DVN-I
Automotive Interior

Thu, 10 September 2020 Weekly Newsletter **NEWSLETTER #36**

Editorial

Opportunities For Exhibitors At DVN-I Workshop

The DVN-Interior Smart Interior Conference and Expo will be held online this coming 24 September 2020, providing an ideal opportunity to delve into topics relevant to today's and tomorrow's vehicle interiors—including User Experience, Design, HMI, Lighting, Driver Assistance Systems, Audio, and many more.

The online conference will start off with three exceptional presentations from Valeo CTO Geoffrey Bouquot on Smart Technology for Smart Interiors; Faurecia CTO Christophe Aufrère on Cockpit of the Future, and one from Dave Muyres, Mobility Futurist and Streetscope VP on future mobility's challenges.

We've built a fantastic roster of presenters and lecturers, exhibitions and opportunities, and we're very excited at the opportunity to try out a bunch of new technology and techniques for virtual gathering. We think it's going to be just as big a success as every previous in-person DVN Workshop. Come join in!

One important part of the online conference will be the virtual exhibition booths you can book for the opportunity to show your innovative technologies during the online

workshop and for a week afterward while the website will stay open. **See here** for a presentation of what a virtual booth looks like. Register **here** to attend and see the conference program **here**.

The Mercedes Benz S-Class has been the industry standard luxury for decades now, and as luxury typically cascades down the market segments, it is worth an editorial effort to report its interior paving the future of the rest of the market (UX through interaction between physical and digital, displays, interior lighting, rear “cradle” airbag, rear cockpit)

As cars are more and more automated, our in-depth is addressing safety within the car interior and combination with the road itself

Enjoy reading, and looking forward to meeting you (virtually) at the conference!

Sincerely yours

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

Automotive Safety: In Car and On Road

Millions of lives are lost every year due to road traffic collisions—a figure called an outrage by the UN World Health Organization's Director-General Tedros Adhanom Ghebreyesus, speaking at the Road Safety Conference in Sweden last February: "It is an unacceptable price to pay for mobility".

According to WHO figures, approximately 1.35 million people still die in road crashes each year; on average 3,700 people lose their lives every day on the roads. An additional 20-50 million suffer non-fatal injuries, often resulting in long-term disabilities.

Swedish King Carl XVI Gustaf noted the conference was "an opportunity to link the road safety challenge to other sustainability challenges, such as climate change, health, equality, poverty and human rights", following which many countries presented their progress in road safety management and legislation to mitigate and countervail safety threats like speeding, impaired driving, and failure to use seatbelts. Infrastructure was another topic discussed, including safer sidewalks and dedicated bicycle lanes.

Vehicle safety was, as usual, split between active (crash avoidance and prevention) and passive (crash mitigation), with new improvements via the combination of both called "integrated safety". An example is using sensor technology to monitor the vehicle's environment and interior, which can assist in critical driving situations and in protecting occupants.

Crash warning is sort of somewhere in the middle, as even when relevant information is presented timely and intuitably, drivers don't always respond optimally. In fact, driver error is a factor in virtually all crashes—one reason why calling them "accidents" has fallen out of favor. According to a U.S. national survey of police-reported crashes, driver error is the final failure in the chain of events leading to more than 9 out of 10 crashes. That's why automation has been held up as a potential giant boost for safety.

To estimate how many crashes might continue to occur if self-driving cars are designed to make the same decisions about risk that humans do, researchers at IIHS (the U.S. Insurance Institute for Highway Safety) examined more than 5,000 police-reported crashes from the National Motor Vehicle Crash Causation Survey. Collected by the National Highway Traffic Safety Administration, this sample is representative of crashes in the U.S. in which at least one vehicle was towed away, and emergency medical services were called to the scene.

The IIHS team reviewed the case files and separated the driver-related factors that contributed to the crashes into 5 categories:

• Sensing and perceiving errors (23% of crashes) included things like driver distraction, impeded visibility, and failing to recognize hazards in time to avoid them.

• Incapacitation (10%) involved driver impairment by alcohol or drugs, medical conditions, or fatigue/falling asleep at the wheel.

• Predicting errors occurred when drivers misjudged a gap in traffic, incorrectly estimated how fast another vehicle was going, or made an incorrect assumption about what another road user was going to do.

• Planning and deciding errors included driving too fast or slowly for the road conditions, driving aggressively, and following too closely the vehicle ahead.

• Execution and performance errors included inadequate or incorrect evasive maneuvers, overcompensation, and other car-control mistakes.

