Thu, 1 December 2022
Weekly Newsletter

DVN-I
Automotive Interior

NEWSLETTER #138

Editorial

Auto Interior, Electronics Everywhere!

The first DVN Interior Think Tank Seminar just wrapped up; watch for coverage on it next week. And we're hard at work on the next event: the DVN Interior Workshop on 25-26 April at the Pullman Hotel in Köln, with the theme **Human Centered Interior Technologies**. Put it in your calendar, and we'll bring you more information soon.

This week's in-depth report describes our visit to Electronica in Munich, Germany. More automated driving; connectivity; electrification, and software-defined vehicle are trends driving the industry, more specifically for interior lighting; displays; sensors and actuators; microcontrollers; haptics; functional surfaces, and LEDs—all of them need supporting technologies based on electronics solutions.

It also helps to get to lighter weight solutions, thanks mostly to miniaturization. This complements all the sustainability efforts going into any detail of the vehicle, like the belt buckle of a new BMW, or the upholstery of the Polestar brand, both of which you'll read about in today's Newsletter.

We are happy and proud to work for your membership; thanks for being with us!

Sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

Electronica: Electronics to Support All Interior Trends

ELECTRONICA IMAGES

The Electronica show took place from 15 to 18 November in Munich, Germany. 2,144 international exhibitors showed their stuff for around 70,000 visitors—the complete range of technologies, products and solutions in the entire electronics industry, sorted into the following main exhibition sectors:

Automotive: New lightweight materials, miniaturization as well as digitalization and networking are making automotive electronics a rapidly growing market. Main topics: power trains, active safety, on-board power supply

Displays: Whether in smartphones or driver-assistance systems, displays are used in a large number of applications. Main topics: LCDs, LEDs, OLEDs, flexible displays and periphery

Electromechanics and system periphery unites all the areas that deal with connections that conduct electricity. Main topics: switches, keyboards, interconnection components / systems, casing technology

Electronic design (ED/EDA): The EDA software provides the foundation for developing other innovations in electrical engineering. Main topics: CAD/CAE tools, design/development systems, software

Embedded systems are omnipresent**:** Washing machines and refrigerators also feature microprocessors and related software just like automobiles. Main topics: Software and hardware development tools, system solutions, memories and memory periphery

Semiconductors: Today, integrated circuits are used in practically every electronic device, and they have revolutionized the world of electronics. Main topics: Power semiconductors, Microprocessors, Diodes, Transistors

PCBs and other circuit carriers: Single-sided, double-sided or multilayer, PCBs are used nearly everywhere. Main topics: MID/3D-MID, Multiple-layer PCBs, Ceramic PCBs

Test and measurement techniques are becoming increasingly complex and require greater precision and increasingly higher resolutions. For this reason, the industry is focusing on software-based metrology solutions that can perform functions such as simultaneously codifying, analyzing and organizing measured data. Main topics: Image/pattern recognition, specialized laboratory/test equipment

Micro- and Nanosystems: The use of microelectromechanical systems (MEMS) is resulting in pioneering improvements in the functionality of small microphones, cameras, signal filters, affordable multiple-axis inertial sensors for measuring movement and digital optical micro-mirror arrays. Main topics: MEMS

Passive components can be found in all electronic assemblies. Without these components such as resistors and capacitors, it would be impossible to solve many of the tasks perform by switching circuits. Main topics: Capacitors, magnetic and electronic ceramic products, radio-frequency and microwave components

Sensor technology: Due to advances in micromechanics and microcontroller platforms, sensors are not only used in traditional applications such as measuring temperature, pressure and flow rates, but also in manufacturing, aviation, aerospace as well as in automobiles and robotics. The most important sensor technology topics: Sensors for mechanical, climate and for optical and acoustic parameters.

System components/Assemblies and subsystems: Increasing automation has brought about dramatic changes in drive technology and in the sector for assemblies and subsystems. This sector includes assemblies for control applications and servo-technology. Main topics: Assemblies, multi-chip modules, servo-technology/drive elements.

Wireless: This sector features among others modules for wireless communication with low storage requirements such as high-frequency transceivers for use in wireless sensors or MEMS. Main topics: Cellular and non-cellular systems

Automated driving; connectivity; electrification, and software-defined vehicle are trends driving the industry, and this show highlighted them as supporting technologies are all based on electronics solutions. Increasing requirements in terms of safety, environmental protection and comfort have led to a sharp rise in vehicle functions in recent years. The main drivers for this have been the increased demands for comfort and convenience, the networking of vehicles, but also, quite significantly, stricter exhaust and safety regulations. In recent years, complex infotainment and assistance systems have been added that could only be realized through the interaction of many control units. Their intuitive operation and personalization of functions required a cross-system HMI. The massive increase in the number of electrical consumer features has also led to a significant rise in energy requirements, which meant that electronic energy management systems had to be used to ensure an optimized energy balance.

