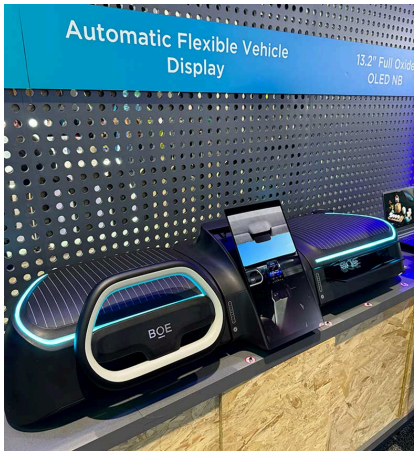
Thu, 30 May 2024
Weekly Newsletter

DVN
Interior

NEWSLETTER #214

Editorial

Digital Cockpits And Display Technology



'Digital cockpit' describes the advanced technology layers incorporated into car dashboards. Digital cockpits can provide a wide range of information in an intuitive and user-friendly way, offering advantages over discrete analog single-function indicators.

The first digital cockpits came around 2018. They've been evolving new types of innovations year upon year. Their morphology is changing, too: new software layers with digital cockpit controllers, operating systems, and other in-car computers and systems. All this is consequent to the trends toward software-defined vehicles…or is it the other way round, and the digital cockpit is the stem of the SDV? Have a look of recent developments in this week's In-Depth piece..

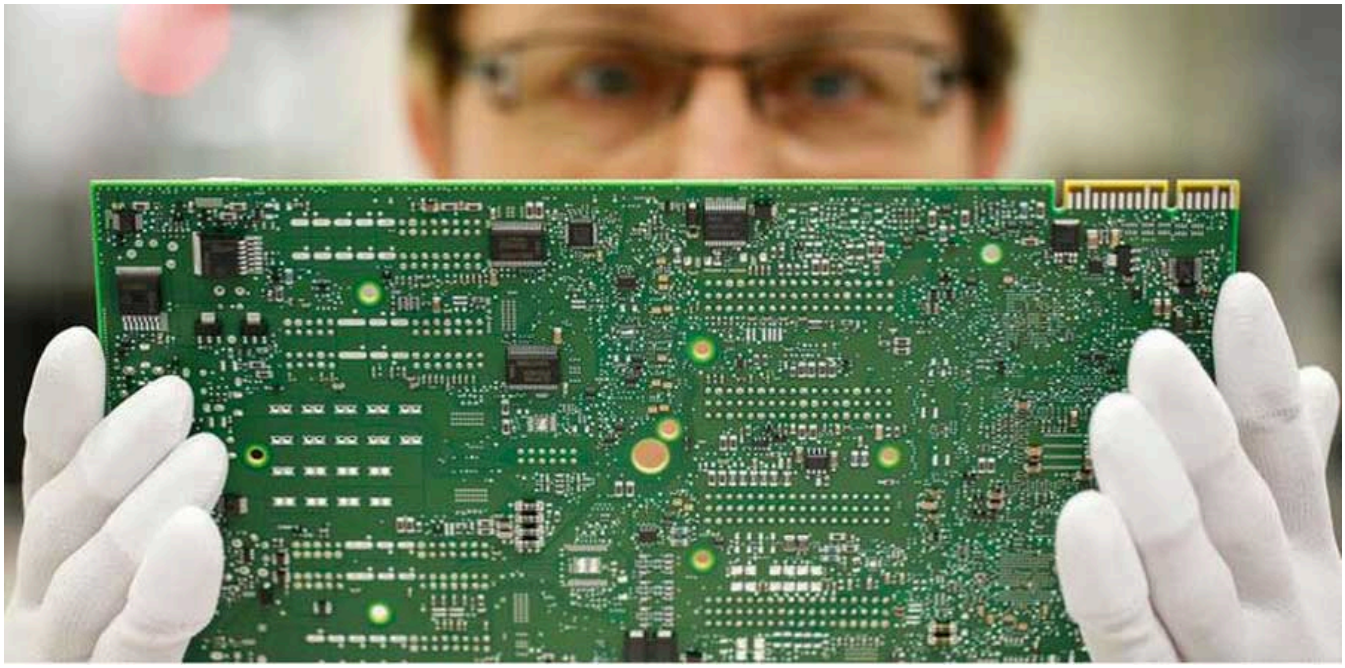
The biggest display conference and fair of the year took place shortly ago in San Jose, California, and DVN Consultant Shammika Wickramasinghe was there. The first summary of his report is included in this week's Interior News. Windshield projections, 3D displays, evolving film-based technology, and microLEDs are being used together to open up new possibilities in the info-display space and in interior and exterior lighting applications.

Sincerely yours,

Philippe Aumont
DVN-Interior General Editor

In Depth Interior Technology

Digital Cockpits All Around



CONTINENTAL IMAGE

A digital cockpit requires a CDC—a cockpit domain controller. A software-backbone operating system and high-performance computing are needed to make complex calculations fast enough for rapid and diverse innovation, so a CDC is now a crucial vehicle interior component. It integrates various functionalities within the vehicle's cabin, providing a seamless and personalized experience for drivers and passengers.

As automakers and suppliers seek to consolidate a multiplicity of domains and ECUs into a single module or board, global CDC shipment volumes are projected to reach 45 million by 2030, with a compound annual growth rate of 72 per cent, according to a report by ABI Research. The primary drivers behind this growth are the cost savings from space, weight, and wiring reduction, which are particularly significant as automakers strive to streamline their production processes and optimize resource allocation.