Sensing-perceiving and incapacitation crashes, together accounting for a third of serious crashes, might be avoided if all vehicles on the road were self-driving, though it would require sensors that work perfectly and systems that never malfunction—a level of performance that has not yet been achieved and is not on the foreseeable horizon.

The remaining two-thirds might still occur unless autonomous vehicles are also specifically programmed to avoid other types of predicting, decision-making and performance errors.

Planning and deciding errors, such as speeding and illegal maneuvers, were contributing factors in about 40 percent of crashes in the study sample. The fact that deliberate decisions made by drivers can lead to crashes indicates that rider preferences might sometimes conflict with the safety priorities of autonomous vehicles.

IIHS President David Harkey says "Unfortunately, the more sophisticated and reliable automation becomes, the more difficult it is for drivers to stay focused on what the vehicle is doing. That's why systems should be designed to keep drivers actively engaged. Our analysis shows that it will be crucial for designers to prioritize safety over rider preferences if autonomous vehicles are to live up to their promise to be safer than human drivers."

Moreover, the legal framework for liability and social acceptance remains a major issue. Without a driver, it is difficult to assess liability for a crash. And aside from that, many people say they would be afraid to ride in a fully automated vehicle.

Let's take this opportunity to mention some new passive and active safety features recently introduced:

Mercedes S Class Rear Airbag

The new Mercedes S-Class has the world's first rear-seat airbags. They've been designed specifically to protect passengers during frontal impacts. Based on the photos, it appears the airbag will be built into the front seatback and will inflate into a U-shape to presumably cradle a passenger's head as they move forward during a crash —similar to Autoliv's Life Cell described by DVN-I previously. Daimler says these rear-seat airbags will work with inflatable seatbelts and will be able to adapt to child seats as well.

Mercedes S Class Pre-Safe Impulse Function

The new S Class also introduce a new integrated active and passive safety solution, the upgraded Pre-Safe Impulse Side function. This feature inflates the seat air cushions to move front passengers towards the center of the vehicle in the event of a side impact. Simultaneously, the active suspension raises the vehicle to divert the force of impact through the lower, stiffer structure of the car.

Intuitive Steering Wheel

Some steering wheels have an integrated electric motor that can vibrate the steering wheel to alert the driver to a dangerous situation. Autoliv's zForce DRIVE™ "intuitive steering wheel" is an HMI-based innovation that uses touch technology and air gesture controls to keep the driver in full control. It could also help in transitions between automated and manual driving. The infrared technology enables touch on any surface of the steering wheel.

GM Super Cruise

General Motors' Super Cruise system, available on Cadillacs, offers advanced L^2 capability—the vehicle can drive for hours on certain highways without driver engagement. It can change lanes if the driver clicks the indicator, same as systems from Tesla, BMW, and Mercedes. It uses a camera in the steering wheel to monitor the driver's head position and eye level to make sure eyes are on the road, not looking down or closed. If the system detects inadequate driver vigilance, there will be a series of escalating warnings, starting with the light bar on the steering wheel flashing green, then flashing red with audio warnings and seat vibrations. If that still doesn't get the driver to steer, a voice prompt commands the driver to take over, or else the vehicle will activate emergency braking.

IIHS says this kind of setup creates a false sense of security; they'd rather see systems designed to share control with the driver, not just warn in case of a problem. The IIHS urges automakers to escalate each alert, increase the car's following distance, pulse

the brakes, and then if there is still no response from the driver, put on the hazard flashers and get the vehicle off the road and onto the shoulder.

Dave Hodgetts, upon retiring as Honda UK's Managing Director, said "it’s like with an airplane—they are almost fully automated but, at the end of the day, you want the pilot to be in charge of the landing, just in case. That’s the approach that I think will happen with the car industry as well".

Between liability, public acceptance, optimized passive safety, and intuitive driving assistance warnings, there’s still a lot of development in front of us to get to full safe autonomy.

Interior News

Gentherm ClimateSense For Thermal Comfort

INTERIOR NEWS

Gentherm, based in Northville, Michigan, and formerly known as Amerigon, have partnered with ThermoAnalytics in nearby Novi, Michigan to develop advanced software to improve human thermal comfort predictions. They're modeling the human body in the cabin of the vehicle to increase the number of body parts measured, and to include the effects of moisture on human comfort. This is the first time software will be able to predict comfort and discomfort caused by sweat from the human body.