Among the exhibitors were important suppliers for the automotive interior industry; let's take a look:

DVN IMAGE

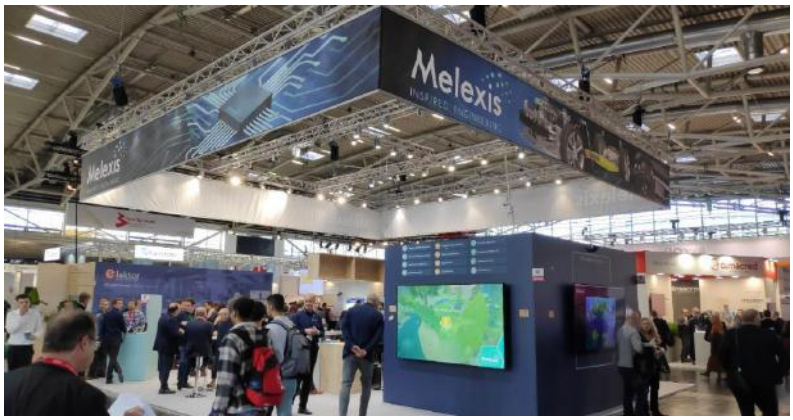
AMS Osram, based in Premstaetten, Austria, offers components for lighting, visualization and sensor technology, including sensors and technology for driver monitoring, RGB or iRGB ambient lighting, position detection of the chassis or the gearshift (or whatever else).

DVN IMAGE

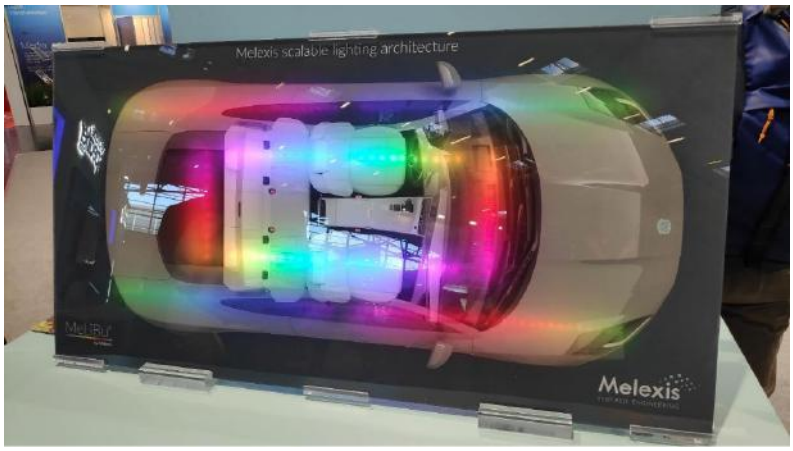
At the **Renesas** booth, there was a demo of an electric car in which various products from the group have been installed. The company, based in Tokyo, Japan, was presenting its portfolio of microcontrollers, SoC products and MPUs (memory protection units).

DVN IMAGES

The Munich-based fabless semiconductor manufacturer **Inova Semiconductors** specializes in broadband data connections for displays in car infotainment with over 170 million APIX (Automotive Pixel Link) products delivered. Its interface IP has become an industry standard. With smart LED driver chips (ISELEDs) and a dedicated data bus (ILAS), the company has created a second mainstay for the future symbiosis of display and light.



DVN IMAGES

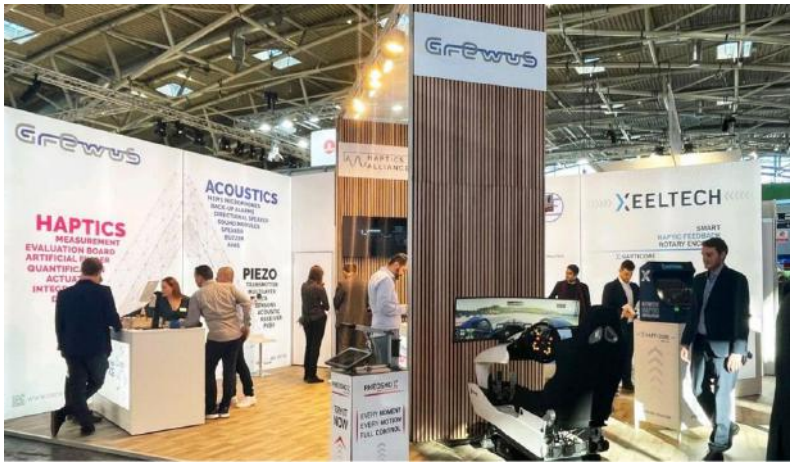


Melexis provides innovative microelectronics solutions. Its advanced mixed-signal semiconductor sensor/actuator devices equip upcoming products and systems with sensing, actuation and communication technology. Today, every new car produced worldwide contains an average of 18 ICs from Melexis. The company also applies this know-how to other markets: alternative mobility, smart home appliances, smart buildings, robotics, energy management and digital health.