Key features of a CDC include:

- multi-display management, including rear-seat entertainment systems
- HMI for occupants to interact with the vehicle effortlessly
- DMS and OMS

As vehicles become extensions of our living and office spaces, a CDC plays a crucial role in creating a connected and enjoyable environment during journeys. The growth of CDCs is expected to be particularly pronounced in the Asia-Pacific region. Chinese automakers are leading the innovation curve, benefitting from faster production cycles compared to their Western counterparts. Brands like Great Wall and Hongqi have been integrating CDCs into multiple models since as early as 2019. As a result, that region is anticipated to contribute to more 60 per cent of CDC shipments by 2024, ABI Research reports.

CARIAD IMAGE

A **car operating system (OS)** is a software platform designed to run directly on the in-vehicle hardware. It serves as the backbone for various functions within a car, including infotainment, navigation, climate control, and other vehicle-specific features.

In the interior, there are sensors that detect occupant presence, impurities in the air, massage functions in the seats, natural voice recognition or apps from music providers. The list of comfort functions could be extended forever!

The world's major car manufacturers increasingly want to develop functions independently of the hardware, and upgradeable or fixable via OTA technology installed in the vehicle. Engineers call it service-oriented networks. Marketers call it the software-defined vehicle (SDV).

High-performance computing (HPC):

HPC refers to technology that leverages clusters of powerful processors to process massive multi-dimensional data sets and solve complex problems extremely fast. Multiple tasks run simultaneously. Networking, memory, storage, and file systems are optimized for speed and throughput.

Here are some recent announcements on the topic:

Continental

CONTINENTAL IMAGE

Continental has successfully implemented a cross-domain HPC in a car. The system can host cockpit functionalities and additional vehicle functions.

Features of this SDV include driving safety and automated parking functions with holistic motion control, ultrasonic sensors, an integrated brake system and surround view cameras, all within the cross-domain HPC architecture.

Continental's demonstration SDV technology car uses the cloud-based Continental Automotive Edge Framework (CAEdge), which facilitates connectivity between the vehicle and the cloud. This framework features a virtual workbench to simplify the development, supply and maintenance of software-intensive system functions.

The implementation of the cross-domain HPC was made possible through a technical collaboration with Qualcomm Technologies, leveraging the company's Snapdragon Ride Flex SoC with pre-integrated Snapdragon Ride Vision perception stack.

The Snapdragon Ride Flex SoC supports multi-modal critical workloads on a single chip which, Qualcomm says, provides auto makers with an adaptable approach to designing their vehicles, with passengers benefiting from a driving experience characterized by added assistance, safety, and comfort.

Qualcomm Hypervisor

QUALCOMM CONCEPT 2023 (QUALCOMM IMAGE)

A crucial technology facilitating the development of mixed-criticality systems within CDCs is the hypervisor. Currently, the Blackberry QNX Hypervisor is dominant in the automotive market. However, there is growing interest in open-source projects like the Xen Hypervisor, with stakeholders recognizing their potential, particularly in collaborative efforts toward achieving ASIL-D safety certification.

Elektrobit

ELEKTROBIT IMAGE

At Elektrobit—a Continental child company—operating systems are described using three central points:

- An operating system is a software platform that abstracts the complex vehicle network of control units as a single device.
- The automotive OS manages, monitors, and updates the devices.
- An operating system harmonizes the programming interfaces.

Developers of application software (apps) only need to know this interface and adhere to the specification. Which microcontrollers or system-on-chips are installed in the control units is then no longer important for creating applications. At this point, software is decoupled from hardware. This gives car manufacturers and suppliers more flexibility and a more efficient use of resources. The application can be used across several models.

FORVIA IMAGE

Forvia's cockpit electronics offering provides a single system for multi-display management across the vehicle, as well as intuitive HMI systems such as Faruecia Clarion Electronics' Trenza and an onboard app store. Its cockpit monitoring systems based on sensor fusion and image processing will offer disruptive consumer experiences and advanced safety.

FCE's scalable and upgradable CDCs can be customized to provide and cater for a wide variety of operational, comfort, and safety features. One ECU plus HMI-activated surfaces allow vehicle occupants to control all adjustable cockpit technology. FCE says their multi-view graphical interface, Quadview, eliminates confusing menu structures, making it simpler to switch between options and manage onboard services. To reduce driver distraction, this technology uses priority management when resizing windows and preserves key control icons such as temperature and volume controls.

Are Automakers Losing Control to Apple and Google?

APPLE IMAGE

Porsche

Porsche will be one of the first car manufacturers to integrate the new Apple Carplay into their cars. The system will not simply offer a different interface in the infotainment system. The version to be released this year will control the entire cockpit of the car, including the dashboard displays. It will also be possible to operate the comfort functions via the Apple interface.

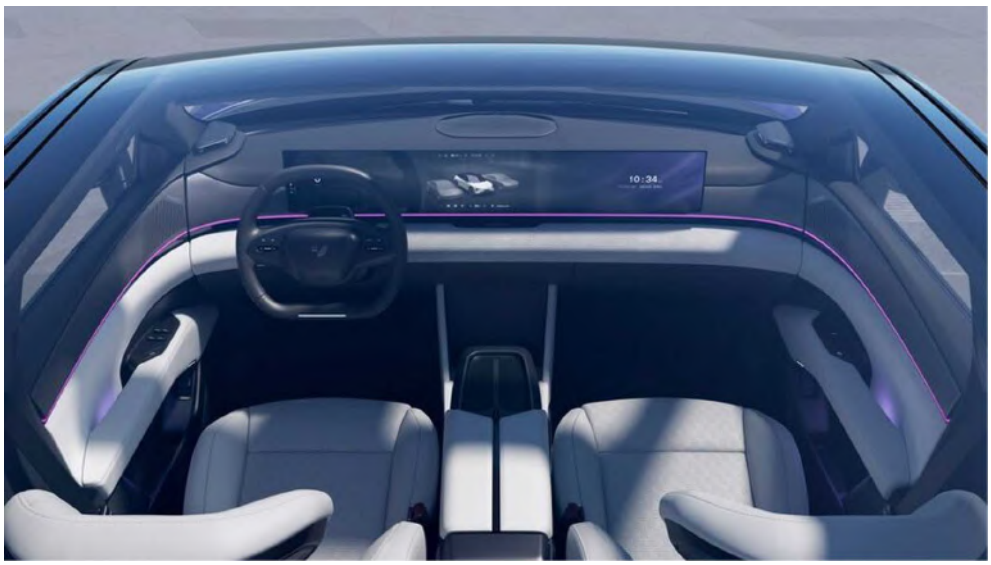
Infotainment systems are now at the heart of car interiors. Many automakers have neither the skills nor the personnel to develop software-based services in-house. Automakers are not software companies.