These new software capabilities enable Gentherm to improve the personalized thermal comfort experience provided through the company's Climate Control Seat and future ClimateSense solutions.

ClimateSense™ is Gentherm's microclimate thermal comfort system comprising advanced thermal delivery methods, integrated electronics, embedded software, and a thermophysiology-based control algorithm. It uses localized convective and conductive heating and cooling, plus radiative heating, to create personalized comfort while substantially reducing energy consumption.

ClimateSense delivered up to 69% energy savings in cold-weather testing (-7 °C), up to 85% energy savings at moderate 4 °C cool weather testing, and 34% energy savings in hot weather testing (25 °C with 850 W/m^2 sun load), when compared to the existing central HVAC system of a Chevrolet Bolt EV—all results were based on two occupants in the vehicle.

The new ClimateSense technology was commercialized recently by Lear in their INTU™ thermal comfort seating.

HiPhi X Touchless Door System

INTERIOR NEWS

Human Horizons is a Chinese company based in Shanghai, founded in August 2017, that makes electric cars and develops autonomous driving technology. They operates their production and assembly plant in Yancheng, Jiangsu Province.

Human Horizons' HiPhi X all-electric car model, to be launched at the 2020 Beijing Auto Show, is the first application of the company's touchless NT Door system.

There are no door handles or mechanical lock cylinders. With six electronically-managed doorways, the NT Door system comprises impartial management modules. With the 360° clever sensing system, the HiPhi X can detect people or objects in the path of the doorways and regulate the opening angle accordingly.

Customers can enter by way of facial recognition, a key, a smartphone ID, or remotely with the HiPhi app.

The X itself is positioned and described as a self-learning, supercar-inspired SUV, adopting the world's first Human Oriented Structure (HOA) enabling a safe, developer-open software program platform. HOA includes of 6 "tremendous mind" area controllers, related by 1G Ethernet, over 500 sensors, and a 5G-V2X expertise community. The HOA will enable over-the-air (OTA) updates for improved or further management of all digital options from car efficiency to seat management and UX interfaces.

Magna Seats are Tops for Quality: J.D. Power

INTERIOR NEWS

According to the J.D. Power 2020 U.S. **Seat Quality and Satisfaction Study**, Magna International finished an industry-leading first in three of seven categories, and second in a fourth. Lear and Bridgewater Interiors each won two categories.

Magna ranked first in the mass-market compact SUV segment for its seats in the Chevrolet Equinox; first in the luxury car division for seating in the BMW Z4; and topped the luxury SUV category with their seats in the BMW X6. Their seating in the Ford Edge finished second behind Bridgewater's Honda Pilot seats in the mass-market midsize/large SUV category.

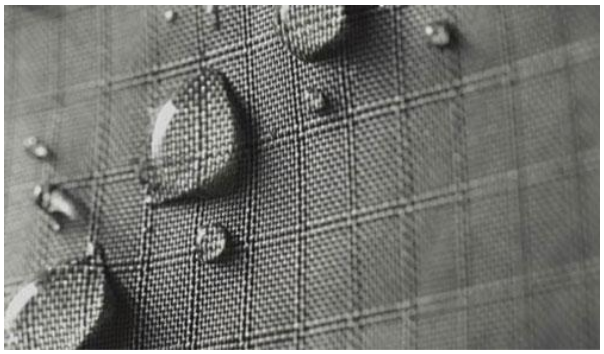
The 2020 U.S. Seat Quality and Satisfaction Study is based on responses from 87,282 purchasers and lessees of new 2020 model-year vehicles who were surveyed after 90 days of ownership from February through May 2020. Seat quality is measured by the number of problems experienced per 100 vehicles during the first 90 days of ownership, with a lower number reflecting higher quality.

From a car brand perspective, Chevrolet and BMW were leaders in the study.

Guilford Textiles by Lear Inhibits Bacteria Growth

INTERIOR NEWS

Guilford Performance Textiles—founded in 1946 and part of Lear Corporation since 2012—develops and produces interior solutions that include body cloth, headliner and specialty applications, including warp knits, wovens, double-needle bar fabrics, lamination, composites, and bi-laminate constructions.



With the pandemic accelerating already-increasing consumer demand for hygienically clean surfaces, Guilford's TeXstyle Defense is a layered system that can be customized to include anti-odor, anti-static, anti-dust, stain release, and stain repellance performance. The portfolio also includes TeXstyle Enhance offering design embellishments including embossing, printing, laser etching, embroidery, and sonic welding. TeXstyle Tough offers styling range, seat craftsmanship, and product longevity specially designed for wear areas. And then there's TeXstyle Lite for cost optimization through yarn selection, technical construction design, and coating chemistries.