DVN IMAGES

KURZ / POLYIC IMAGES

The Kurz Group develops and produces decorative and functional layers applied to carrier thin-films for a wide range of industries - from the packaging and printing industries to the automotive sector, electronics, cards and textiles. Kurz offers a comprehensive range of products for surface finishing, decoration, marking and anti-counterfeiting, rounded off by an extensive range of embossing machines and embossing tools. In addition, the company continuously invests in new technologies and develops innovative solutions for integrating functions into surfaces.



GREWUS IMAGE

Grewus, based in Hamburg, Germany, works on individual acoustic and haptic components - from acoustic signaling to innovative haptic feedback. Grewus acoustic signaling devices are in almost every car. They are always precisely matched to the character of the vehicle and make the ride more pleasant and safer. The haptic actuators are increasingly used in automotive touch panels.

DVN IMAGE

Everlight Electronics, from Taiwan, is in the top five worldwide in the LED market. They provide a diverse product portfolio including high-power LEDs; SMD LEDs; lamps; lighting components; LED lighting modules; digital displays; opto-couplers, and infrared components for various applications.

DVN IMAGE

Brightek Optoelectronic is an international certified original manufacturer for LED and sensing components. Headquarters is in Taoyuan, Taiwan, along with with their R&D department. Brightek offers products including AEC-Q102 automotive LED components, ISELED, smart LEDs (LED with embedded IC); invisible lighting (IREDs; VCSELs; photodiodes; phototransistors; UVA and UVC, etc).

DVN IMAGE

Samsung Semiconductor Europe is part of the global components network of Samsung Electronics, and serves automobility with technology solutions for memory; system LSI; foundry; LEDs and displays in Europe, the Middle East, and Africa.

Interior News

Two CES Innovation Awards for Visteon

INTERIOR NEWS

LIGHTSCAPE PANORAMIC DISPLAY (VISTEON IMAGE)

Visteon has been named a CES 2023 Innovation Awards Honoree for two new products: their LightscapePanoramic display, and their Command & Control display.

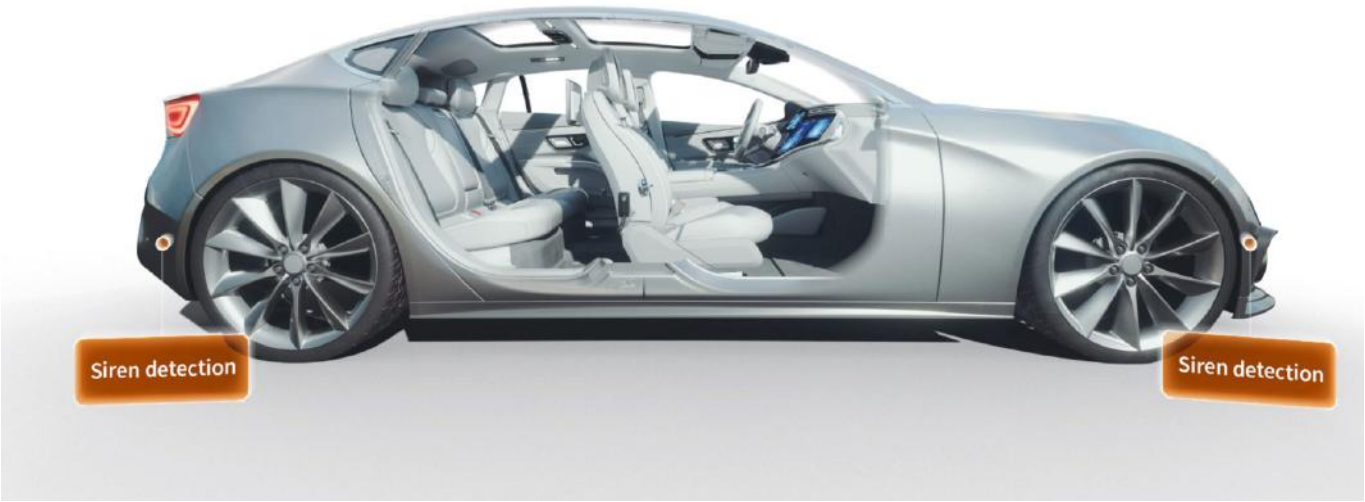
The Lightscape is a pillar-to-pillar display of seamless design under a continuous glass lens. It provides high perceptual quality even in direct sunlight. With Visteon's TrueColor Image Enhancement, the system dynamically improves display performance based on ambient brightness conditions. Visteon's '1-Watt' backlight delivers contrast and color performance. Force-touch and on-screen haptics create sensory experiences adding depth to HMI and improving safety. The display also offers a video and gaming experience to the front passenger. The entertainment content is protected by Visteon's Active Privacy filter, designed to promote safety and contextually prevent driver distraction.