The infotainment systems from Apple and Google are familiar to the user and they can use their already personalized apps in the car. Calendar entries are transferred as well as contact data, which can then be easily linked to the navigation system.

For automakers, Apple and Google in the vehicle means that they will only have limited access to their customers' data. They will therefore lose the revenue from offers that are currently generated via infotainment systems.

That is the main reason why some automakers prefer to rely on their own solutions. But can they keep customers in their own digital ecosystem? Mercedes and BMW will likely try to maintain differentiation. A uniform infotainment system that looks the same in all cars does not match their premium image. But the manufacturers must then also offer services that meet the premium claim and are exclusive to their own vehicles. This will only be feasible if further financial resources are invested in the development of the software.

AI is another important new layer of SDVs. For example, look at the Baidu-Geely AI car:



GEELY IMAGE

Baidu and Geely advertise the vehicles from their joint venture as 'AI car robots', and recently presented them at their AI Day 2024. Here they're positioning AI above the car user's perception.

They announced the Ji-Yue cars will adopt new software called Apollo Vision Takes All, in which generative AI is to improve perception of the environment. Important functions for automated driving such as dynamic and static object recognition, temporal tracking, real-time mapping, and the interpretation of scenarios from road traffic and occupant perception will be "significantly improved" thanks to artificial intelligence, according to a Baidu manager.

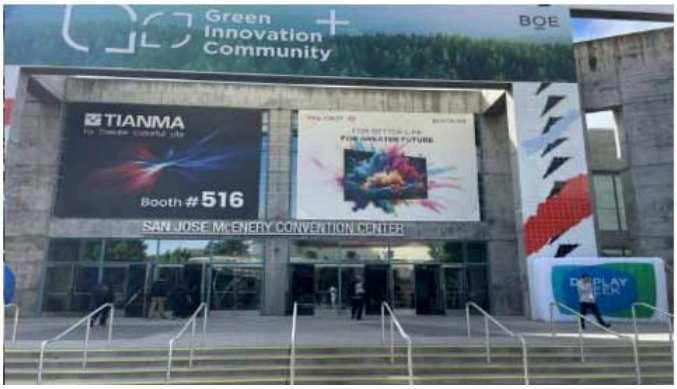
Ji Yue CEO Xia Yaping said, "In the 3.0 era of smart cars, robotization will be the most important development trend (…) and just like the cars in science fiction movies, only those cars that have the ability to communicate naturally, move freely and evolve autonomously can be called real car robots".

Baidu Maps, the Chinese counterpart of Google Maps, has developed what they call the Lane Definition Map, or LD Map. Cars with cameras provide feedback and algorithms refine the maps to a high extent. AI and large models now take over much of the work that previously had to be done manually by programmers. The algorithms and generative AI have now ensured that high-precision maps and comfort management can be mass-produced without much manual input. This creates a new form of perception, no longer primarily for the driver, but for the intelligent, automated cars of the future.

Interior News

Display Week Conference: Technology and Trends

INTERIOR NEWS

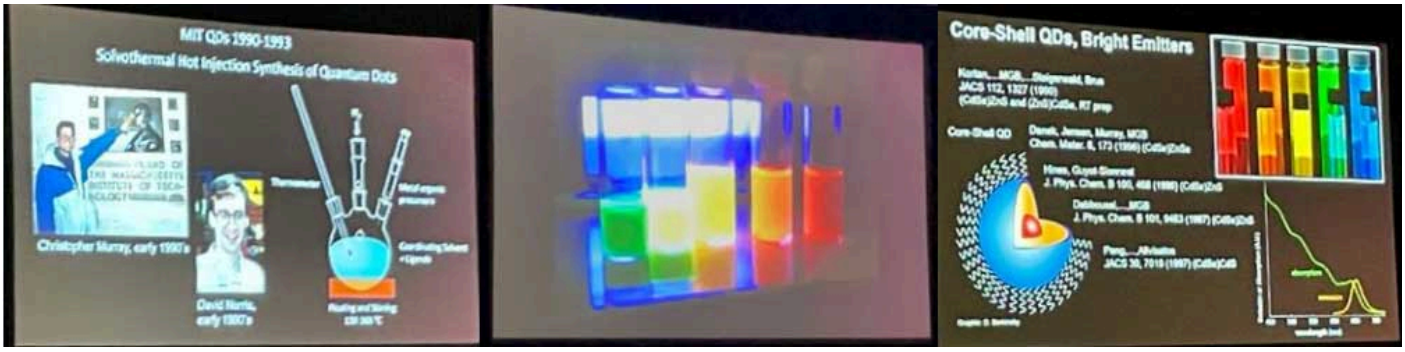


ALL DVN IMAGES IN THIS ARTICLE

Display Conference 2024 took place shortly ago in San Jose, California. DVN Consultant Shammika Wickramasinghe was amongst thousands of industry experts and guests at the event. There were three keynote speeches by industry experts, and lectures and demonstrations from suppliers. There were over 130 tier-1, -2, and -3 suppliers, as well as test houses, all promoting and showcasing technological and technical innovations and new test protocols, methods, and equipment.

