Thu, 23 March 2023
Weekly Newsletter

DVN-I
Automotive Interior

NEWSLETTER #153

Editorial

Melexis: Semiconductors For Smarter Cars

Melexis wants to put their talents to work to help create safer; more comfortable, healthier future cars. In today's DVN-I Newsletter, we introduce the company and their activities by bringing you an exclusive interview. Get to know them, then learn more during their presentation in the interior lighting session at the DVN-I Workshop coming up next month—25-26 April—in Köln, Germany. You'll want to register **online** while there's still space; in the meantime, check out the revised and nearly-finalized **docket**.

We also take a look at the de luxe interior of the Chinese Nio EL7 SUV; new non-animal leather made out of fruit waste; new audio technology from Bose; AR-HUD hologram technology from a startup called Envisics; new head protection and airbag technology from Hyundai Mobis, and Magna's new SmartAccess Power Door System.

There's coverage of an interesting research project for automated driving in cities, and a of a new collaboration to evaluate connectivity products for enhanced road safety. There's news from the Indian supplier ecosystem, and from China's redoubtable auto industry. Quite a smorgasbord of news and information to keep you right up to date.

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

Sincerely yours,

Carsten Befelein
Consultant, DVN-Interior

In Depth Interior Technology

DVN-I Interview: Melexis' Roland Steger

Melexis is a global supplier of microelectronic semiconductor solutions to make cars (and other products) safer, greener, and smarter. Today we bring you an interview with Melexis' business development manager for the EMEA region, Roland Steger:

DVN-I: Philosophically, how does Melexis approach the automotive industry?

Roland Steger: Melexis wants to create the best imaginable future. A future that is safe, comfortable and healthy. Mobility is an essential part of our society, thus it has a huge impact on our safety, our health and our comfort. Melexis can make a big difference there, by making cars greener; by raising their efficiency; by increasing the comfort, and by making them safe.

DVN-I: What is the importance of the automotive market from your perspective?

Steger: 90 per cent of our turnover is generated by the automotive industry. It's safe to say that the automotive market is vital for Melexis. The complete semiconductor industry is believed to be in a decade of growth. It will reach a total worth of a trillion dollars by 2030. McKinsey predicts that 70 per cent of that growth will be driven by three industries: automotive; computing, and wireless technology. The strongest driver will be automotive with demand for automotive semiconductor content tripling in this decade.

DVN-I: What impact did the pandemic have on your business?

Steger: We had all the necessary scenarios in place to ensure business continuity and to safeguard the health of our employees. We promoted hybrid working and had Covid-specific regulation concerning ventilation; mask wearing, and keeping distance in place on all our sites when the local situation required it.

During the lockdown, all the operators had to work in the manufacturing sites (Leper, Erfurt, Sofia) but all the desk people were able to work from home without visible impact on the day to day business. As lessons learned, we understood that the collaborative and innovative tasks must be done in the office while some individual tasks can be better done at home.

Post lockdown, we have launched the hybrid mode where the team and the team lead can decide themselves when they work from home and when they work in the office—always in the office is an option, never in the office is not. The dynamic of the work from home/ work from the office depends on the team and on the tasks to be accomplished and can change throughout the year. Generally speaking, the biggest impact of Covid was the chip shortage. But we had our strategies in place and our results prove they were the right ones.

DVN-I: What are your main products and applications?

Steger: We engineer sensor and driver ICs. We have been in the automotive business for more than 30 years. We are recognized as a reliable and sustainable automotive semiconductor company. But we are also targeting other markets: digital health; robotics; energy management; smart appliances; smart buildings, and alternative mobility. Our ICs make cars and other products smarter; safer; greener; healthier, and more comfortable.

DVN-I: What are the main unique technologies from Melexis?

Steger: Melexis provides sensors and drivers for automotive applications. Our ICs are a blend of CMOS technology and unique know-how (Triaxis®, MeLiBu®, etc). Sensor ICs comprise leading products such as magnetic positioning sensors; inductive position sensors; current sensors; latch & switch; time-of-flight 3D camera; infrared temperature sensors, and pressure sensors. Driver ICs include embedded motor drivers, smart drivers and smart LED driver.

DVN-I: What niche do Melexis products occupy?

Steger: Our ICs give objects senses so they can capture the conditions in the world around them. They interpret these signals and tell other objects how to [interact] with the circumstances. The signals are converted into actions which improve your comfort, safety or health. Our ICs bring your digital world to life.

DVN-I: What makes Melexis products and services better?

Steger: We are small enough to care and big enough to serve. We create strong partnerships. If you have projects in which Melexis can play a role, we love to listen to you and assist you with our knowledge; expertise, and experience. Together, we make your project work! That is what we call inspired engineering.

DVN-I: Can you tell us more about your car-interior products?

Steger: Melexis covers many applications from the cockpit, from lighting and cabin monitoring to the driving control or seating experience.

DVN-I: Which technologies and innovations do you want to push in the car interior?

Steger: Melexis is especially leading innovations with ambient lighting and time-of-flight. For lighting, the MeLiBu® (Melexis Lighting Bus) technology is being adapted by all the premium automakers. This innovation enables fast dynamic lighting animation and thus a full personalization of the cockpit. It is also implemented to anticipate with the coming needs for safety warning in upcoming autonomous car, when the car will need news way to communicate with the passenger (which won't be in focus anymore). For time-of-flight 3D camera, it is a technology used for in-cabin monitoring. It enables new applications such as the synchronization of your head up display with the driver eye orientation. And much more of course.

