customer wishes. In addition to cowhide, the seats and trim can also be upholstered in alligator, crocodile, or ostrich leather. Around 60 per cent of customers order a starry sky for the Rolls-Royce Wraith, and a few of them have their family crest or star sign put on. Initials or coats of arms in the headrests and deep-pile floor mats are almost standard. For especially wealthy customers, Rolls-Royce also refines complete vehicles such as the recently presented "La Rose Noire" drop-tail with elaborate wooden parquet flooring, special paintwork, an integrated Audemars Piguet watch and a matching champagne chest.

The more exclusive the vehicle, the more likely it is to be upgraded. Apparently, customers of luxury cars and super sports cars love their favorite product more individually. Perhaps because individual products increase social status. But also because excellent craftsmanship demonstrates a love of detail and therefore a certain social competence.

Luxury

MERCEDES-BENZ IMAGE

Smart driving and cockpit functions determine today's luxury. Mercedes is not doing badly in the race, but the future of the car is growing in China, where a great premium is placed on highly intelligent driving and smart cockpit functions.

Mercedes' new MMA platform, on which the future CLA is also based, is configured such that it will no longer be possible to press any buttons or "swipe" on various screen surfaces in the future. Buttons, keys and touchscreens no longer represent the luxury. The future unique selling proposition is the virtual assistant, through which the vehicle talks to the driver or passengers. The complexity of the numerous apps, which can be downloaded and are constantly updated, is anything but luxury for the S-Class of the future. The new Mercedes voice assistant 'learns' through millions of voice and audio contacts, until it gets really good at **imitating comprehension**.

A multitude of driving assistants make up the modern car. Automatic parking—you get out at the entrance to the parkade and your car finds a parking space on its own and returns automatically when summoned. In the course of time, this will all merge into autonomous driving. The really great future is L^5: you can sleep while the car drives you wherever you want to go in the city, in the country or on the highway.