The imaging and display industry is actively evolving, which means the displays available for automotive application (among others) is likewise quickly evolving. The technical presentations at the conference described innovations and advancements pushing the forefronts of change. This year's special topics and tracks provide technical and professional insights into the future of imaging technologies for enhanced near-term and future capabilities. Key innovation areas included:

- Ultrahigh-bandwidth transmission and processing (new for 2024)
- Sensor integration and functional displays
- AI including machine learning for imaging
- Digital signage (indoor and outdoor information displays)



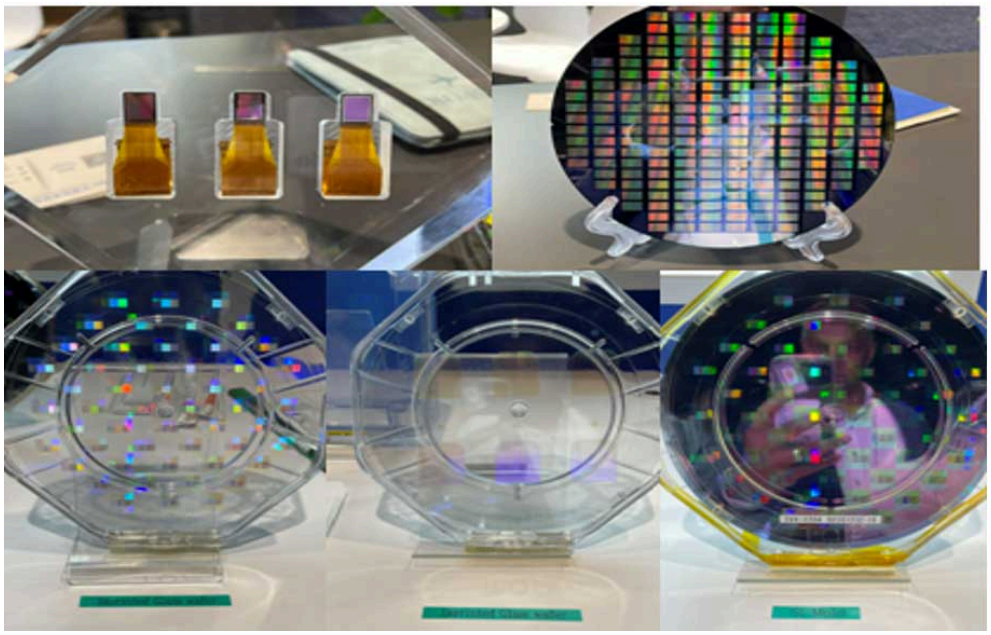
There were sessions on automotive imaging technology, as well as on advancing XR technology, optics, OLEDs, quantum dots, microLEDs, healthcare and biotech imaging, and more. The overall program included on-site demos providing opportunities for direct interaction with leaders and explorers in the imaging field. There was also deliberate focus on women in tech, and a CEO forum. This year's event was sponsored by BOE, TCL CSOT, TIANMA, 3M, Meta and Radiant.

Topics of particular interest included:

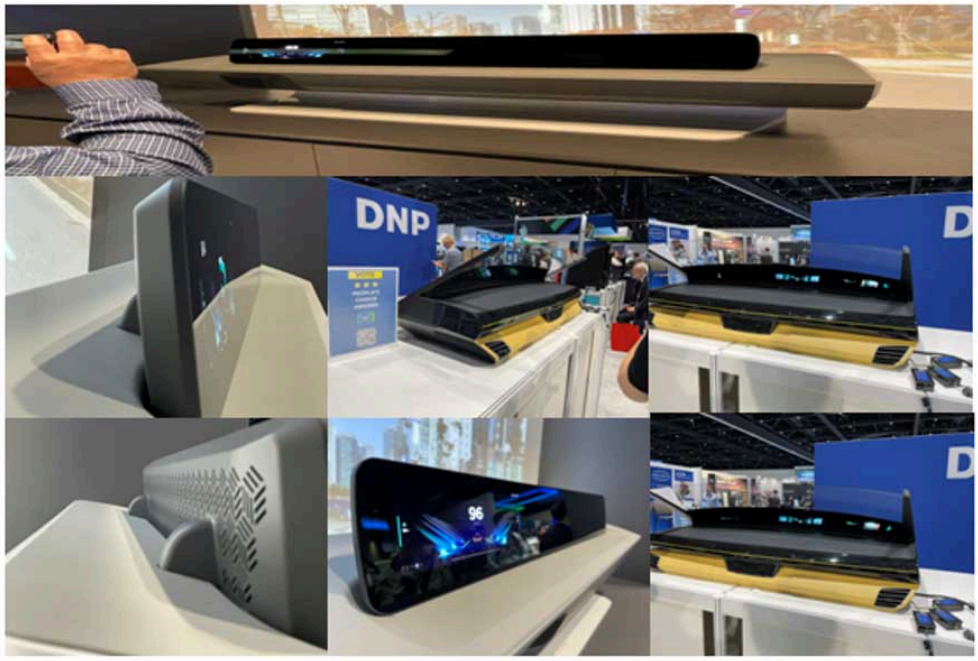
- Quantum dot materials
- AR/VR display systems
- Emerging biomedical applications
- Display data transmission and processing
- Machine learning in displays

The development and innovations as well as the advancements in microLEDs drew much interest. Exploring the possibilities of the future market and innovations linked to microLEDs showed significant growth in advancements in microLED applications. Not only for displays, but elsewhere in and on cars.