DVN-I: What are your expectations in lighting?

Steger: The market for interior and exterior lighting is constantly growing, almost every day we see new applications. Applications like smart surfaces; lighting lines; matrix; symbols, and projection are going to be on one hand more and more fancy and on the other hand displaying safety relevant information for the driver of the car. Meaning we are going from an ambient light to a safety-relevant functional light with diagnosis.

DVN-I: How do you support market growth?

Steger: The volume of applications with LEDs in the car is exploding. To handle the number of LEDs and to support over-the-air update features, we have to develop the right components at the right time to support the needs of the automakers worldwide. Our parts have to fit seamlessly into the new architecture of the car platforms. This is the reason why we are working closely with our customers, including automakers. It's key to increase the functionality and flexibility of our LED drivers. Next to that we need to reduce the system complexity. The target is to set up a flexible and easy to use system. In our portfolio you find a variety of RGB-LED drivers, so you can choose the right one for your application. An example for this was **displayed** by Renault at the SIA workshop in Paris last year; we had a Renault car equipped with our reconfigurable system in no time and over 100 RGB-LEDs were running with highly dynamic scenarios. At the same time, we are supporting the ASIL requirements for safety relevant systems.

DVN-I: Who and where are your customers?

Steger: We are already known at traditional automakers. The electrification of the car and the growing focus on comfort and safety open new opportunities for Melexis. We see a lot of newcomers from all over the world entering the automotive lighting market segment. There are also startups upcoming with new lighting applications.

DVN-I: What are the main challenges for Melexis?

Steger: As a growing company we need to invest into our people, meaning to develop and produce the growing number of products we also need to expand our workforce. Finding additional qualified people is in the current times quite a challenge.

Besides the growing market we need to carefully operate within the ongoing global inflation as well as raw material cost increases. Beside that as well the ongoing geopolitical crisis influences our future as well. We need to prepare ourselves as best as we can in those challenging new situations.

The strong growing demand beyond of the possible supply capacity remains a challenge. Actions are ongoing to increase the possible supply. For the time being we need to work closely with suppliers as well as automakers to serve as best as possible all customers and maximize the car output with the available supply capacity.

DVN-I: Thanks so much for sharing your thoughts? Any closing comments?

Steger: Melexis ICs shape the future. A future that is safe, clean, comfortable, and healthy. Because we care about our planet and our customers. As we always have a plan, we come with the right products at the right moment, so our customers stay one step ahead of the competition. And the right products for this era are products that support the electrification and the premiumization of cars. Many of our solutions support the increased comfort and personalization automakers are looking for. So that's what we deliver: inspired engineering.

Interior News

Nio EL7 Interior: Looks Like High Quality

INTERIOR NEWS

NIO IMAGES

Nio's new EL7 electric SUV is positioned as offering world-class levels of equipment; comfort, and digital content, at a Chinese-automaker price. What is striking is the appearance of feel of top quality in the interior, a giant departure from Chinese cars in general.

Nio speaks of the car as a 'second living room": great power-adjustable seats front and rear, and with massage function. The passenger lounge seat has a retractable leg rest, almost like a business-class airplane seat, which reclines to allow lying flat. The interior is sustainable and vegan. The seat covers look and feel like they could be leather, but they are made using the coffee bean husk tanning process, and the decorations are made of renewable rattan. There are a few buttons on the steering wheel and center console for operation; they work relatively intuitively and logically. A large vertical display is propped up in the center.

Nio says the EL7 offers the largest panoramic sunroof in the industry, and that many aspects of the car will be improved by upgrading the software over the air. The central computer boasts a computing power of eight gigabytes per second—capacity designed for the autonomous driving of tomorrow. Some of the ADAS calibrations are twitchy; they intervene too early and too often, and not very sensitively. The in-car voice-operated asssitant 'Nomi' babbles constantly about this, that, and the other thing; Nio says the system has artificial intelligence and is constantly 'learning'.