LG is GM's Innovator of the Year for 3D Display

INTERIOR NEWS

THE 38" CURVED OLED DISPLAY IN THE 2021 CADILLAC ESCALADE.

General Motors has named LG Electronics an Innovator of the Year for the supplier's contribution of the OLED display screen for the 2021 Cadillac Escalade. It has more than 38" diagonal of total display and double the pixel density of a 4K television, producing bold images, perfect blacks, and the largest color range available in the automotive industry.

It's a system made of 3 screens: a 7.2"-diagonal touch control panel driver information center to the driver's left, a 14.2"-diagonal cluster display behind the steering wheel, and a 16.9"-diagonal Infotainment screen to the driver's right. The OLED's curvature positions these displays for optimal visibility by the driver.

OLED technology eliminates the need for overhanging hood at the top of the dashboard, as vivid color and visual quality will be not spoiled by ambient or extraneous lights. The new curved OLED display is the centerpiece of the interior, enabling designers to integrate and customize the entire environment, rather than simply inserting a standard rectangular screen into a conventional instrument panel.

2021 CADILLAC ESCALADE DASHBOARD

This year, more than 100 companies from 15 countries were recognized as top GM suppliers with only five suppliers receiving the prestigious Innovation Award. Since 2015, LG Electronics has supplied 11 components for the Chevrolet Bolt EV, including infotainment systems, instrument clusters and driving components.

Subaru Eyesight Scans for Hazards

INTERIOR NEWS

Subaru has partnered with Silicon Valley tech company Xilinx—who make flexible and adaptive processing platforms—to enhance the automaker's EyeSight safety system with new features that will first launch in the Japanese market.

EyeSight, a stereo vision-based advanced driver-assistance and safety system, will be powered by Xilinx's UltraScale multiprocessor system-on-chip. This provides the power to process the stereo images into 3D point clouds with ultra-low latency.

Subaru's EyeSight system has two outward-facing interior cameras placed toward the top of the windshield, above the rearview mirror, that scan the road ahead for objects, including vehicles and pedestrians. Introduced in 2012, it includes adaptive cruise control, pre-collision braking, pre-collision throttle management, lane-departure and sway warning, lane-departure prevention and lead-vehicle start alert, which tells the driver that the vehicle stopped ahead has resumed moving. A **video posted** on Xilinx's website describes the newest EyeSight upgrades.

Other Xilinx customers include the likes of Daimler, Continental, Magna and Veoneer, as well as startups like Pony.ai.

New Mercedes S-Class Interior Functions and Lighting

INTERIOR NEWS

IMAGE: MERCEDES

The new Mercedes S-Class has an interior wherein shapes are emphasized horizontally, accentuated with modern technology and screens that do not rely on total reduction, but on a proud representation of what is technically possible.

The instrument panel presents its messages in 3D graphics if desired, and the head-up display projects information directly onto the road and thus in the driver's field of vision. The virtual reality head-up display merges the assistance systems and navigation content practically with the area in front of the vehicle. Blue arrows running along support you when changing lanes at intersections and before turning. The huge touchscreen in the center console controls the complex operations in combination with the steering wheel buttons. There are up to five screens, OLED displays and the three-dimensional screen, which varies the display depending on the position of the driver's eyes. This 3-D effect is just as stunning as the huge head-up display—one of two available. It is dimensioned so expansively that it offers a real augmented-reality experience.

Mercedes has deleted 27 individual elements and thus clearly detoxified the cockpit. But it feels like a thousand new functions are included! Some of them can be assigned to MBUX voice control.

The S-Class pays tolls or parking fees ad hoc online using a fingerprint scanner. The driver and the vehicle environment are constantly monitored. It assigns voice commands ("Massage, please") to specific seats, and it can import various instrument graphics from sporty digital to classic analogue. The seat belt buckles can be illuminated if desired, slim airbags are embedded in the belts themselves, and the rear passengers enjoy additional protection in the form of inflatable impact bags (described elsewhere in this issue of DVN-I) in addition to the side airbags. The rear blind lowers automatically when the driver turns his head. The emergency braking function prevents parking bumps in reverse. A Burmester (Berlin based manufacturer of high-end audio components, founded in 1977 by Dieter Burmester, an Austrian-born musician and engineer) Hi-Fi system with 30 loudspeakers creates what's being called 4D sound. The sound waves are amplified by vibration using eight so-called “exciters” in the seat, which significantly increases the listening experience.