Innovation and significant advancement in microLEDs have opened a world of possibilities in the display industry. In parallel have come technical advancements in films, coatings, and chemical compositions.



Some of the key highlights at the congress for the automotive industry were the full-width (pillar to pillar) displays, filters and sharp cutoffs for displays with seamless transition between sections and screens, as well as a unique collapsible screen that would extend to a passenger display when an occupant was present and just a driver display and center information display when the driver is alone.

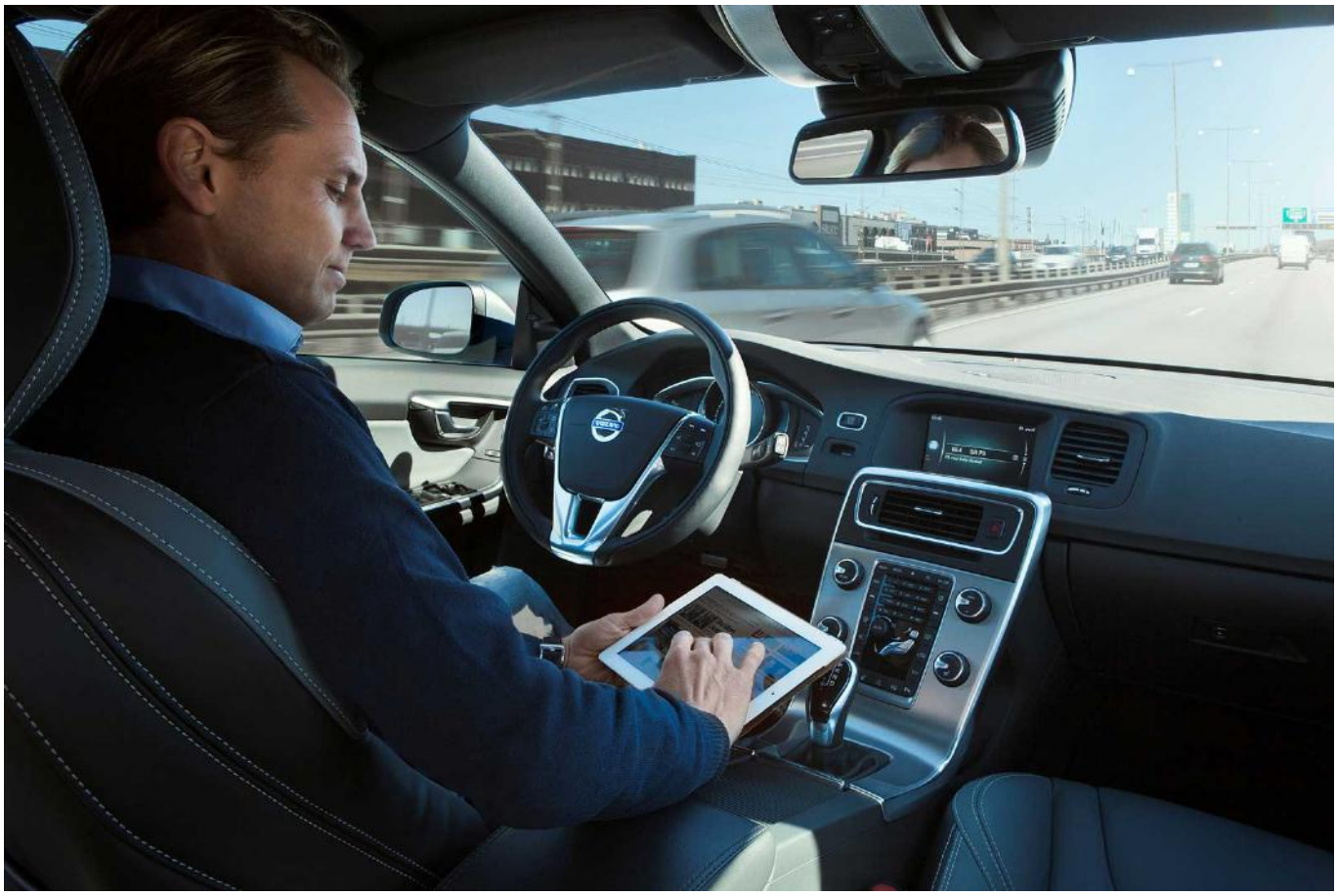


Windshield projections, 3D displays, and the evolution of film-based technology are being used in conjunction with microLEDs to make new kinds of displays—and also new kinds of exterior and interior lighting.

DVN will publish in-depth coverage of the conference in a forthcoming Newsletter.

RUMBA Project to Redesign Interior and Experience

INTERIOR NEWS



VOLVO IMAGE

One of the most tempting ideas about autonomous driving is probably the possibility of being able to sleep while driving because the computer takes over the steering. The problem, however, is the question of liability in the event of an accident. Sleeping is not an option for the time being, because even largely automated driving requires the driver to be able to take over the wheel again in an emergency.

And this is not easy for sleeping drivers, as new study results show. Drivers who are asleep in a fully automated car take 60 seconds or so before they're really able and ready to assume control. That's a core result of the RUMBA research project, which investigated interior design for the robot car of the future, with an eye toward realization of a positive user experience by means of user-friendly interior design for automated driving functions. Experts from Bosch, Audi, and MAN were among those involved; Bosch is coordinating the project, and TÜV Rheinland Consulting is administrating it.

According to the findings, the vehicle must wake the user as early as possible so they have time to get re-oriented. Otherwise, there is a risk of deficits in driving performance and a deterioration in subjective perception. No emergency situations were considered, but rather regular handover processes, such as when the autonomously driving car approaches a section of road where the human must or wishes to drive for themself.