Antolin, PersiSkin: Auto-Grade Leather From Fruit Waste

INTERIOR NEWS

PERSISKIN IMAGE

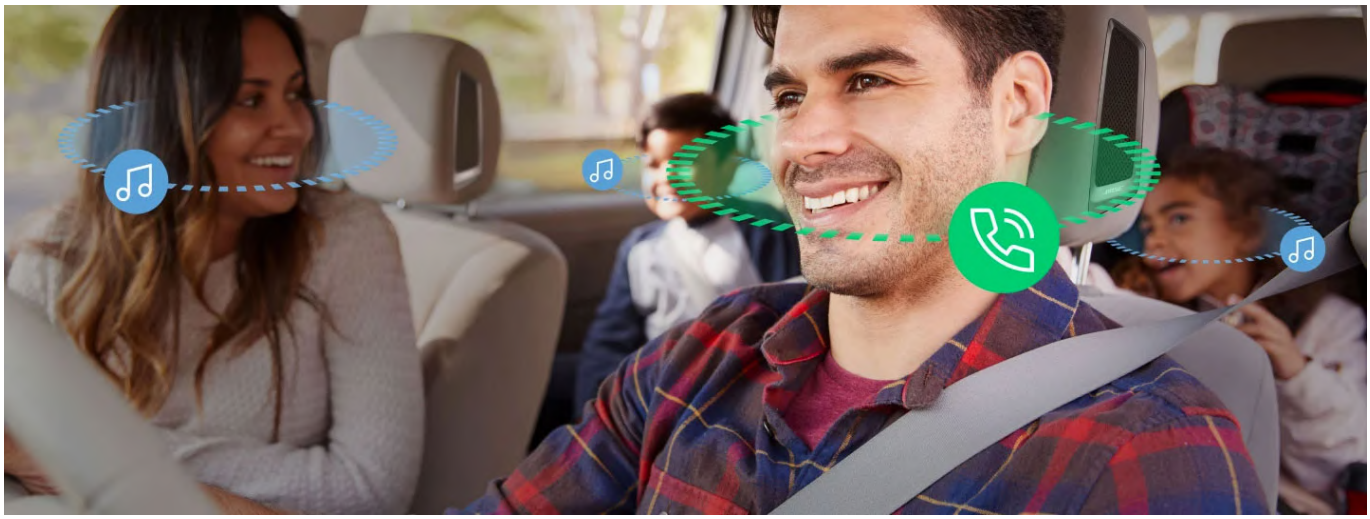
A collaboration agreement has been signed between Grupo Antolin and PersiSkin, a startup producing a plant-based material as an alternative to animal and synthetic leather, for the development and supply of material for use in automotive interiors.

PersiSkin, based in Valencia, Spain, uses surplus persimmon harvest to manufacture their product. Unlike other leather alternatives based on agri-food waste or byproducts, the PersiSkin solution integrates more than 75 per cent of organic vegetable content in the material. The two companies aim to deliver a material with the same technical performance and quality as conventional materials but with reduced environmental impact. PersiSkin and Antolin are targeting full use of the waste and surplus from persimmon production to create a natural; ecological; vegan, and mainly bio-based coating of vegetable origin. The collaboration will provide automakers with a sustainable alternative to animal skin, in addition to reducing the use of chemical products and water consumption.

PeriSkin CEO Jaime Sanfelix says the two companies are pooling their expertise to "develop this material in an efficient way that is committed to sustainable development objectives; the complementarity of our capabilities, as well as a common vision, will contribute to a future of quality materials while caring for our environment and augurs a fruitful relationship with which we will have the capability to offer attractive solutions for customers".

Bose SeatCentric for Personal Audio Experience

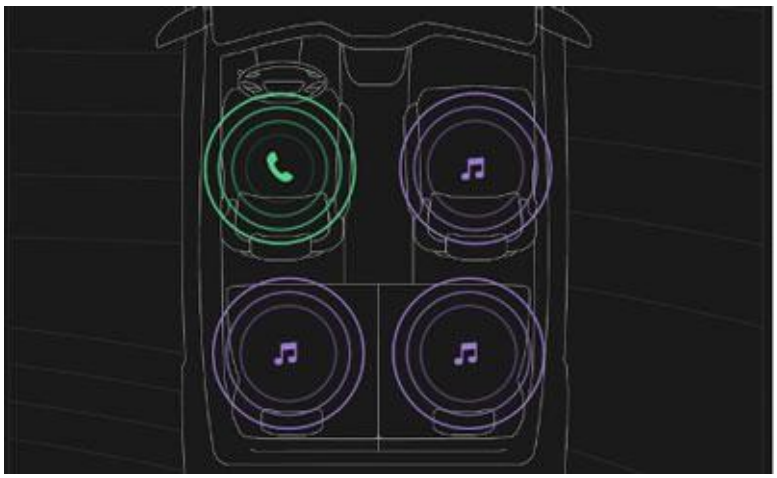
INTERIOR NEWS



BOSE IMAGES

Having a Bluetooth phone conversation in the car is…not optimal. The music stops as soon as the phone rings. Sometimes voices aren't clear. Passengers in the car can hear the conversation, leaving the driver no privacy.

Now comes Bose, the Massachussetts-based famous audio company, to see about fixing that; they've designed technologies to provide a personal listening experience in each seat. Not everyone wants to listen to music at the same volume level—or wants to listen at all. And no one enjoys it when a phone call interrupts the music.



SeatCentric Call Placement technology—see **video**—allows drivers to talk more privately while passengers enjoy uninterrupted playback of their entertainment audio.
SeatCentric Volume Control allows the front-row passengers to enjoy the same music at just the right volume for each seat. The music becomes a personal experience, and the cabin can cater for more than one person's preferences at a time.