COMMAND & CONTROL DISPLAY (VISTEON IMAGE)

The Command & Control display is a driver-centric, technology-forward display concept. The display glass is curved to bring the central display area within touchable reach. The 4K, wide-format, reconfigurable display area is optimized for high perceptual quality: high brightness, wide color and pure black. The decorative panel in the central area matches appearance with surrounding design elements and can predict driver intent. When in use, the panel transforms to a fully reconfigurable display surface. When it is not needed, it transitions back to a decorative element. Powered by Visteon's local dimming technology, it can deliver brightness where it is needed, or save up 90 per cent on power when it's not.

Infineon's Emergency Vehicle Detection

INTERIOR NEWS



INFINEON-CERENCE IMAGE

Drivers are required to actively yield the right of way to emergency vehicles in whatever country one might name—whether the driver is a human being or a vehicle itself. So self-driving vehicles will have to detect and respond to emergency vehicles in the manner prescribed by regulations.

To achieve this, German semiconductor company Infineon Technologies is working with Massachussetts-based Cerence to develop a solution based on Infineon's Xensiv MEMS microphones and Cerence's Emergency Vehicle Detection (EVD) software. The solution will enable vehicles to detect approaching emergency vehicles even when they are not in sight.

The microphones can capture distortion-free audio signals in noisy conditions, enabling signals to be accurately classified even when background noise blocks the siren tone. Cerence's EVD can be integrated into an automotive assistant or on separate controllers. The solution uses microphones to accurately detect the sound of sirens, in addition to estimating the sound source location of an emergency vehicle. Upon identifying a siren, the driver or automated driving assistant is informed to enable a safe reaction. Human drivers can be notified via a reduction in the volume of radio or other forms of media. Alternatively, a visual warning can appear, or an acoustic warning can be provided by the in-vehicle assistant.

UltraSense TouchPoint Smart Surface HMI Controllers

INTERIOR NEWS

ULTRASENSE IMAGE

More and ever more digital solid-state smart surfaces are being found in new vehicles on a range of components. The TouchPoint HMI controllers made by UltraSense, from California, benefit from accurate multi-mode sensing when touched in addition to realizing when an area is touched accidently. Furthermore, the smart solution is capable of processing at the touchpoint with zero latency to provide feedback controls for illumination, audio and haptics.

TouchPoint Sensor Fusion features an open architecture with secure connectivity to ensure connectivity with other sensors. The UltraStudio UX design software also enables the customization of a complete integrated user experience.

UltraSense currently has three TouchPoint HMI controllers on the market, consisting of the CapForce which features traditional capacitive touch technology, combined with force sensing, to enable the solution to detect touch even through thick gloves. The company's UltraForce technology uses ultrasound to detect touch through conductive surfaces such as metals and thick materials with force sensing. The company's final solution on offer is TapForce, a force-only HMI controller solution with processing, ML algorithms and feedback control of lighting and haptics.

The TouchPoint HMI controllers support the broadest choice of materials, beyond plastic and glass, including metals, wood veneers and even soft surfaces like leather and textiles. All of UltraSense's HMI controllers are available as silicon, subsystem modules, or as ready-to-roll Solid State Interface products and have been qualified to the AEC Q100 Grade 2 specifications.

Sony PS5 as Honda Sony Mobility USP

INTERIOR NEWS

SONY IMAGE

In the EV Sony and Honda are co-developing, on-board entertainment will definitively the unique selling proposition—in accord with Sony strategy. "Sony has content, services and entertainment technology that move people. We are adapting these strengths to mobility, and that is our strength over Tesla," said Izumi Kawanishi, the № 2 at Sony Honda Mobility, in an interview with Financial Times.

The car will be designed and optimized from the outset with a focus on premium entertainment and the necessary software. The vehicle is subordinate to entertainment, music, movies and the PlayStation 5—including games.

The EV is seen as the hardware that will enable the ambitious entertainment plans. This also includes autonomous driving; the idea being that the more autonomously the car can drive, the more time the occupants have to use Sony content.

According to Izumi Kawanishi, integrating the PS5 platform into the car is "technologically possible. However, a practical problem still stands in the way: Despite improvements in the meantime, the PS5 is still in short supply. Many customers are still waiting for a chance to get their hands on the next-gen console. But that could still change by the time the e-car is scheduled to launch in 2025 at the earliest.