IMAGE: MERCEDES

The ambient lighting has 250 LED light sources. The contour lighting in the instrument and door panels form a continuous line as brand identifier of the S-Class interior. The contour lighting below the overhead and the center console and below decor trims and armrests create floating effects of the components and amplify the styling language of the interior. The illuminated loudspeaker grills underline their claim for high quality. The dynamic ambient lighting in the door panels is flickering as soon as traffic approaches from behind when getting out.

IMAGE: MERCEDES

The car can memorize five different driver profiles and can drive autonomously at L^3, with L^4 autonomy said to be very close!

The Design Lounge

2021 Mercedes S-Class: New Luxury for the Digital Age

THE DESIGN LOUNGE

Regarding interior design, the S-Class Mercedes has focused on a new direction that highlights the UX/HMI (Mercedes MBUX, using 5 displays and an extended HUD), materials such as glass (displays), wood (instrument panel) and floating elements (with lighting) that showcase their superb craftsmanship while also including their typical comfort expertise.

Mercedes-Benz's Head of Design explains it in **this video**, with interior discussion starting at 2:30.

2021 Mercedes S-Class exterior has the traditional rear wheel drive proportion but is very restrained aesthetically

Contrasting the exterior design direction is new interior design direction for the S-Class and Mercedes.

A full width wraparound gloss wood panel that reminisces old wooden powerboats (ie. Riva) has now become Mercedes' main design element, displacing ‘real wood’ trim inserts used previously.

By using wooden element (with aluminum inlays) and the large high resolution glass displays, a strong ‘hard touch’ feel replaces the ‘soft touch’ direction used previously by Mercedes and other luxury brands.

Ambient lighting is also incorporated to highlight these floating hard elements such as the displays, form the softer leather covered surfaces.

This is used to such an extent that even the door pulls and seat controls are offset from their base surface and highlighted with lighting. This aligns with Mercedes new emphasis on the user experience with their UX/HMI.

Extending to the rear occupants, two variations are presented. The individual ‘business class’ seating…

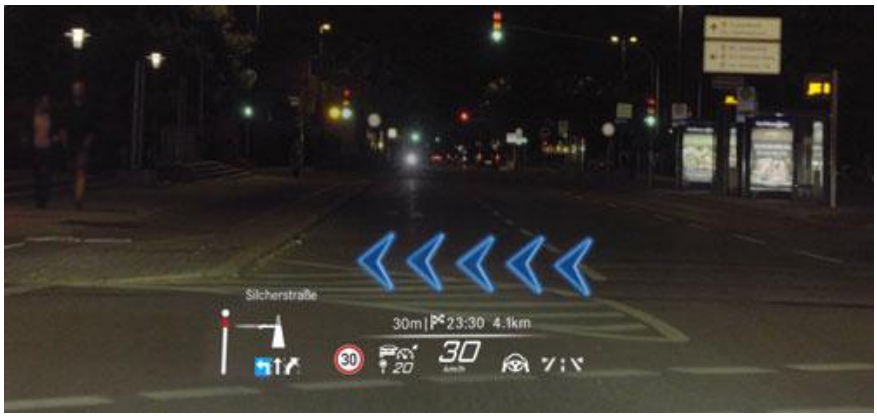
…and a three across bench version. Notice the wood inlays and floating displays on the back of the front seats that creates ‘mini cockpits’ for the rear occupants.

This ‘business class’ environment creates a plush cocoon for the rear occupants that also integrates heated, pillowy head restraints.

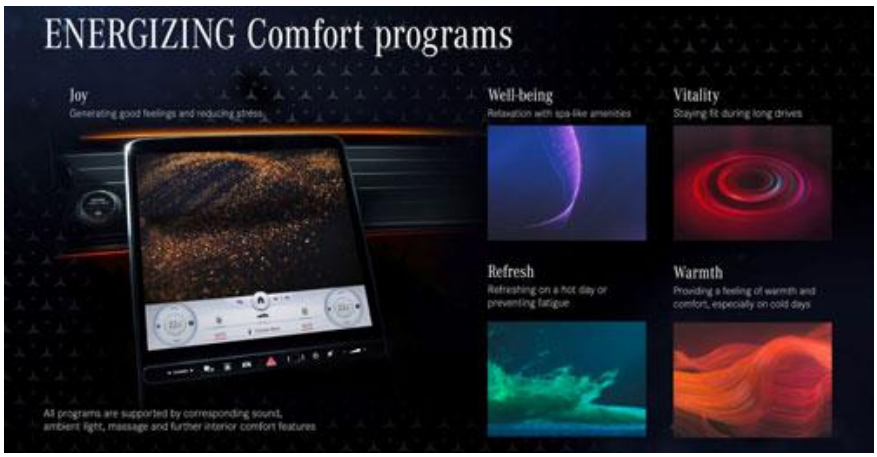
The bench type rear sets offer a more open, spacious environment while also retaining these new ‘mini cockpits’ for the rear occupants.