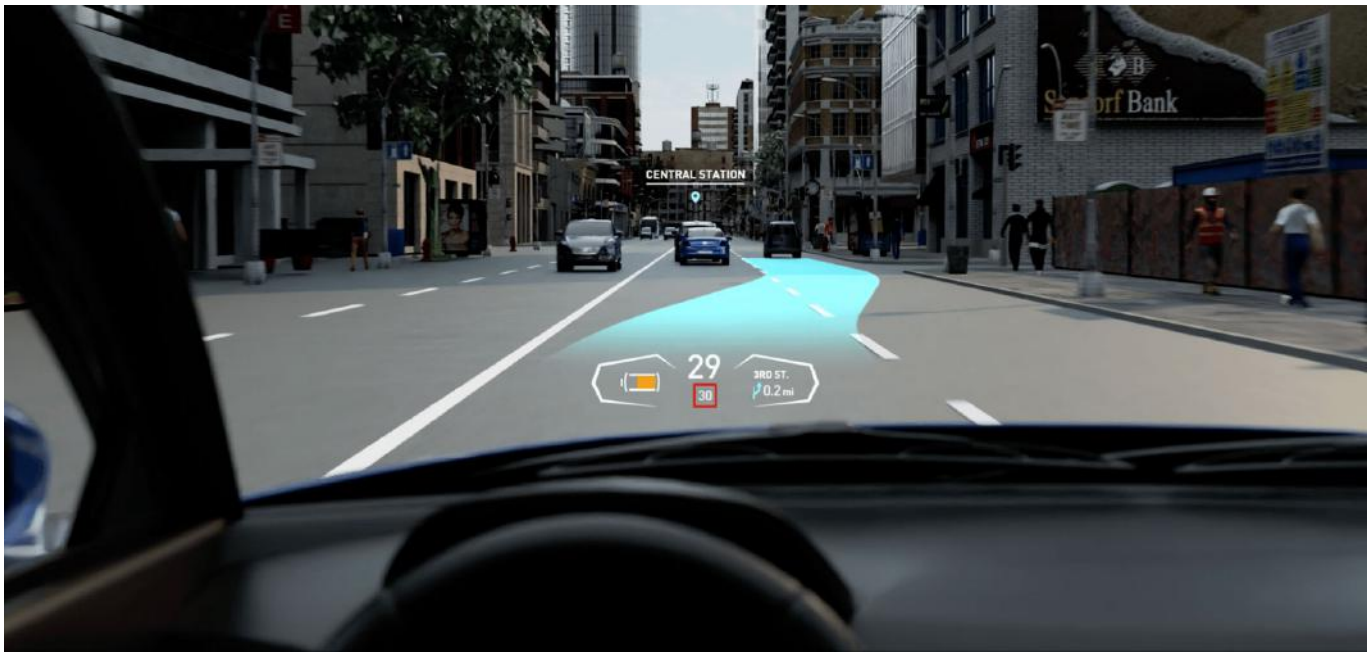
Using headrest-mounted UltraNearfield speakers, Bose SeatCentric Call Placement presents phone call audio to any seat equipped with these special loudspeakers.

With SeatCentric Rear Seat Attenuation (RSA), those in the front seats can keep enjoying music at comfortable volume levels, while the rear seat is kept quieter for passengers to listen to brought-in devices and rear-seat entertainment—or simply relax in a quieter space.

With this Bose technology, every passenger in the vehicle should be able to enjoy a personalized listening experience.

Envisics Hologram Technology for AR HUDs

INTERIOR NEWS



ENVISICS IMAGE

Envisics is a UK startup in the town of Milton Keynes, developing hologram technology to replace car monitors to improve driving safety. The company has been valued at USD $500m; GM and Hyundai were early backers and reinvested during the funding round, while Stellantis and Jaguar Land Rover bought into the company for the first time during the round.

Envisics says projected displays could reduce driver distraction and warn motorists of oncoming hazards earlier, particularly on busy urban roads. Their systems allow drivers to view speed limits and navigation information on the windshield, rather than on a screen lower down within the car.

The latest generation of their technology, which uses self-driving cameras fitted into cars to warn drivers of hazards they may not have spotted, will be in GM's electric Cadillac Lyriq from next year.

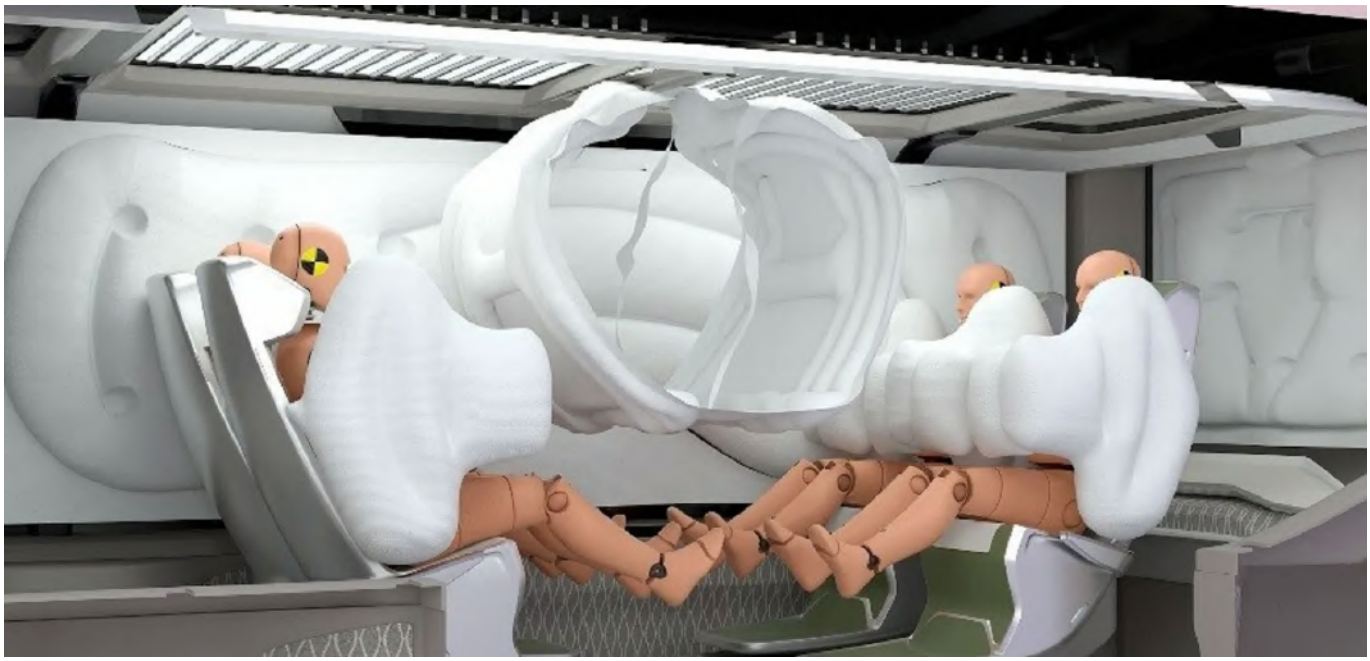
Raised investment will help to speed up the next stage of the product's development to enable it to project three-dimensional images on the road ahead, allowing drivers to see turns or other signs in advance.