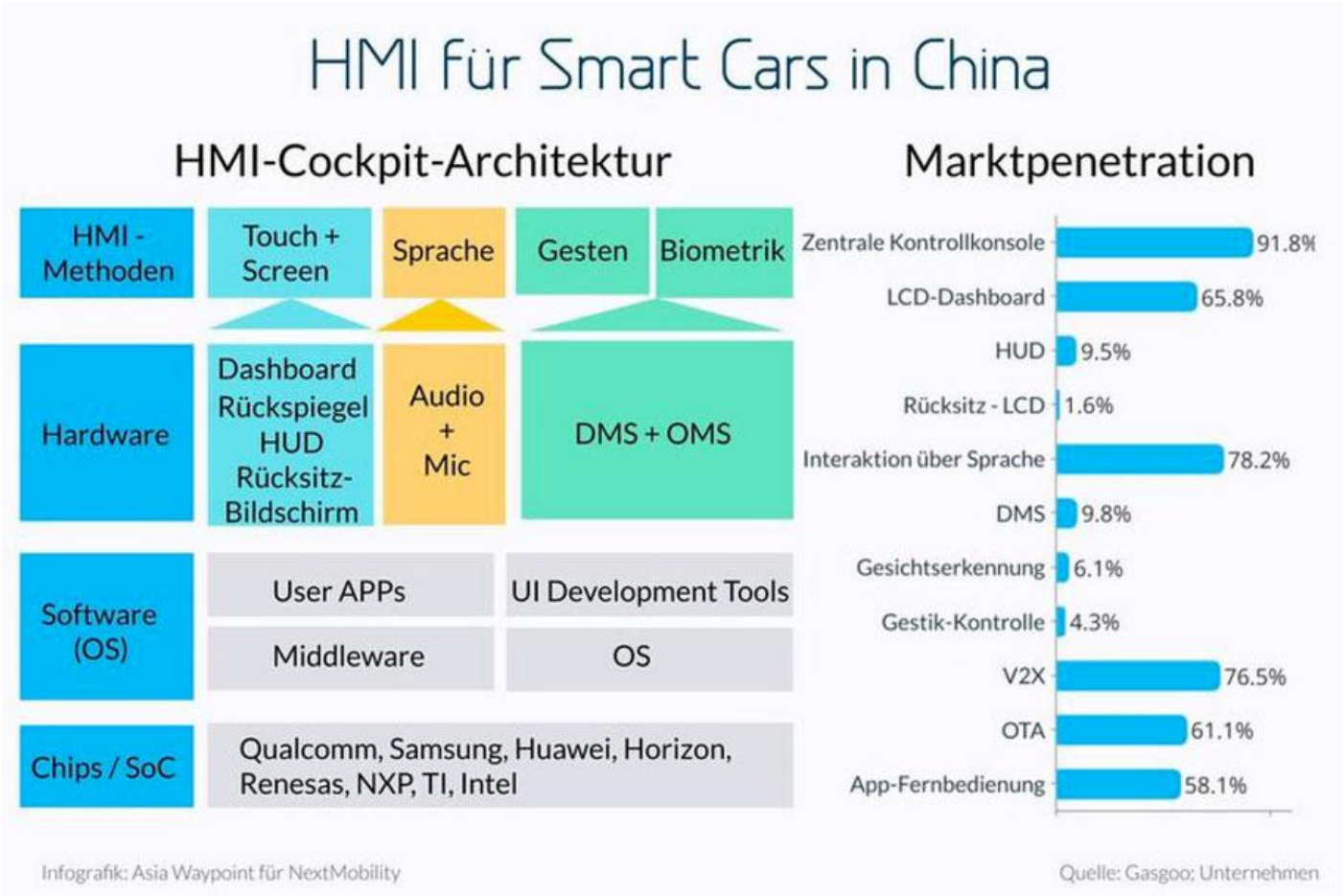
Another characteristic of new-fashioned luxury is that a great deal of it is coming from Asia, and to a large extent from China. Huawei has introduced a software function that recognizes drivers by the sequence of their steps as soon as they approach the vehicle. Baidu has teamed up with the startup Apollo to deploy autonomous cabs in major cities with real customers. By 2025, these autonomous, driverless cabs will be in use in 65 mega cities in China. The system is to be rolled out in 100 major cities by 2030. Germany is almost light years behind, and not just when it comes to robot cabs. Of course, software is not enough; high-performance chips and semiconductors are needed.

Technological innovations play a key role—think of Google and Google Maps, and Apple Carplay sets standards no car maker can ignore. Tomorrow we will have a wealth of data and software-driven innovations. And innovations are largely coming from China. The smart cockpit is at home in China. The Chinese demand digital innovations that offer convenience, flexibility and speed.

HMI

BMW IMAGE

The car is increasingly seeking a conversation with its driver. At the moment, the focus is primarily on new types of communication between the vehicle and its occupants. Within the car, modern 3D computer graphics enable very realistic instructions from the car navigation system. One specific example that is very successful on the market is the "Tuanjie Auto HMI" apps from Unity.



HMI TECHNOLOGY IN CHINA: APPLICATIONS, MAKERS, & MARKET UPTAKE (NEXTMOBILITY)

Communication channels are expanding: from traditional touch (via buttons or clicks on screens) to powerful voice and facial recognition systems. Some vehicles respond to simple hand gestures. 3D LED screens and other new types of projection within the car are intended to provide a visual driving experience.

Cars are beginning to greet the driver even before they get in. Headlights bring interaction from the cockpit to the front of the car. This is perhaps the new HMI trend that is most popular in marketing departments: the headlights not only automatically adapt to the road and lighting conditions, but also project holiday greetings

or the weather onto the road or nearest house wall. Ideally, customers fall in love with their new car in the showroom.

The head-up display is also being upgraded with artificial intelligence and is taking over more and more functions. Overall, new interfaces are being created on the hardware side that will make the cockpit smarter.

Another trend is that the smart cockpit functions extend from the driver's seat throughout the vehicle. The front passenger gets their own screen and the passengers in the back seat their own independent infotainment system. All this is made possible by increasingly powerful components, including new cockpit SoCs (systems-on-chip) and domain control units, which together with an extended operating system and new software applications form a completely new cockpit architecture.