Mercedes has highlighted the driving and vehicle experience by not only using the highest quality materials but also integrating them with an UX/HMI interaction the goes beyond the latest touch screens and tablets. Incorporating ultra-high-resolution displays for both front and rear passengers with an augmented reality HUD, this S-Class has integrated digital comfort with physical comfort.

Luxury and wellbeing features of the S-Class are described by Mercedes **online here**.

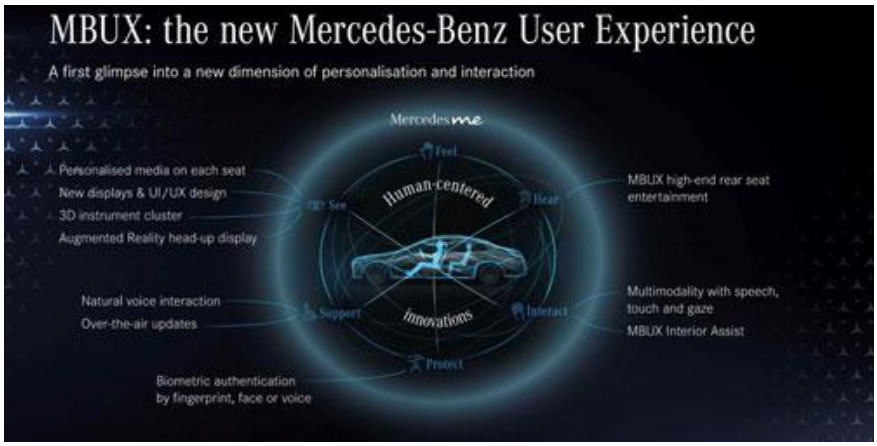


2021 S-Class HUD using augmented reality for navigation sets a new industry standard.



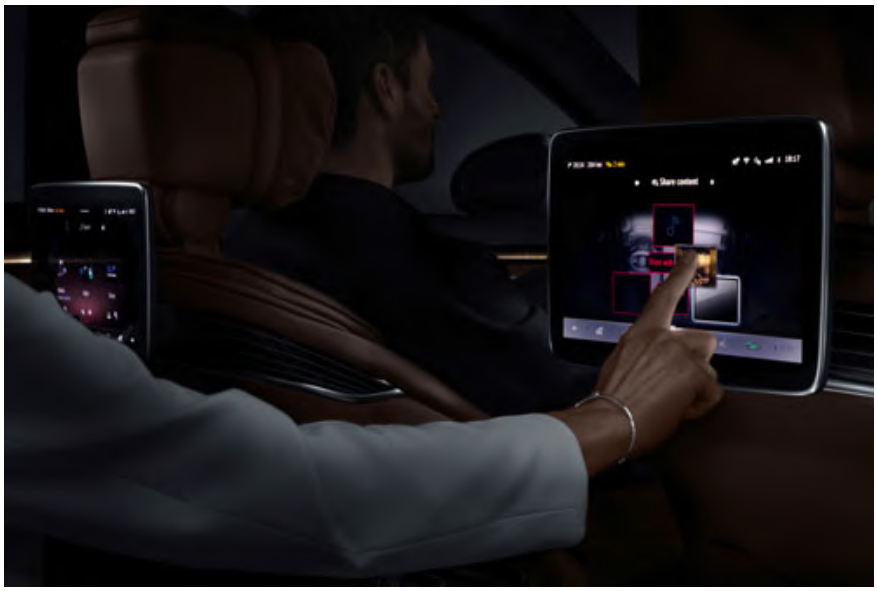
Comfort driving modes are visualized with a new 3D effect cluster display.

My MBUX upgrades are described in another online **video here**.



The large central display flows into the center console while also highlighted with ambient and contour lighting.

The large high-resolution display is not only integrated physically with the center console but also…



… digitally with the rear displays allowing digital interaction between the occupants.