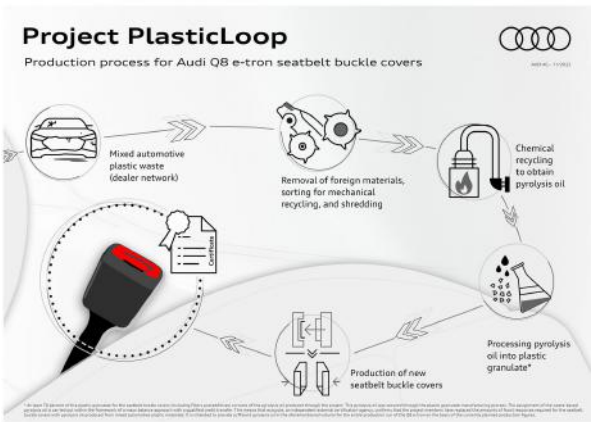
Recyclable Materials in the New Audi Q8 e-Tron

INTERIOR NEWS

AUDI IMAGES

More materials with a recycled content are used in the new Q8 e-tron. In the interior, Audi uses recycled materials in insulation and damping materials as well as in carpets. The decorative inlay, the so-called tech layer above the display, is available with an anthracite-colored tech fabric that is partly made from recycled PET bottles.

In the S equipment line, the sports seats are upholstered with the microfiber material **Dinamica** as well as imitation leather. Dinamica consists of up to 45 percent polyester fibers. These fibers are made from recycled PET bottles, textiles, or fiber scraps. In contrast to the previous microfiber quality, Dinamica production is also solvent-free.



The plastic covers of the seat belt buckles are also made of recycled material. In a pilot project with the Dutch plastics manufacturer Lyondellbasell, within the PlasticLoop project, Audi researched the reprocessing of plastic components from end-of-life vehicles. The first step was to remove all foreign materials such as metal clips. The components were then shredded and processed into pyrolysis oil in a chemical recycling process. This oil serves as the basic material to produce new plastics. The plastic granulates obtained in this process is used to produce the Q8 e-tron seatbelt buckle covers.

Polestar SUV Has Bio-PVC Upholstery

INTERIOR NEWS

Polestar has introduced bio-attributed **PVC Biovyn** from supplier Ineos Inovyn into the MicroTech upholstery of their Polestar 3 SUV. Polestar is part of Geely/Volvo, headquartered in Torslanda outside Gothenburg, Sweden with vehicle production taking place in China.

MicroTech will use Biovyn to reduce the carbon footprint of the upholstery. Biovyn bio-attributed vinyl is made of renewable feedstock that does not compete with the food chain. It replaces fossil-based raw materials with renewable materials obtained from crude tall oil, a byproduct of coniferous tree pulping. According to Polestar, it has the same properties as traditional PVC but also enables a carbon footprint reduction of over 70 per cent, and it is therefore the first PVC product certified by the Roundtable on Sustainable biomaterials.

Polestar CEO Thomas Ingenlath says, “The new model defines the heart of Polestar in terms of size, luxury, ambition, and design. It features innovations throughout the vehicle, including MicroTech seat upholstery which is made from Biovyn”.

Maximillian Missoni, head of Polestar design, says “We decided that we would not choose the easy way of quoting old paradigms of traditional car design. On this path, we asked ourselves how we could combine the benefits of vinyl upholsteries with a better process to achieve our sustainability target, and the solution is MicroTech”.

Ineos Inovyn CEO Geir Tuft adds “It’s a great honor for our company to be associated with a brand as ambitious and forward-thinking as Polestar. This shows just how much the automotive industry is evolving and how Ineos Inovyn’s continuous innovation and investments in more sustainable processes and products are paying off”.

The Design Lounge

Yanfeng XiM23: A Vision of Future In-Vehicle Luxury Experiences

THE DESIGN LOUNGE

YANFENG IMAGES

Yanfeng unveiled their new digital luxury concept vehicle, the XiM23, in Europe. It follows the **XiM21** presented two years ago.

The XiM23 demonstrator is a vision of future luxury. Inspired by the company's recently-released Luxury Research Study, the XiM23 uses interior experience modes to show the company's broad integration capabilities, where digital technologies and innovations transform the interior's features into a user-centric, luxury experience.

The findings of the Luxury Research Study identified five aspects of luxury that must be present for an experience to become and remain luxurious: simplicity, service, personalization, control, and comfort.

"When discussing how luxury will evolve, two schools of thought emerge in discussions with our customers," said Tim Shih, VP of Design and User Experience. "The first is a focus on digital technology driving the user experience, while the second relies on traditional symbols of luxury like premium materials and finishes. What our research revealed—and what we've explored in the XiM23—is that a luxury solution is not one or the other, but rather a dynamic combination of both to create holistic and highly personalized interior experiences".