Then there are the new interfaces with people, either via screens or smart rear-view mirrors, instrument panels, facial or voice recognition. From the user's perspective, the car's individual messages are becoming increasingly personalized and are intended to trigger more and more emotions.

Generative AI is also rapidly changing the possibilities of interaction between humans and the car. The voice assistant speaks in natural sentences, can react to them and also identifies the driver's emotions. The steering wheel notices when the driver is getting tired.

Another trend rapidly gaining momentum in China is the integration of automotive HMI and driver assistance systems: drivers are supported interactively during automated driving or intelligent parking. These new functions are known in the industry as cabin-driving integration.

BMW, among other German makers, has recognized what's happening in China and how much these trends will change the car of the future. BMW's new research and development center, which opened this summer in Shanghai, is the largest outside Germany. It is home to Munich's only "Skylab" design team outside of Germany, where engineers, psychologists, software developers and other specialists work on HMI solutions. The progressive integration of hardware and software in the car has now become as important for success on the market as the development of the most powerful engines used to be for the joy of driving.

Interior News

Auto Supplier Showings at CES

INTERIOR NEWS

FORVIA FAURECIA IMAGE

CES is running right now in Las Vegas, until this Friday. Automakers and suppliers will once again use the trade fair to showcase new products and set the tone right at the start of the year. Here's a first look at select products and topics of CES exhibitors:

Bosch

BOSCH IMAGE

They've announced a world premiere: for the first time, infotainment and ADAS functions are successfully merged in a central computer and a system-on-chip (SoC). The new SoC maps functions such as automated parking and lane recognition and can control the navigation system or process voice commands from the occupants. According to Bosch, the benefits for car manufacturers include less installation space and wiring and therefore lower costs.

Elektrobit

Elektrobit is presenting an interactive automotive operating system framework which uses Ubuntu Linux as a basis. Another product is cloud-based ECU virtualization. This allows functions to be developed, validated and tested virtually. A demonstration shows a digital cockpit on a curved display. The cockpit runs on the Unreal Engine and Android Automotive. Sony Honda Mobility uses parts of the technology for its Afeela prototype.

Forvia

FORVIA-FAURECIA IMAGE

Forvia has developed a display that makes the upper section of the doors appear transparent and another display that spans the entire width of the vehicle and is positioned between the windshield and the instrument panel. Content is only displayed when required.

Grewus

Grewus is showing off their capabilities in acoustic, haptics, components, electromagnetic, piezoelectric parts, actuators, speakers, steering wheels, automotive gaming, white goods, commercial vehicles, consumer goods, small, large, displays, seats, dashboards, control elements....and much more!

Harman

Harman is presenting their in-car experience ecosystem. It is designed to offer users a highly personalized, immersive and safer in-car experience. It uses technologies such as augmented reality, artificial intelligence/machine learning, radar sensors and more.

For example, in-car audio systems that can be individually configured for each seat will be on display. This allows the driver and front passenger to listen to different audio content or the passengers in the car to work or play while the driver concentrates on the road. Other topics will include over-the-air updates, V2V/V2X technology and Neo QLED car displays

Intellias

Software development service provider Intellias wants to showcase their expertise in HMI, digital cockpit, and ADAS integration. One demo will be the next generation of the Automotive Portable Kit, which is based on the fourth generation Qualcomm "SA8295P Snapdragon Automotive Cockpit Platform". It will integrate Rightware's "Kanzi One HMI Kit" and the Blackberry "IVY Connected Vehicle Data Platform".

Magna

They're showcasing products from the fields of active safety, connectivity, and electrification, having held a panel discussion on V2X technology on opening day, 9 January.

Marelli

Visitors to the Marelli stand can view a replica vehicle cockpit connected to a cloud, based on a scalable architecture and with standardized zone control units. This replica of a cockpit is designed to allow functions to be tested and validated automatically.