Sonus Faber Sound System for Lamborghini Revuelto

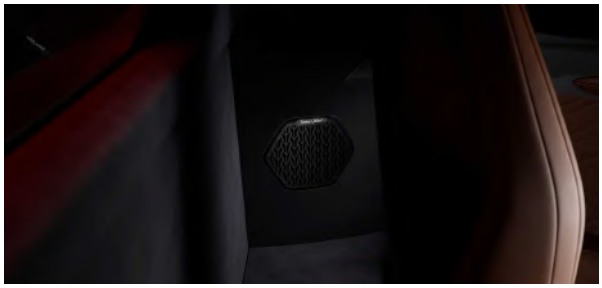
INTERIOR NEWS

LAMBORGHINI IMAGE

Luxury Italian speaker brand Sonus Faber has designed an exclusive sound system for the new Lamborghini Revuelto.

The new Revuelto will be the first Lamborghini available with Sonus Faber's automotive audio system, a joint project headed up by Lamborghini and Livio Cucuzza, Sonus Faber's head of design. Sonus Faber is an Italian maker of handcrafted speakers and other high-end audio equipment.

Fiore Cappelletto is Vice president and Automotive General Manager of McIntosh Group, the parent company of Sonus Faber. He calls the Lamborghini collaboration a major milestone, further expanding the SF brand into the luxury car segment.



FULL-RANGE SPEAKER BEHIND PASSENGER SEAT OF LAMBORGHINI REVUELTO (LAMBORGHINI IMAGE)

He says, "Working on the Revuelto has been exhilarating yet challenging given the cabin's restrictions and the sound of their incredible V12 behind the seats. Thanks to the joint work between the teams in Sant'Agata and Vicenza, the journey has been remarkable, and we hope to transfer our passion at Sonus Faber to every Revuelto customer. In fact, the system we engineered and tuned fully embodies world-famous Sonus Faber's natural sound. We are honored and grateful for the trust that Lamborghini extended to us on this project".

The two Italian brands' coöperation has delivered a masterpiece of design and sound, representing Italian artistry, high-quality craftsmanship, and rich traditions of audio excellence.

Sonus Faber claims the system has been designed to deliver natural, clear, detailed sound. There are seven speakers, with one tweeter and one mid-woofer in each door, a full-range in the dashboard as a center channel, and two integrated full-range speakers with surround function, which are positioned right behind the driver and co-driver. The center channel speaker is designed and tuned to provide a distinctive sound experience directly in front of the vehicle occupants, helping recreate a very detailed soundstage. To achieve this spatial audio effect, Sonus Faber had to develop special new phase plug, natural fiber composite material, and Class-D amplifier that can deliver up to 750 watts.

Tesla's New Voice Assistant

INTERIOR NEWS

Tesla is preparing to launch a new voice assistant. They are saying unlike current voice commands, which only translate your voice input into commands, the voice assistant can respond to questions. You can have a meaningful conversation with it, Tesla says, including about the weather, stock prices, and others, all in a natural voice. It can also double as an owner's manual, as it can answer questions about the car. Reportedly it will have the Microsoft "Jenny Neutral" voice.

To activate the voice assistant, you will need to pronounce a specific keyword, along the lines of "Hey, Siri" or "OK Google"—that's new; currently, to voice-command a Tesla you must press a button on the steering wheel and then give the command.

There's no known release date for the new voice assistant, but it is certainly an interesting novelty. Tesla is also said to be working on introducing additional features, including the Amazon Music application—which would give users the opportunity to easily access their favourite music tracks directly from their car, without the need to use external devices.

Xpeng G6 Arriving in Europe

INTERIOR NEWS

XPENG G6 (XPENG IMAGES)

Xpeng is a Chinese startup founded in 2014. They are headquartered in Guangzhou, China, and make cars in plants in Zhaoqing and Guangzhou, Guangdong province.They have rapidly become popular in China, and has come to be known as the Chinese counterpart of Tesla. In recent years, though, Xpeng sales have declined in China, due to rising competition.

The most recently launched car, the G6, now also arrives in Europe, starting with Nordic countries and Italy.

The Xpeng G6 is a high-end SUV developed on the Smart Electric Platform 2.0 platform with an 800 V battery, which extends the range to 755 Km. The passenger compartment is a hi-tech, eco-friendly, roomy, and comfortable living room, with high quality materials and finishes.

With a design philosophy of simplicity, the G6 introduces a 'circle of life' concept for its instrument panel design. Nappa leather heated steering wheel, HVAC outlets electronically controlled from a 15” IP screenm and ergonomic seats with ventilation, heating, power adjustment, position memory and a welcome function. The car emphasizes material quality in its seat upholstery, adopting childproof, stain-resistant, anti-bacterial organic silicone fabric and microfiber suede for an easy-to-clean cabin with air quality 3-10 times better than international standards.

From a technological point of view there is an infotainment system that can be controlled from the high resolution 14.96" central display which uses Xpeng's Xmart OS operating system and the XPilot driver assistance systems; two 50W induction chargers, four USB ports, a 960W audio system and 18 speakers and a heat pump to optimize performance during the winter.

2025 Mercedes-AMG CLE 53 Cabriolet

INTERIOR NEWS

MERCEDES-BENZ IMAGES

Mercedes-AMG has unveiled the 2025 CLE 53 Cabriolet, expanding their model range with a performance-oriented open-top model. Hitting US dealerships in the second half of 2024, this latest addition boasts significant interior enhancements and generous standard features.

The cabin bristles with luxury features, including a 12.3" digital driver display and 11.9" central multimedia display, both oriented toward the driver for ease of use. The tilt of the central display can be electronically adjusted to minimize glare when the soft top is down.