Connected to a mobile app, the XiM23 recognizes passengers, adjusting its settings to the preferences designated by the driver. Upon approach, the XiM23's mono-post front seats pivot and the rear seats slide forward for easy ingress, serving as a welcome to occupants. This initial experience, known as Calm Mode, is visually simple and elegant. No screens are present and the ambient lighting of the interior is soft and airy.

Interior lighting plays an important role, to create the right atmosphere, to spotlight design features, Lighting is also a communication tool, guiding the user on how to engage or control features as they go through each experience mode.

As the driver is recognized, the front seats return to their forward-facing positions, and the steering wheel, outfitted with secret-till-lit lighting and controls, illuminates. Simultaneously, a slim, curved, pillar-to-pillar 8K display rises from the instrument panel, as well as two slim touch displays nestled in the floor console.

When users desire to transition from the serene Calm Mode to the more interactive experience of Rich Mode, the power is in their hands via the multi-controller, a “phygital” innovation combining a physical dial with gestural controls and interactive smart surfaces.

Control by gesture, the Rich Mode experience is activated, and the interior begins to change. The ambient lighting tones shift and brighten and the instrument panel display rises from 50mm to 100mm, revealing additional features and offerings for occupants to select. The two center console displays extend fully, accessible for all occupants and providing additional options for service, personalization, and comfort.

In both the Calm and Rich experience modes, the vehicle defaults to a manual driving scenario with level two assisted driving features such as blind spot monitoring, hands-off detection, and forward collision warning augmented with interior lighting. When users are ready for a level four autonomous experience it’s as simple as clicking the steering wheel’s illuminated “Autodrive” button.

Shih said “For Yanfeng, this broadened scope is a glimpse into the future, showcasing how mobility experiences can evolve as autonomous technology advances."

AC/DC

THE DESIGN LOUNGE

COFFEE CORNER
DVN
Interior

EV CHARGING STATION – WIKIPEDIA IMAGE

This article is like going backwards into the future, where electricity and mobility were about to change the world for 100 years until today.

The Westinghouse No345 steam engine was the machine that inspired young Henry Ford to fabricate his own farm locomotive (tractor). Steam self-propelled machines or horseless wagons were using coal or wood, to heat water and push a piston along a cylinder and so, generate and transmit motion. Succeeding Etienne Lenoir's principle*, Henry put his greatest efforts and infinite passion to fabricate his first four-cycle (4stroke) internal combustion engine. It sucked, compressed, exploded and exhausted gas in each one of its four moves. That gas was a substance, a useless byproduct of crude oil refining process: gasoline, aka petrol! However, it had to use an electric spark to get going and the young Henry knew nothing about electricity…

In that new world powered by gasoline, electricity and steam, that nobody knew the way to go, was internal combustion engine the future? To get the right answer he would personally ask America's most famous inventor, Thomas A. Edison, during an official venue that gathered the most prominent entrepreneurs and pioneers of the era. How the young Henry got invited nobody knows, but he soon found himself surrounded by his electric minded colleagues, presenting his invention to the wizard. His reaction was stunning: *'This is it! Electric cars need to stick near power stations and their storage battery is too heavy; steam cars will not make it either because they have to carry a boiler and a fireplace; Yours is self-contained, it carries its own power plant!'*

Henry now had the answer, but he had to make it commercially viable, just like Edison did with lighting by distributing dynamos of direct current, to each household.

While the statue of liberty was still under construction and New York was evermore illuminated by light bulbs, powered from dynamos, a number of technicians had to run around and install, maintain or fix these rudimentary machines of limited capacity. Among them there was a prominent engineer with a larger than life ambition, coming soon into a direct conflict with the electric wizard T. Edison. Nicola Tesla claimed that no dynamos were needed to power entire cities and that High frequency alternating current could sent the electricity hundreds of miles away. After sending 250,000 volts through his own body to prove the point, during one of the most amazing lectures ever given, he stated:

"There is no subject more captivating, more worthy of studying than nature. To understand this great mechanism, discover what forces are after and the laws that govern them, is the highest aim of the intellect of man. Nature has stored in the universe infinite energy… "

AC/DC—not the rock band—stands for alternate current/direct current. I do not know if in our EV days we are about to commercialize mobility from its DC status to its AC version, but we remain thunderstruck!

* *Two-stroke internal combustion engine*

News Mobility

BMW L2 Head Unit With Here HD Live Map

NEWS MOBILITY

BMW IMAGE

The BMW 7 Series will be their first series production vehicle to use the Here HD Live Map for hands-free driving, following the BMW Group's decision to use Here's high-definition map that enables hands-free driving in the USA and Canada. Here states it is one of the first companies to provide high-definition maps for Level 2+ automated driving capabilities in series production vehicles.