Other demos include a large-format display, ambient lighting, intelligent surfaces, driver monitoring and multifunctional HMI technology.

Qualcomm

Qualcomm is focusing their CES appearance on generative AI. In the area of software-defined vehicles, the "Snapdragon digital chassis" will enable the necessary functions.

Valeo

VALEO IMAGES

Valeo is represented with two stands again this year. In the exhibition grounds, they're showing new products including software (Predict4Range) that predicts and controls the most efficient thermal management strategy for electric vehicles.

For the first time, they're showing technology for wireless charging (Ineez Air Charging).

As at the IAA in Munich, Valeo is demonstrating teleoperated driving together with BMW. Visitors can control and park an iX remotely.

Valeo has also developed a technology that projects graphics and switches onto surfaces. These can be operated using gestures.

Visteon

VISTEON IMAGE

Visteon has developed a Deco trim command and Control display, which can be shown and hidden with a flick of the wrist. When the display is not needed, it resembles a wooden or metallic surface that blends seamlessly into the background of the vehicle's interior materials.

Zeiss

The Microoptics division of Zeiss is demonstrating application examples of their Multifunctional Smart Glass technology. The basic element is a thin, transparent film to which very precise optics are attached. It's for car head-up displays; and side and rear windows—they can be darkened or project various content such as videos or symbols. Something similar is possible on various surfaces in the vehicle interior. According to Zeiss, a transparent camera can be integrated into the smart glass technology. The incident light is directed onto a hidden image sensor via various light guiding elements. Larger cut-outs for the camera lenses are not required with this concept.

Xiaomi SU7: The Next E-Car Cracker from China

INTERIOR NEWS

XIAOMI IMAGES

So far, Xiaomi has mainly been known in Western countries for inexpensive, well-equipped smartphones. In the future, however, the company also wants to be mentioned in the same breath as Tesla, VW, or Polestar. Xiaomi is launching the SU7 and the upgraded SU7 Max, which comes with a more powerful electric motor.

For the software, Xiaomi relies on their own HyperOS. This is, of course, fully compatible with the company's own smartphones. In other words, close integration (contacts, music library, apps and so on) should be a matter of course. The sound system has 25 speakers distributed throughout the vehicle and supports Dolby Atmos.

Xiaomi EV Smart Cabin adopts a “human-centric” interaction architecture and features a 16.1-inch 3K central console, a 56-inch HUD head-up display, a 7.1-inch rotating dashboard, and two seat-back extension mounts that allow for the mounting of two tablet devices. It is equipped with the Snapdragon 8295 in-car chip with AI computing power of up to 30 TOPS, enabling an ultimate interactive experience with the linking of five different screens.

The interactive experience of Xiaomi Smart Cabin is similar to tablets, allowing users to quickly adapt without the need for a learning curve. The system operates exceptionally smoothly, with the vehicle OS launching in a rapid 1.49 seconds after the door is unlocked. Additionally, it offers seamless cross-device connection between smartphones and the EV. For example, when the phone is brought into the cabin, the console automatically displays an icon, enabling easy access to the phone’s interface with a single touch.

The in-car OS seamlessly integrates mainstream applications, including the whole Xiaomi tablet application ecosystem, with gradual adaptation to over 5000 applications. Smartphone applications can be conveniently pinned to the car console, instantly transforming them into in-car applications. In terms of hardware integration, Xiaomi SU7 supports over 1000 Xiaomi smart home devices for effortless integration with the vehicle, enabling automatic discovery, password-free access, and the ability to set up automation scenarios, creating a robust CarIoT ecosystem. The car interior also has dedicated pin-point expansion connections, supporting plug-and-play functionality for a wide range of devices. To meet the needs of users, the Xiaomi EV fully supports CarPlay, the mounting of iPads and iPad accessories, and applications on the rear extension mount.

Marelli's Cabin Digital Twin

INTERIOR NEWS

MARELLI IMAGE

Marelli used the Wipro Cloud Car to develop the Cabin Digital Twin environment. With the help of the Artificial Intelligence and Machine Learning ecosystem and Wipro Accelerator solutions, an intelligent, automated, cloud-based solution was developed. This enables the testing, validation and updating of software-defined vehicle (SDV) functions.