Envisics CEO and found Jamieson Christmas says, "Big screens in cars are not the answer" to driver distraction."Augmented reality, with information on the glass that gives much better situational awareness, is a better solution. Our solutions are an exceptional fit for OEM requirements and provide platforms that enable the creation of unique brand experiences. Envisics stands apart as the only company that has created and delivered dynamic holographic technology as a viable product at scale."

Jaguar Land Rover was the first automaker to use the Envisics technology, in 2010. The supplier has been recognized at the Stellantis technology partnership awards, winning the Automotive Tech category for its work in augmented-reality head-up displays.

Mobis: Head Protection With New Airbag Concept

INTERIOR NEWS



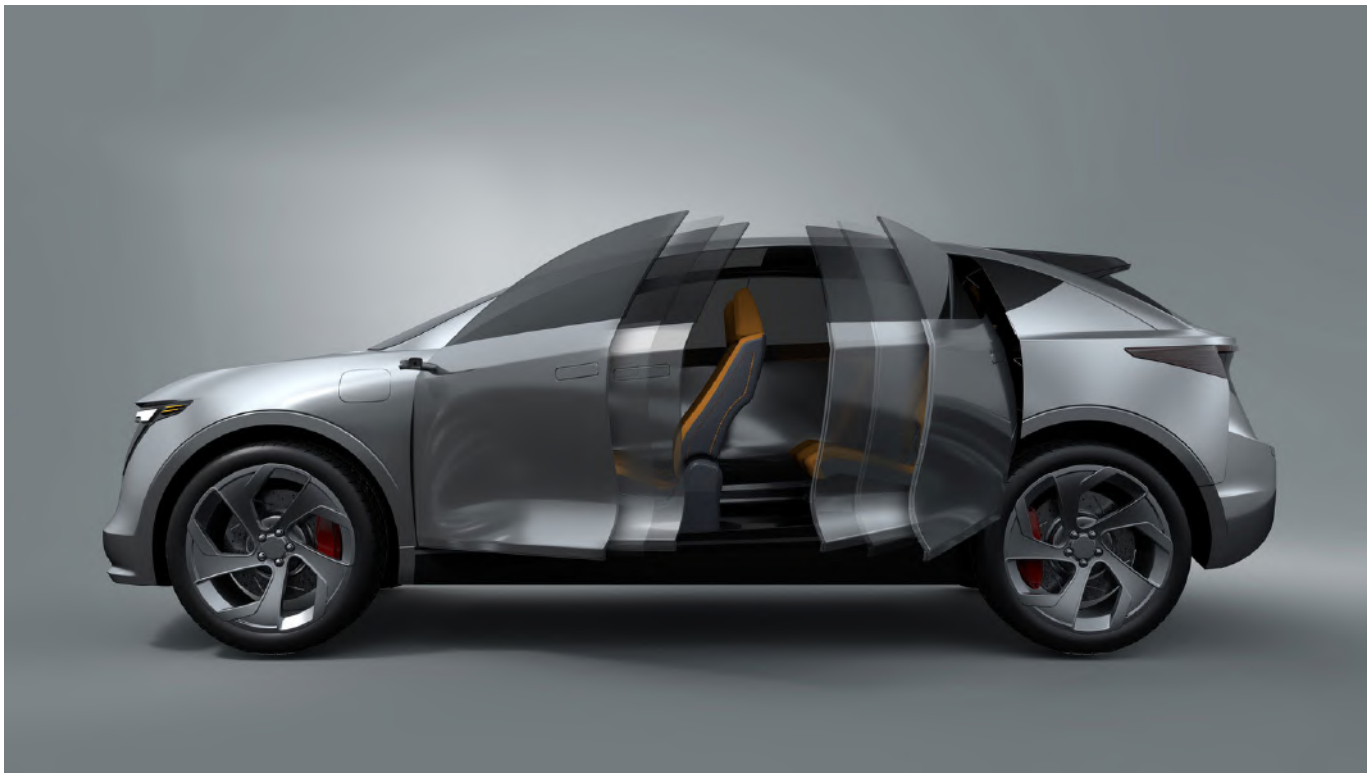
Diversified supplier Hyundai Mobis supplies numerous automakers round the world, and they're the main supplier for many systems to Hyundai-Kia, including interior and safety.