The 7 Series is the first BMW to launch with L^{2+} automated functionalities at a maximum speed of 80mph (130km/h). This function enables hands-free driving on interstates and highways, provided drivers remain focused and ready to take control.

The Here HD Live Map consists of rich, highly accurate and fresh layers of data to support the vehicle in knowing exactly where it is on the road and what road features lie ahead. The lane-level data serves as a redundant source of information to the onboard sensors, providing additional safety assurances for the system. Here HD Live Map helps a vehicle to proactively adjust its behavior to upcoming road characteristics. It provides road geometry, route profile and traffic signs – all on a global scale.

The BMW 7 Series is also the first vehicle to deploy Here Predictive Routing, a cloud-based routing functionality that learns individual driving patterns to propose more personalized journeys. In addition, the BMW 7 Series uses Here Real-Time Traffic across 70 countries. The service delivers drivers detailed information on traffic congestion with lane-level precision and potential road hazards ahead, with auto re-routing capabilities, helping drivers stay safe and save time

Geely's New Robotaxi Platform

NEWS MOBILITY

GEELY IMAGES

Waymo, and Geely's EV brand Zeekr revealed last year they were working on a new platform for electric robotaxis. The two companies are aiming to beat other automakers to the launch of purpose-made autonomous EVs, the kind that could serve as the robotaxis of the future once L^4 technology starts to arrive at scale.

Now Geely has revealed the SEA-M architecture, derived from Sustainable Experience Architecture (SEA) for purpose-built vehicles, that is expected to be the base of robotaxis with Waymo's autonomous tech. It looks like a regular MPV, with a low floor and a relatively tall roof. But it also incorporates some elements of mobile lounge-style concepts seen in recent years, including sliding front doors, as many automakers have arrived at the same general layout.

The platform itself is an evolution of the Zeekr 001. It was released in China in October 2021 and is scheduled for release in Europe in 2023. The 001 has a shooting brake design, similar to the Porsche Panamera, and it features a similar front end to that of the Lynk & Co 05.

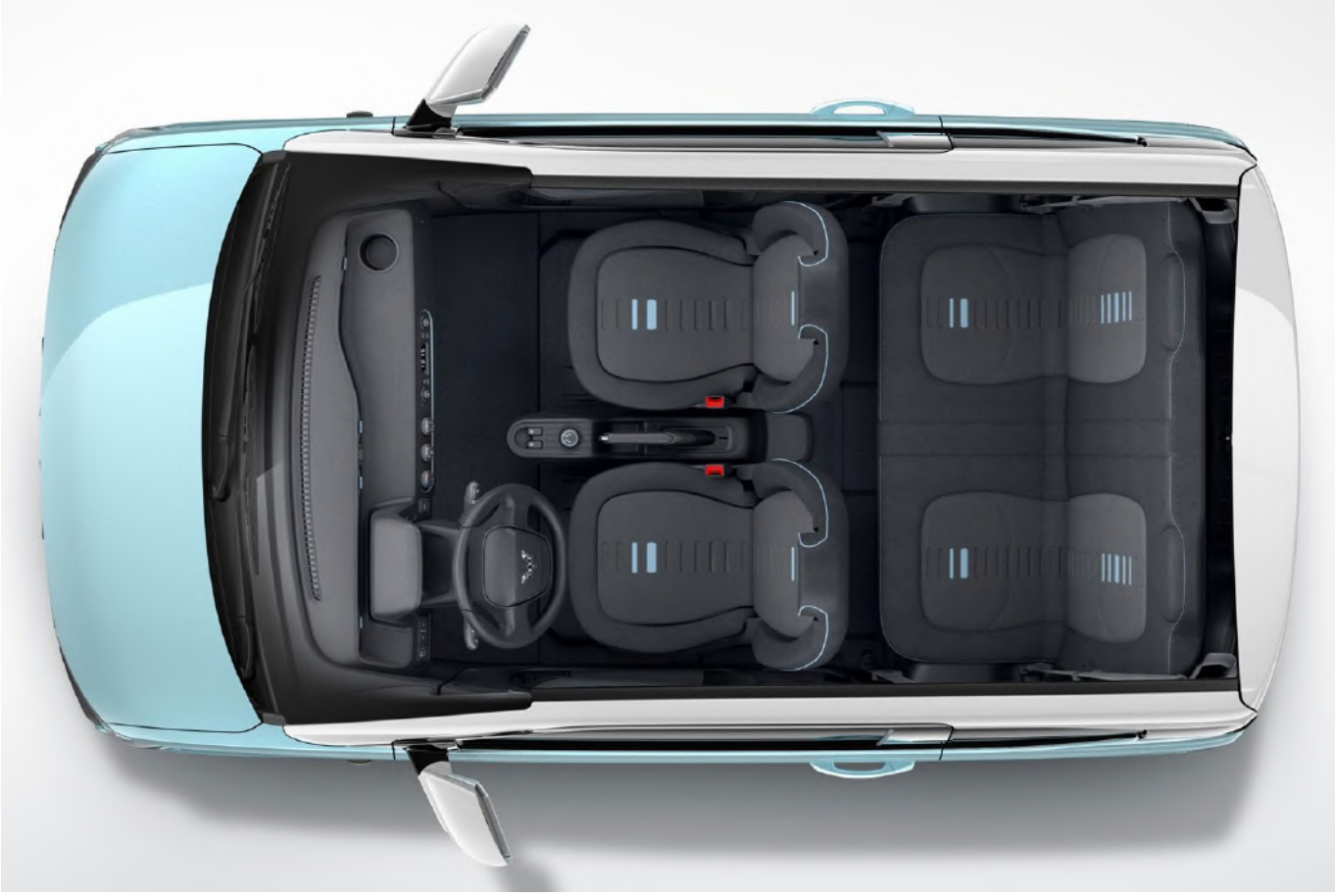
Zeekr says they are planning to begin producing the robotaxi in 2024 for the Waymo fleet, which recently announced the spread of its autonomous operations to Los Angeles. **See video.**