In addition, Wipro's cloud and container microservices were used to speed up the implementation of new functions and save costs. It also shortens the project duration, accelerating the development of connected vehicle services. "The collaboration with Marelli builds on our expertise in software engineering and brings a connected, cloud-native solution to the market," said Yves-Antoine Brun, Vice President, Head of Wipro Engineering Edge Europe, Wipro Limited.

BMW Launches Mixed Reality Driving in Munich

INTERIOR NEWS

BMW IMAGE

BMW is bringing PlayStation racing to the real world. In the "BMW M Mixed Reality" experience, participants will be driving on a real test track near Munich—with data goggles.

In this mix of driving and PlayStation, participants drift around a real racetrack in a genuine BMW M4 Competition Coupé with 510 hp. They do not see the real environment, but have data goggles on their heads. They feel like they are on an alien planet or in a futuristic city. Because the route is identical to reality, the cars race through artificial worlds in "mixed reality" at racing car speed.

Using a GPS signal and numerous sensors, the positions and movements of the accelerator pedal, brakes, tires and driver are precisely recorded and reproduced in the virtual world. BMW speaks of the "world's first driving experience in which the virtual and physical worlds merge harmoniously and the vehicle itself becomes the controller". Project Manager Alex Kuttner says: "We want to combine the ultimate driving pleasure offered by the BMW M models with the limitless possibilities of the virtual world."

Under the guidance of instructor and racing driver Philipp Götz, the drivers spend half a day on the race track. After a test drift without goggles, the mixed reality adventure then lasts four laps. Registration for the months of January to March is now open. For BMW, mixed reality is more than just an action spectacle. The Munich-based car manufacturer is already using the technology in everything from development and testing to production planning.

New Customer Demands for the EV Interiors

INTERIOR NEWS

GENESIS IMAGE

Connectivity, intelligent services, convenient charging options…user requirements for an electric car differ significantly from previous wishes. Chinese manufacturers are responding faster than those in other nations.

"Connectivity and the use of digital services are omnipresent these days. The smartphone is a constant companion for most people, and even our own homes are becoming increasingly connected. This permanent availability of digital services has long since extended to our own vehicles," says Johannes Richenhagen, Managing Director of FEV.io, a subsidiary of development service provider FEV developing digital systems and products for future mobility.

"Thanks to constant connectivity via mobile data connections, customers expect the same availability of information that they are used to from their home environment. In addition, a great user experience and high-quality visual design are just as important for their own vehicle as they are for their smartphone or tablet. Both factors can now be decisive for or against the purchase of a particular brand," explains Richenhagen.

This is particularly true of the Chinese market. Potential buyers here have high expectations of digital services in their cars. Particularly in the comparatively new segment of electrically powered cars, Chinese manufacturers are moving much faster than expected. Moreover, in a topic that was first hype in Germany, then no longer hype, and is now at least a topic again: automated driving.

The constant evolution of driver assistance systems with the prospect of 'autonomous driving' increases this expectation even further. The infotainment system of connected vehicles should make driving easier, entertain the occupants and, in the foreseeable future, enable an increase in productivity during automated driving. The car will become a second living room, offering a more premium, exclusive digital space, including high-quality air conditioning, massage seats and other functions. With the increase of devices and content, the combination of digital content and services will provide users with a more extreme, personalized, immersive space, for example voice control, artificial intelligence, voice modules that interact with the occupants, unlocking and locking via facial recognition, streaming, apps, VR/AR glasses, high-quality, three-dimensional music playback etc.

Ted Li from the car manufacturer Nio takes a broader view of the future: "Multimodal interaction will be the most important interaction mode of intelligent electric vehicles, and the importance of services such as media, entertainment, navigation, car use and other services will gradually increase".