This interaction between the physical luxury environment and the digital environment defines the new S-Class experience.

News Mobility

_Trajectories of Our Mobile Signature

NEWS MOBILITY

A look at our mobility-centric culture by designer Industrious_

5. Global trend

Mobile trends were raised for decades on the narrative of the wheel as the dominant form and symbol of mobility. Any size, diameter or layout of wheels and tires, from 1" roller to 29" fixed gear-bike wheels, biased the pandemic evolution of all types of mobility. On the dawn of 21stC, a new nomadic enigma created its own spatial expression and legacy; even though surroundings did not change, movement went beyond flat grounds and smooth linear sweeps. Motion was reinvented to trespass walls, gates, staircases and all obstacles that wheels could not properly deal with. This new, modern and disobedient swing was founded on the ultimate source of mobility, the human body; traction was reassured by the most personal and basic apparel unit: a pair of shoes.

Following the mid 90's, globalization unfolded to its million facets through digital technology thus, new trends took rapidly world-class magnitude. The complex pallet of all known trajectories, with instant intercultural exchange, enriched and gained everywhere its own local version. From the suburbs of Paris to the study of African tribal moves, mixed with Asian martial arts, the new trend performed in the most complex of environments. Composed on urban choreographies, putting together trajectories from diverse and unforeseen practices and latitudes, 'parkour' or 'free-run' is the fluid act of moving in urban obstacle course. Exceeding all limitations on the form

of moves and expression of positive thinking, it has been suggested that practitioners of free-running will sometimes fall, largely because they think they might. *(Declan Saldana, Jan 2012, Parkour Legends: Daniel Ilabaca).*

The undisciplined new urban behavior soon triumphed in city districts, any district, the global district. ‘It is about relearning something we forgot and not about pushing limits. It is the animal-kind relationship to the environment. It is not about the goal but about the journey. Finally, it is the fluid connection of all kinetic segments and the challenge is, keeping the flow'. *(Ft.Sebastian Foucan, The Making of Casino Royale-Parkour Chase)*. The new element is the perception of surrounding space through this specific path of motion and soon enough its digital version gave birth to highly performing game platforms around the globe. Free-runners can improvise their own moves, flows and lines in different landscapes. It is all about being creative in an objective environment by adding acrobatic and stylish moves, showcasing the art of movement. Suddenly, after over a century of industrial culture and mechanical motion, we witnessed the grandeur of human body, exploiting all dynamic dimensions through urban passages. It was a little bit like BMX without the bike.

Free-runners were in a way, predecessor of the upcoming global shift; humans declared officially ‘Urban’ in 2007 (UN) and ‘Urban mobility’ became a proper term, boosted by flow and density towards metropoles, where more people were prospected to live for the years to come. With their ever-multiplying broadcasts, they modeled the apotheosis of urban self and local landmarks became global labels.

_to be continued

INDUSTRIOUS_____

Bedrock, Bosch, Ford Explore Valet Parking

NEWS MOBILITY

Ford, Bedrock (Real Estate), and Bosch are launching a demonstration project with connected Ford Escape test vehicles that can drive and park themselves inside Bedrock's Assembly Garage in Detroit using Bosch smart infrastructure. This is a first infrastructure-based project of its kind in the U.S.

The research will take place in the Corktown neighborhood, the site of Ford's new mobility innovation district. This district will draw mobility innovators from around the world to develop, test, and launch new solutions to solve urban transportation challenges, improve mobility access for everyone and prepare for the increasingly connected and autonomous world ahead of us.

The intelligent parking infrastructure communicates with Ford Escapes equipped with vehicle-to-infrastructure (V2I) communications technology. It is using Ford Co-Pilot360 driver-assist technologies, which provides awareness of the car surroundings with optimum on-board computing to help improve design, packaging and affordability. The parkade's sensors recognize vehicles, pedestrians and other hazards, and uses this information to guide the Escape to an open parking spot.

While the system is configured for a demonstration basis, the technology would allow people to pull up to a parkade, exit the vehicle, and use their smartphone to tell the car to park itself. When the owner is ready to leave, they'd walk to a designated pick-up area and tell their vehicle to come get them; the vehicle and the parkade would once again cooperate to bring the car safely out of its space and over to the waiting driver.

The primary main objective, from a business-case standpoint, is to make parkades more efficient; they can accommodate up to 20 percent more vehicles in the same amount of space, and could be equipped to offer automated services such as car wash or charging stations—new revenue streams for parkade operators to cover technical investments.