The interior is accentuated by 64-color dynamic ambient lighting and chrome accents throughout the passenger compartment.
The integral sports seats, upholstered in Black MB-Tex/microfiber with AMG-specific graphics and red contrast stitching, are designed to provide exceptional lateral support. Customers also have the option to upgrade to leather upholstery, specially coated to reduce heat absorption in direct sunlight. For those seeking even greater support, optional AMG Performance seats with enhanced bolsters are available.
The driver display provides customizable display styles, including “Classic”, “Sport”, and “Supersport”, with the latter offering a central round tachometer and driver-focused content. The central multimedia display features individual AMG displays, such as AMG Dynamic Select drive programs and vehicle telemetry data.
Safety was also a key focus of the design, with targeted reinforcement of the body shell structures ensuring structural integrity even without a fixed roof. Standard safety features include 11 airbags, including a new center airbag between front occupants and head airbags for rear passengers. The vehicle also comes equipped with Pre-Safe, which detects critical driving situations early and initiates precautionary measures.
Mercedes says the 2025 AMG CLE 53 Cabriolet represents a blend of performance, luxury and safety, presenting drivers with an exhilarating driving experience coupled with comfort and convenience.

The Design Lounge

Features Drive Brands

THE DESIGN LOUNGE

COFFEE CORNER
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GENESIS G7

According to the Stellantis CEO Carlos Tavares, there will be only five car manufacturers left by 2034. This is in 10 years. Darwinism was the expression used to explain the industrial/financial phenomenon, according to which the theory of adaptation and artificial selection would apply to the competing conglomerates for the global markets. All that was originally pure biology, however in the industrial domain and more specifically the automotive sector, a number of important evolutions that took place in the recent years, suggest, indeed, an industrial transmutation. Much like the bigger picture communicated by the CEO of Stellantis, these events are also perceived from ground level, let's say, from where we stand, you and I.

We grew up with locally identifiable brands as Italian, English, German or Japanese, with their mechanical culture often referring to a specific type of an engine, such as boxer, flat six, v8 or other, as well as the derivate silhouettes and segments. At the beginning of this millennium, a new car type took over just about any brand, overwriting their primary characteristics: the SUV. From then on, design becomes an adaptation of identity features into the new and often very different envelopes, like in the case of Mini, Cinquecento, Porsche, and many others or, a new design exercise overall, aiming to redefine the brand under the new circumstances, like for instance Peugeot. Very rapidly, cars grew both in size and equipment.

Car reviews tend to explain, to a meticulous detail, how does the entertainment center work, or the HVAC unit, or how to adjust the seat through the novel interface, how many pre-dialed positions are in a headrest, connectivity, fuel efficiency, value for money, styling vs design and comparison to competitors and of course, safety. One has the impression that the features become the car itself, while most of the reviews take place while cars are static. Most car journals do not talk any more about how a car drives or how it handles, which should be indicative of the real soul of a vehicle. We have the impression that most people believe they could delegate driving, thus, cars tend to be reviewed as appliances.

The truth is that most of the modern cars handle well these days and handling is not an issue since a while. Cars are not addressed only to car experts and petrol heads, since the average performance of most cars is now easily accessible to wider pools of people without the requirement to know how it works, it just does. So where is the real driving character of a car today? What makes it exciting to drive and what makes it fun? Is the singularity of each brand now left only to design? Is it just the appearance, which also happens to be locked behind predefined universal silhouettes as SUVs?

Cars tend to get bigger and heavier with most features and therefore, maybe, somewhat more uniform. In addition, the driving/handling aspect of a car is now subject to new norms such as semiautonomous driving. Upcoming technologies will tend to render the driving experience smoother, independently to the automotive genes and singularities of any brand. In the case of the latest Tesla model S, for example, the system works very well, but you must hold your hands on the wheel. When it comes to a turn though, it turns so conservatively- disappointingly slow, that reveals a completely different character than the one the brand is alluding to and capitalizing on. Would that 'type of handling' evolve into the new character of the brand? Would there be place to express automotive singularity within all the shades of driving assistance softwares? In the case of Genesis g70, once you go to sports-mode drive, the seat deforms and 'hugs you', the lumbar support comes out, as a real feature that says out loud 'sportiness' and somehow becomes the brand.

Most vehicles have already a version of automatic emergency breaking, varying from warning-only all the way to hard breaking. Automatic emergency brake is going to become a law in 2029 for every system up to very high standards: 90mph breaking and up to 45mph pedestrian detection. But what happens when the car in front, slows down suddenly and, as Tesla S would do after braking and turning, moving slowly without ever stopping completely after the turn? Well, it seems the idea is growing within the OEMs and the new non-cognitive algorithmic territory of driving assistance is just about to be branded. Every car reacts differently. While Volvo, for instance, will come to a complete stop to prevent any impulsive reaction of the slowly moving car ahead, BMW software, to the opposite, will give full control to its driver. BMW trusts its drivers as a brand that comes from a deep automotive-performance legacy. Once again, the feature becomes the brand. But how does the car know? In this case, the choices are pre-dialed and BMW execs are not only aware of its potential but they see it as an instrumental element for their brand.

Following the agreement with the Chinese Leapmotor, the fifteenth Stellantis brand, Tavares seems to be in terms with the new approach. Great story-telling transcends borders, and that is how, independently of brands, these features conquered several world regions in just a few years, let's say something like the turbo in the 80s, the superpower of the new branding back then. However, producing original content for several markets and regions of the world it is a whole different challenge. Global features become the (new) brand, and this is twofold; local-for-local but also local-for-global, potentially reaping the benefits of investing in local content all around the world. In other words, instead of just the physical car buyers, as the number of international subscribers grows, the performance of their predictive algorithms will continue to improve, in both ability and identity. A new era of car branding might be about to rise where strong brands will be evermore identifiable by their singular interface between the car and the driver and, to our surprise and joy, driving emotions could be an important part of it.