Android to Manage Text Messages Without Distraction

INTERIOR NEWS

Getting text messages while driving can be tedious, especially if someone sends a lot of messages quickly. In an APK teardown (high-level programming language by applying reverse engineering techniques, so that it can be read by a human), it was found that Google is working on an AI feature to solve that problem.

This feature is not yet available, and it's possible Google may abandon the concept or change it radically before release. But the teardown of the latest Google app shows where the company is heading with the feature, and it looks promising.

The idea here is that when you're driving, your focus should be on the road. And getting several back-to-back messages can be distracting, especially as your car reads them out slowly one by one and asks for responses. So Google wants to help by summarizing your messages for you.

That'll come in the form of new options you can turn on and off in both the Google app and in Android Auto settings. Once you turn it on, Google AI will keep an eye out for "busy conversations" and, rather than read out those messages one by one, generate a summary of the texts.

The code reveals a warning from Google, though: "Assistant can now summarize your messages. These summaries will be generated by artificial intelligence, so it's possible there could be mistakes. You can turn this off any time in Android Auto Settings. Would you like to continue and have assistant summarize your busy conversations?"

New Features, Capabilities of the Electric Ford Explorer

INTERIOR NEWS

FORD IMAGE

The steering wheel is flattened at the top and bottom. This makes it easier to look ahead and to get in and out of the car. Behind the steering wheel, an eye-catching soundbar rests on the dashboard. In the comfort version, the front seats with integrated headrests can be heated, as can the steering wheel. A massage function ensures relaxation in the lumbar region. Optional elements include a panoramic glass roof, LED matrix headlamps and 19, 20 or 21-inch wheels.

The special feature of the interior is the "Private Locker": the screen can be raised, and behind it is almost two liters of storage space for valuables. When the car is locked, the screen is also locked. The valuables cannot be seen from the outside. There are two USB-C ports in the locker so that electrical devices can be charged. The large 14.6-inch portrait-format screen can also be moved. This creates different inclinations to suit the desired viewing angle of the driver and front passenger.

There is an inductive charging surface on the shelf in the center console in front of the screen. The storage compartment in the center console is a space miracle with a volume of 17 liters. A laptop fits in here effortlessly. Thirsty people can store three 1.5-liter bottles and one 1.0-liter bottle upright. The dividers in the compartment can be removed and used as ice scrapers in winter, for example. However, in an electric car, the preheating function in the app should take priority. If you don't like the Ford menu, you can use your smartphone wirelessly via Android Auto or Apple Car Play for navigation or media playback.

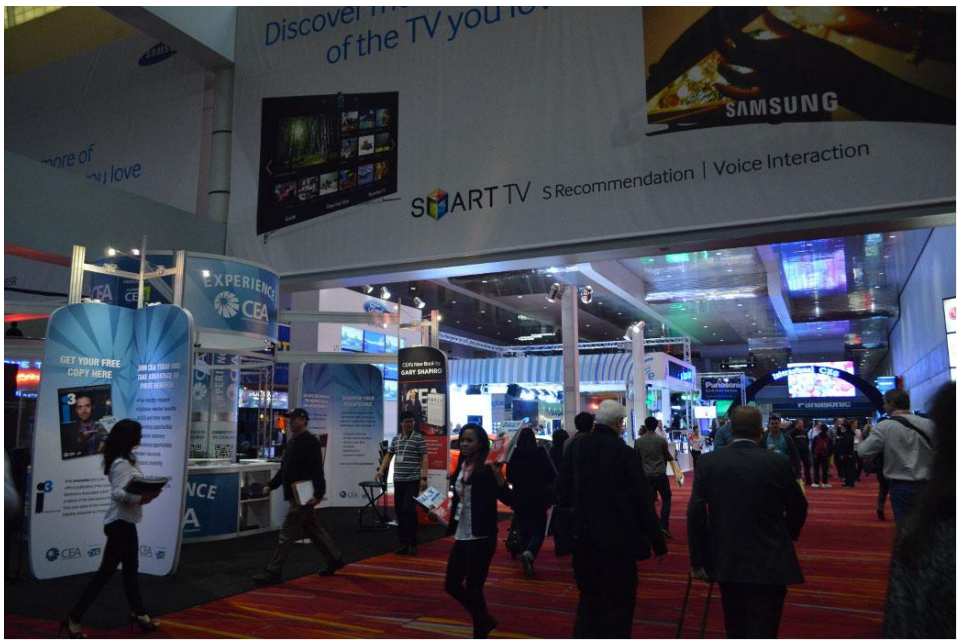
The Level 2 driving assistants use five cameras, three radar sensors and twelve ultrasonic sensors to support the driver. In addition to adaptive cruise control with distance control, there is also an assisted lane change when overtaking. After parking at the edge of the road, the sensors pay attention to road users coming from behind. Visual and acoustic warnings alert the driver before the door is opened.