The new Brain Injury Prevention Airbag, developed by Hyundai Mobis, received a perfect score in the Brain Injury Criteria in a new crash test conducted by NHTSA, the US National Highway Traffic Safety Administration. The Brain Injury Prevention Airbag showed proven performance in the oblique crash test, which is due to be introduced by NHTSA to represent actual crash scenarios. The technology also won the Silver Tower Order of Industrial Service Merit at the New Technology Commercialization Competition hosted by the Ministry of Trade, Industry and Energy in Korea.
The new airbag has a protruding area—a supplementary chamber—which maximizes pressure at just the right time to prevent the passenger's head from turning. This effectively lowers the possibility of the driver receiving a head injury.

In addition, Hyundai Mobis has developed a Total Airbag Solution designed for purpose-built vehicles targeting the future mobility trend. To accommodate the varying interior design in this kind of vehicle, airbags are placed in niche areas inside the vehicle. Face-to-face protection airbags burst from the center ceiling to prevent passengers from colliding with one another. Curtain airbags are installed in the four areas where the windows are connected to the roof, and they pop open to cover all four directions inside the vehicle. Omnidirectional airbags, on the left and the right side on the back of the seat, act as a protective shield that surrounds the passenger's body. Hyundai Mobis also developed slim airbags, 40 per cent thinner, to better suit EVs with their very different structure compared to ICE cars. Slim airbags can be installed in small spaces, such as on variable display panels or on the side of a slender seat. When the airbag is placed on an in-car display, the size is adjustable based on the position. In this way, the driver can get the optimum protection depending on the distance between the driver and the display.

Magna SmartAccess Power Door System

INTERIOR NEWS



MAGNA IMAGE

Magna has launched their SmartAccess power door system on the opposing rear doors of the Ferrari Purosangue SUV. The system comprises Magna's SmartLatch power door drive unit, with cinch actuator and first-to-market Haptronik integration—said to 'enhance the tactile feel of door movement, enabling effortless opening and closing'.

The system—see **video**—can detect when a vehicle is parked on an incline or on a curb, and automatically adapts the gravitational force to ensure that opening and closing the door remains easy for occupants. It also includes anti-slam and wind catch features.

SmartAccess also provides additional consumer-related features including the ability to customize the door feel to specific consumer desires, and gesture control which enables the opening or closing of the side door using a wave.

Other features consist of non-contact obstacle detection where the side doors can sense a post or adjacent vehicle and stop the door in a controlled manner. A keypad can also be used for keyless entry.

"As an industry leader in advanced mechatronic systems, we are excited to bring one of our most innovative solutions to market," said Jeff Hunt, president of Magna Mechatronics, mirrors, and lighting. "By combining our mechanical expertise with our advanced software capabilities, we have been able to reimagine traditional vehicle access and offer a unique and more luxurious experience when entering the Purosangue."

The SmartAccess system will launch with several other Asian and American automakers this year.

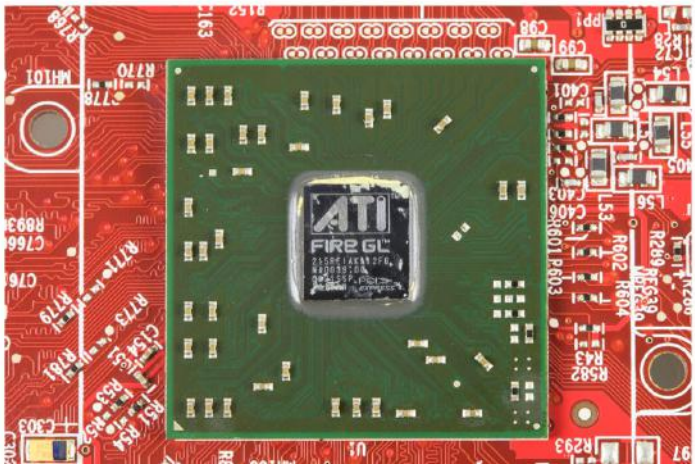
The Design Lounge

The Genie

By Athanassios Tubidis

THE DESIGN LOUNGE

DVN-I Coffee Corner



WIKIMEDIA IMAGE

Slices of highly purified silicon ingots serve as the starting substrate and it can take 500 steps to process in specially built manufacturing facilities. In 2021, 1.14 trillion chips were sold (per the IEEE), which is about 140 chips for every person on the planet. Features can be as small as 14nm, in the thousandth-fractions of the size a grain of sand. Highly controllable processes, such as atomic layer depositioning and atomic layer etching, are used to add and remove just a few (atomic) layers at a time. If all these tiny semiconductors were stacked one on top of the other, they would expand beyond the maximum cruising altitude for commercial airplanes.

What does all this have to do with car interiors? We don't even see these chips while seated in our cars, but semiconductors can be considered one of the most important inventions of all time. They are fundamental to our ability to connect with each other; collect, store, and process information, and implement intelligent automation.

In the 1400s, printing enabled to replicate and share knowledge at an unprecedented pace. What had been inaccessible turned into the base of accelerating inquiry. Today, everyone's personal device connects to the internet, and new technology transforms our cognitive processes as never before. The unparalleled excitement for anything digital brings humans into car interiors through ever-'smarter' interfaces. Technology is transitioning from a value-add luxury to the differentiating factor between vehicle brands. Automakers' advanced design studios are experimenting with technology-first aesthetics. Automotive brands attempt to build trust in their R&D by reinventing themselves to appeal to the next generation of highly curious tech consumers, who view life as a continuous stream of content. The transition to zero-emissions powertrains; the rise of AI and autonomy, and the increasing popularity of digital services as revenue generator will significantly broaden the domains within which car interior design studios operate. This new clientele is far less likely to go to a gearhead-orientated car show than their counterpart of the past. Many automakers today are holding back their brand vision concepts from domestic motor shows in favor of presenting them at the likes of CES in Las Vegas.