News Mobility

MINI Mixed Reality To Improve Automated Driving

NEWS MOBILITY

MINI Mixed Reality uses virtual reality systems through which you can undertake journeys through the MINI universe while sitting comfortably inside a vehicle. The goal is to offer users the ability to see the MINI Virtual Reality World from all windows of their cars as they continue to move through the physical environment mediated by the cameras' activities. This will be possible by combining the immersive capabilities of virtual reality technology and the typical driving emotion of being on board a MINI.

Born from the work of the MINI Design team, MINI Mixed Reality is based on a high-end computer that runs a self-produced MINI VR World that is streamed directly to the headset worn by the driver. In-vehicle devices work with headphone tracking devices, acceleration devices, audio, and vehicle interfaces to create an unprecedented driving experience.

A bit like what happened in other areas, what we have begun to appreciate in the gaming sector slowly becomes an integral part of reality. So, if VR viewers were once limited to driving simulations, today they become (and in the future they could increasingly become) a reality in cars to improve driving.

As MINI is part of the BMW Group, this technology is currently being used for various testing and validation purposes, including user studies to improve automated driving systems, but it is not excluded that it could include various integrations within a few years.

Renault's Autonomous Minibus

NEWS MOBILITY

RENAULT IMAGES

The Renault Group is working on vehicles for autonomous public transport. A new partnership with WeRide has been agreed for this purpose. The company has 700 autonomous vehicles in operation, including 300 minibuses. The aim of the collaboration is the commercial deployment of L^4 vehicles. Together with WeRide, Renault is launching a test run with electric and autonomous shuttles at the Roland-Garros Grand Slam tennis tournament going on as we speak.

In future, Renault would like to offer their own robotized electric minibus platform based on the new Renault Master. This should be able to accommodate automation solutions from specialized partners such as EasyMile, Milla and WeRide. The minibuses could be used in the "Mach 2" project announced in 2023, in which a fleet of automated electric minibuses is to be integrated into the public transport network in Châteauroux, France, from 2026. The autonomous buses are intended to complement the public transport system. The additional costs of robotization and automation are to be offset by the elimination of drivers. According to Renault, a simple remote monitoring system is all that is needed to operate an automated vehicle fleet.

General News

Nobo Automotive Seat Plant in Czechia

GENERAL NEWS

NOBO IMAGE

Nobo Automotive Systems, a subsidiary of Great Wall Motor, broke ground for an automotive seat factory this week in České Budějovice, a city in Czechia's Southern Bohemia region.

Nobo held a groundbreaking ceremony for the new plant on 16 May. With a planned investment of over C¥600m and an area of nearly 30,000 m^2, the plant will supply car seats to automakers in Europe. This marks Nobo's deeper integration into the global supply chain of top-tier automakers, enhancing its global strategic footprint and demonstrating the competitiveness of Chinese auto components companies in the international market.

The plant, representing an investment exceeding $83m, will supply seats to BMW Group and other European automakers.

Nobo Chairman Mr. Dehui Zhang said, "The establishment of the Czech factory is a significant milestone in Nobo Auto's internationalization process. We are committed to international development, gradually implementing a global business layout. We have set up a European division to streamline the entire business chain, from research and development to production and sales. To better meet the demands of the European market, we are investing in local production in the Czech Republic."

As one of the top 100 global auto components suppliers, Nobo Auto surpassed C¥20bn (€2.5bn) in total revenue for 2023, marking five consecutive years of high-quality growth. A key component of this success is the stable development of their international business.

Currently, Nobo Auto operates 25 manufacturing plants and 12 R&D centers in locations including Germany, Thailand, and China. The Czech plant is its fourth overseas factory, following the commencement of its global expansion with a factory in Germany in 2019. With the addition of the Czech plant, Nobo Auto is now better positioned to serve the European market, providing local R&D, technical support, and manufacturing services to automakers, and fostering closer collaborations with global customers.

Marquardt Wants to Grow Again in 2025

GENERAL NEWS

MARQUARDT IMAGE

Automotive supplier Marquardt felt the effects of the difficult economic environment in the 2023 financial year. Turnover fell by 2.2 per cent to just under €1.4bn.

"Nevertheless, we have continued to invest against the general economic trend, consistently pursued our path in all business areas and sales regions and pushed ahead with innovations," said Harald Marquardt, Chairman of the Management Board of the Marquardt Group.

Marquardt has won some projects with its latest business unit "Power and Energy Solutions". The mechatronics provider also won several new projects with its Human Machine Interfaces business unit in 2023. Marquardt is supplying gear selector switches and steering wheel control panels to a European vehicle manufacturer. The total sales volume is said to be in the high three-digit million range.

For the "Entry and Authorization Systems" business unit, the focus in 2023 was on the "Push and Drive 3" digital key system. Marquardt started series production in Asia. According to the company, it was also successful with a patented capacitive door handle sensor. It is said to function reliably even in damp and wet conditions and was particularly in demand from customers in Korea, Europe and the USA in 2023.

Marquardt also expanded its position in the truck market and supplied well-known manufacturers with switches, parking brakes and drive authorization systems. In addition, business with the "E-Lock" locking system continued to develop positively. The system is designed to improve the charging of vehicles with electric or plug-in hybrid drives and protect the charging cable against theft.

In view of the persistently gloomy economic situation in 2024, the company has taken further steps and launched a program to improve productivity and cost efficiency, says Harald Marquardt.