The Design Lounge

2024 Wish List

THE DESIGN LOUNGE

DVN-I Coffee Corner



WIKIMEDIA COMMONS IMAGE

Many journalists consider the Consumer Electronics Show in Las Vegas as the first auto show of the year. Well, not exactly. However, CES is indeed, the place where something unique and a much needed - otherwise missing ingredient from classic auto shows - is abundantly present. Since the show covers a great range of products and market segments, there is space for 'trying out' new stuff and create dialog and debate on the quality, appearance and usefulness of new applications, since often presented in early development stages. CES is a massive real-time brainstorming session, representing in post pandemic times, the new era of trade shows. Thus, it is the place where marketing communication faces a reality check. As often stated, it is where you can promote anything.

Cars are technology products, yet, with about a million dollars for a prototype and approximately a thousand times more for a production launch with a return circle of six to eight years, cars are actually much more than anything else on this show floor. In addition, with infotainment and sat-nav, cars are becoming interfaces for connected services. Many of the most noteworthy launches at CES 23 indeed, were car related.

While CES24 has opened its doors, just about a year ago, same time and place during Stellantis press conference, Peugeot Inception was unveiled by Carlos Tavares. A daring electric vehicle showcasing the future of the brand's design and technology. Based on the BEV-by-design platform, it was a manifesto of a new automotive era featuring new technologies on electric connected and sustainable mobility, aiming to achieve net zero carbon by 2038. Many more automotive and tech companies made bold statements that day, such as Honda in partnership with Sony, Mercedes focusing on Metaverse, NVIDIA aiming to bring cloud to vehicles, VW ambitioning to compete with Tesla, Audi focusing to VR and Volvo with the smartest vehicle yet. All targeting at the most concrete depiction of future mobility scenarios as well as giving a glimpse of what and how the carbon based automotive industry will evolve in the new silicon based world.

Some of the significant car design scenarios had made their debut such as BMW I vision Dee as an announcement to what's-coming, with a remarkable UX design, and the astonishing use of color e-ink. Other noteworthy examples were the Light year 0, the worlds first solar production car; Delorean's mars rover, pushing ground clearance and overall height to the limits of the SUV segment; Ram 1500 Revolution BEV

concept with its 24-inch rims trading chrome for LED lighting; Dodge Daytona charger concept with its logo becoming a light but also its front spoiler; and the taxi of the future, Zoox, with its distinctive pinpointed/focal sound bar, expressing a new approach towards the pedestrians.

In 2023, besides the ‘batterification’ of everything, it was remarkable that automotive product development practices were part of the same setup with other tech industries with much shorter development circles. The fact that the automotive overall was very successful, increased the wish-list for the 2024 edition.

Last year’s open debates concerning the cyber maturity of many camera enabled smart products as well as the quality or vulnerability of the corresponding softwares, are some of the expectations from the biggest TV, AV and audio players to be addressed during the upcoming CES edition. Furthermore, it is expected to see a wider spectrum of business casing, deviating from anything primary based just on number of followers.

Projected 2024 trends already demonstrate the need to extend collaboration at all stages in the automotive development process. The upcoming shift will likely create a market pressure projected to profit on shorter automotive development cycles. Five to seven years in Chinese translates, already, in three to five.