Vehicles can now empower our mobile infrastructure, while we can explore their new possibilities. This new era wants humans more conscientious of themselves within their close proximity, implicating cognitive adjustments. It is not about a form of an object but the settings of our closest circle; a major shift from objects to experience.

Machines have become so powerful that they can even alter the fabric of reality itself, making it difficult to distinguish truth from misinformation. Nevertheless, cognitive limitations may keep humans closer to what is tangible. Thus, the genie of technology is out of the bottle. We must be wise in what we ask.

News Mobility

Stadt-up: Research Project for City Automated Driving

NEWS MOBILITY

STADT-UP IMAGE

The Stadt-up project, launched on January 1, 2023, aims to pave the way to the mobile future. According to a press release, 22 players from industry and research institutions are involved. The goal is to develop concepts and pilot applications for continuous automated driving in urban areas. The project name is a bit of a pun; "Stadt-up", as pronounced with a German accent, sounds a bit like "Startup".

About €60m will be available to the project partners until the project is completed at the end of 2025, of which more than €33m will come from the funding pot of the German Federal Ministry of Economics and Climate Protection. Automakers involved include VW (via Cariad); Mercedes-Benz; and Opel, as well as suppliers like Continental; Hella; Bosch; Valeo, and ZF.

The three-year project phase is divided into five steps. According to the announcement, the first step is to collect citizens' ideas and needs regarding autonomous mobility as part of a dialog platform.

Based on this platform, the researchers want to create a digital twin of urban mobility. This is intended to reflect the diversity of participants and, at the same time, to reflect the rapidly changing reality of life for the urban population, such as the trend toward home-office working models.

In the second subproject, Stadt-up is dedicated to possible methods of how people and automated vehicles can interact and communicate with each other. The main focus here will be on human-machine interfaces (HMI).

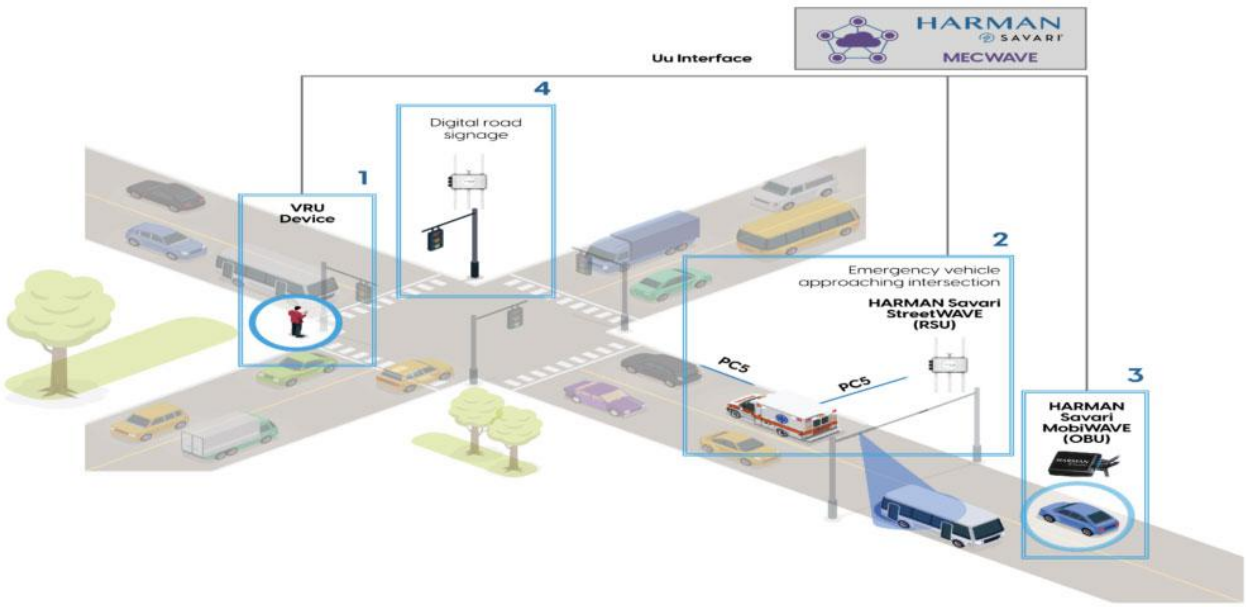
How sensors such as camera systems, lidar or radar as well as special algorithms can be trimmed to record and interpret demanding urban scenarios is the subject of the third subproject.

In the fourth project section, the project partners want to devote themselves to environment perception optimized by data fusion. This involves various decisions that the automated vehicle has to make in urban traffic. The predictive capabilities of automated vehicles are to be sharpened in this project phase.

In the final phase, the participants want to make automated driving in urban areas a tangible experience, both in the simulator and with the help of test vehicles in a realistic test environment.