What could be the business model? That's the challenge! L^4 vehicles must compete costwise with ride hailing drivers in a human-driven vehicle. Therefore, is it worth spending billions creating an electric platform and developing an L^4 autonomous tech for a robotaxi? That's the question; we'll have to watch and see what the answer will be.

General News

Wuling Air is Top Chinese EV for Two Years Plus

GENERAL NEWS



WULING IMAGES

The Wuling Air EV is a city car manufactured by SAIC-GM-Wuling (SGMW) since 2022. Based on SGMW's Global Small Electric Vehicle (GSEV) platform, the model is the third GSEV model to be marketed under the Wuling brand after the Hongguang Mini EV and the Nano EV. On 18 November, Wuling Motors announced that the left-hand drive version of Wuling New Energy's first global car, the Air EV, officially rolled off the production line. This month, Wuling sold 41,000 units of the Hongguang Mini, meaning № 1 in sales of Chinese-brand pure-EVs for 26 consecutive months.

The Air EV has an advertised range of 300 km, and all models are equipped with safety equipment such as main driver airbags, ABS anti-lock braking system + EBD brake force distribution system, and tire pressure monitoring. At the same time, Air EV provides keyless entry, non-sensory start, electronic handbrake, 360° panoramic image, ESC body electronic stability system and other configurations, and is equipped with a 10.25” dual screen, equipped with Ling OS Lingxi system.

The interior carries a minimalist but futuristic interior design to compensate for the exterior design. It carries the concept of Intelligent & Comfortable Experience.

It is a compact city car: 2,917 × 1,493 × 1,621 mm with a wheelbase of 1,940 mm. It seats four.

Wuling was recently the official car partner by providing 300 units of its EV at the G20 Summit in Bali, Indonesia.

Soviet-era Moskvich Is Back

GENERAL NEWS

MOSKVICH 2141 INTERIOR ZPRAVY.AKTUALNE IMAGE

Russia relaunched production of the Soviet-era Moskvich brand at a plant near Moscow given up by Renault, who in response to Russia's war on Ukraine sold their majority stake in AvtoVAZ in May to the Russian state for reportedly just one ruble, but with a six-year option to buy it back. They sold their plant, now renamed the Moscow Automobile Factory Moskvich, for another ruble.

The renamed Moscow Automobile Plant Moskvich expects to produce 600 cars by the end of 2022, and 200 of which will be EVs. The cars should be available to buy in December, Kamaz said in a press release. Reports say the car design will be Chinese, and be very different from the original Moskvich.

The ultimate target of producing 100,000 Moskvich vehicles a year, some of which will be EV, is far below the industry average for a car plant of between 200,000-300,000.

"The first Moskvich cars will come off the production line in December 2022," truck maker Kamaz, the plant's technological partner, said in a statement.

Chinese automaker JAC's design, engineering and production platform will reportedly be used to produce the car, which will lack many of the safety, comfort, and convenience features the developed world considers basic equipment in an automobile—such as airbags. Sales of the Moskvich 3, described as an urban crossover with a gasoline engine and either automatic or manual gearbox, will begin in December.

The previous Moskviches were terrible cars by global standards, but a source of pride for Russia's capital between 1946 and 2001, with the name translating to "Moscovite" or "native of Moscow". The cars' popularity faded after the fall of Communism and the Soviet Union. The manufacturer was then declared bankrupt in 2006.