The overall automotive architecture cannot change overnight, thus, specific partnerships are to be announced focusing on modules and zones such as high-level sensors, expanding functionality, new hosted applications and amplified amounts of AI.

While giants of the sector, like Meta, Apple and Amazon, funded in-house chip development, many automotive OEMs such as Rivian, BYD and XPeng expressed the same wish, however they cannot make it alone. Common chip design tools and platforms are possibly going to call for design consulting services and possibly the creation of new expert companies.

Regulations concerning the approval of vehicles on engineering requirements for cybersecurity risk management systems, might create an increased pressure not only to OEMs but also to suppliers and sub-suppliers to come up with a new framework for the development of anything automotive.

Generative AI is expected to have the center stage and certainly the visitors will be highly thrilled. Speaking from an automotive point of view, we wish the human involvement to find its place in the equation. Even more so, since the 2023 list of the best and worst was polarizing enough, we look forward to for the 2024 edition to be more about people and tech than just about tech.

News Mobility

Mercedes May Test Self-Driving in Beijing

NEWS MOBILITY

MERCEDES-BENZ IMAGE

On 16 December, Mercedes-Benz received approval to test highly automated L^3 driving systems in Beijing. According to the manufacturer, corresponding assistance systems are now to be tested on designated highways.

Mercedes has been testing and validating the system in China since 2021. The local development team is adapting it to China's specific traffic signs, markings, roadworks and special lanes such as bus lanes. It is also improving the logic, algorithms and parameters for scenarios such as vehicles turning in.

In recent years, Mercedes-Benz has established new research and development centers in Beijing and Shanghai. The R&D team in China is set to grow to 2,000 employees by the end of 2023.

The "Drive Pilot" L^3 system has been approved in Germany since the beginning of 2022. According to Mercedes, they now have an internationally valid system approval for L^3 highly automated driving and also an L^4 driverless parking system. Alongside Germany, Mercedes is also permitted to sell vehicles with these systems in California and Nevada.

In addition to the sensors in the driver assistance package, the Drive Pilot system includes additional sensors such as a lidar sensor, a stereo camera in the windscreen, a multi-purpose camera in the rear window, microphones that detect a siren, for example, and a moisture sensor in the front wheel arch. The vehicles also have redundant steering and braking systems as well as a redundant on-board power supply.

By the end of this decade, the manufacturer wants to extend availability on the highway to up to 130 km/h. In the meantime, there is an intermediate system in Germany that allows 90 km/h when following a vehicle on the highway.

General News

SsangYong Motors UK to become KGM Motors

GENERAL NEWS

SsangYong Motor UK is renaming themselves KGM Motors UK (KGM), effective immediately. The Korean parent company was named SsangYong Motor Company in 1988, following its acquisition by the chaebol SsangYong Group in 1986. SsangYong was then acquired by Daewoo Motors, SAIC Motor, and then Mahindra & Mahindra. In 2022, the company was acquired by the KG Group and adopted its present name in March 2023.

In the UK, the new name will be set to the right of the brand's iconic winged logo, which pays homage to KGM's heritage since 1954. This corporate identity change will introduce a new refined brand color scheme, where white on black replaces the current white on blue color palette.

In addition to the new name, the UK distributor also adopts the brand's global slogan, "Go Different. KGM," reflecting a 'unified vision to inspire customers to embrace innovation and break away from the ordinary'.

KGM Motors UK managing director Kevin Griffin says, "KGM Global has changed its name for the first time in 35-years as it transforms into a brand for the future. This is an exciting period for us all in terms of unveiling a refreshed, modern brand identity alongside the development and launch of impressive products which utilize new technologies. We have embraced the change here in the UK and we will continue to grow as a proud and respected SUV and pick-up truck brand."

KGM Global was originally founded as Ha Dong-Hwan Automobile Manufacturing in January 1954, before changing its name to Dong-A Motors in 1977. In 1988, the brand became SsangYong Motor Company. After a second time in bankruptcy it was acquired by KG Global with a majority shareholding in 2023.