Harman, ACM to Evaluate Connectivity Products

NEWS MOBILITY



HARMAN IMAGE

Following an announcement at MWC Barcelona 2023, Harman and the American Center for Mobility (ACM) are set to form a strategic collaboration to test real-world use cases of road-ready technologies, including vehicle to everything (V2X) comms—enabled by roadside infrastructure and edge computing using 5G cellular—to demonstrate connectivity between vehicles, people and infrastructure to improve safety and efficiency. ACM's infrastructure enables the testing of 5G, V2X and MEC technologies to accelerate the validation and commercialization of connected and automated vehicles.

Harman and ACM are also testing vulnerable road user safety and video see-through and do-not-pass warning alerts using vision sensor share under real-world conditions. These tests include variations in weather, network capability and road conditions. For example, see-through provides an ultra-low-latency real-time augmented video feed of a vehicle ahead of the host vehicle, enabling and enhancing visibility, reducing driver anxiety and increasing safety. The solution also enables the host vehicle to perform a safe overtaking maneuver using Harman 5G TCU and Harman Savari MECWAVE.

Through the newly established partnership with ACM, Harman aims to enable auto makers to test and experience their connected vehicles and demonstrate new mobility use cases with the potential to scale.

General News

Lumax Buys Majority of IAC India Business

GENERAL NEWS

Tier-1 automotive systems and components supplier Lumax Auto Technologies has signed an agreement to acquire a majority stake in IAC International Automotive India from the International Automotive Components (IAC) Group.

IAC is a global supplier of powertrain-agnostic automotive interior and exterior systems and components, including instrument panels, cockpits and consoles, door and trim systems, headliner and overhead systems and other interior and exterior components. With global revenues of more than USD $3bn, they operate 45 manufacturing facilities across 17 countries.

With five manufacturing plants (two in Chakan and one each in Manesar, Nashik and Bangalore) and an engineering center in Pune with capabilities in product designing and engineering; dimensional engineering; product development; program management; and tooling development, IAC India is a tier-1 interior systems and components supplier to Indian automaker including Mahindra; Maruti Suzuki; Volkswagen, and Volvo Eicher Commercial Vehicles.

IAC India's day to day business and operations will continue to be managed by their existing professional management team.

Lumax Chair Deepak Jain is calling the buy-up "a marquee milestone in our long-term growth goals of strategic partnerships with global industry leaders. With our group's existing expertise in automotive lighting and plastics, it provides the opportunity to combine competitive strengths across automotive lighting, plastics, and interiors to provide complete solutions to our customers. We are excited with the opportunity to partner with IAC and work together with the team at IAC India with the overall vision of stability, continuity, and growth in the coming years".

And IAC Group CEO David Prystash says the partnership "will offer immense opportunity to expand our business in India and continue to deliver quality solutions to our customers. It also offers the opportunity for industry leaders in lighting and interior systems to offer integrated solutions to meet the rapidly evolving technological advancements in the automotive sector."

Lumax Managing Director Anmol Jain adds, "This strategic partnership will help us expand our existing business in four-wheeler automotive plastics and serve our customers with a wider product range. As the sector moves towards higher value-added and niche content in interior systems, we will look to leverage this platform to deliver industry leading solutions to our customers and enhance our kit value per vehicle."

The acquisition will take place at an equity valuation of ₹5.87bn, and IAC will continue to hold a 25-per-cent stake; 75 per cent of the stake will be bought through an SPV (acquisition vehicle) at ₹4.4bn.

Geely's Branding Push

GENERAL NEWS

GEELY IMAGE

The Chinese Geely Group initially bought various car brands from all over the world, like Smart and Volvo. Since 2018, the company founded a new brand almost every year. Hardly any other company launches new brands on the market with such frequency. The latest example is the new Galaxy luxury brand, which the automaker unveiled just two weeks ago and whose first car is scheduled to be launched in China this spring.

The Chinese are relying on an impressive appearance and a lot of technology. The Galaxy Light has a completely smooth outer skin without door handles or mirrors. The doors, which are hinged in opposite directions, open with the help of a smartphone. The interior features a display landscape and lighting effects. The developers have dispensed with conventional switches. Instead, there are touch surfaces that only become visible when needed.

Lynk & Co, a new make in collaboration with Volvo, launched in 2018. Six models are now available in China. Two years after the launch, Geely brought Lynk & Co to Europe with a radically reduced product range and a very special distribution system

The manufacturer wants to bring its vehicles to customers in Europe primarily by subscription—"members", as Lynk & Co calls them, with the option of sharing the car with others at the push of a button via the manufacturer's own car-sharing platform.

In 2019, Geely introduced the Geometry, especially for the Chinese market. Geometry now offers a compact sedan and two SUVs. The range is to grow to ten models by 2025.

In 2021, Geely founded the Zeekr brand, which will probably launch in Europe this year. The first model, the sedan Zeekr 001 will be followed this year in Europe by the Zeekr X.

In 2022, the outdoor lifestyle brand launched Radar and presented the R6 electric pick-up as its first model. Also in 2022, Jidu unveiled its first two electric vehicles with autonomous driving capabilities: the Robo-01 crossover and Robo-02 sedan.

In 2023, the Galaxy. The automaker plans to launch seven cars, including three purely electric ones, by the end of 2024.

Geelys wants to focus strongly on chips developed in-house, its own operating systems and its own cloud computing technology. In addition, the Chinese are currently building their own satellite network to enable navigation and intelligent driving functions for the cars of the various brands. The advantage of Geely's strategy is that new vehicles, including technologically sophisticated ones, can be developed and launched on the market very quickly.