Hyundai Eco-Friendly Car at Berlin IFA 2020

NEWS MOBILITY

HYUNDAI HYDROGEN WORLD, CENTURY SQUARE IN SHANGHAI,

Hyundai participated for their first time in the IFA 2020 exhibition in Berlin, demonstrating their brand vision based on eco-friendly vehicle technology. The automaker, pushing to shift from a traditional car manufacturer to a smart mobility company, aims to strengthen their leadership in eco-friendly mobility technology in the European market where demand for eco-friendly cars such as hydrogen and electric vehicles is rapidly increasing due to strict environmental regulations.

This year, the event was held both online and offline due to the coronavirus. Hyundai participated in the online sector, and held a discussion on the potential of hydrogen fuel cell technology at the digital-only event “IFA Extended Space Special” under the theme “Open the way to future fuel, hydrogen society".

Participants in the discussion shared their views on the hydrogen charging infrastructure in Europe, the importance of building a renewable hydrogen supply chain, hydrogen energy transport and storage solutions and the European Union’s vision to accelerate the introduction of hydrogen mobility.

Hyundai also introduced their vision to transform themselves into a smart mobility company and unveiled their strategy for Ioniq, a pure-EV car brand on an electric global modular platform (E-GMP).

General News

Beijing Show This Month With Safety Protocols

GENERAL NEWS

BEIJING AUTOSHOW 2018

The Beijing auto show, postponed from April due to the coronavirus, is set to begin late this month in the Chinese capital.

The event, the country's biggest auto show, will run from 26 September through 5 October, with media previews on 26-27 September.

The schedule was first announced by the council on 3 April after the viral outbreak was largely brought under control in mid-March in China. Organizers expect strong presence of EVs—for example, the new SAIC Maxus T60 and D60, the HiPhi X, and many LCVs, because of provincial governments' lavish cash grants for infrastructure projects and for small businesses to invest in new vans.

Organizers of the Beijing auto show said various measures will be implemented to ensure the safety of show participants and visitors, though it's unclear if capacity at the indoor event will be limited.

The biannual auto shows in Beijing and Shanghai are the most important auto exhibitions in China, with the Beijing auto show organized on an even year and the

Shanghai show held on an odd year.

In the meantime, the Los Angeles Auto Show 2020 has been rescheduled to May of 2021.

Hella Considering Software Unit Sale

GENERAL NEWS

German supplier Hella might be planning a sale of their driver-assistance software unit.

The Hella Aglaia Mobile Vision unit makes embedded software systems used for assisted driving functions as well as self-driving cars. Their image-processing programs can detect oncoming vehicles, recognize traffic signs as well as lane markers and sense other objects around a car.

Unlike products from larger competitors like Mobileye, which sell integrated solutions with hardware and software packaged together, Aglaia's software is designed to be paired with chips, cameras, and sensors made by other vendors.

Volkswagen Group announced last year they will cooperate with Ford on electric and self-driving car technology. VW said in June they completed their investment in Ford's autonomous-car partner Argo AI LLC, adding their Autonomous Intelligent Driving unit into the business.

As previously reported in DVN-I, Hyundai and Aptiv created a joint venture named Motional to develop driverless systems for robotaxi network operators. The market is seeing a lot of movement around software, where a lot of the automotive value is headed. Bosch integrated all software into a single unit; Hyundai Mobis made strong investments, and otherwise like that.

GM, Honda in North American Pact

GENERAL NEWS

GM and Honda have signed a MoU to form a North American automotive alliance that may include a range of vehicles sold under both brands and facilitate cooperation in purchasing, R&D, and platforms.

Under the nonbinding agreement, co-development of common platforms, including for electrified and internal combustion vehicles, will begin early next year. Honda have been gradually expanding their coöperation with GM in recent years.

GM President Mark Reuss says "This alliance will help both companies accelerate investment in future mobility innovation by freeing up additional resources. Given our strong track record of collaboration, the companies would realize significant synergies in the development of today's vehicle portfolio".

Honda representative Koji Watanabe said the pact "does not entail a capital alliance or purchase of shares. The objective is to raise the efficiency of operations in North America and a capital tie-up was not deemed necessary to achieve that".

Under the proposed alliance, Honda and GM would collaborate on a variety of segments for the key North American market. The companies will also coordinate on new technologies, vehicle platforms, connectivity, propulsion systems, joint purchasing and manufacturing

The two companies announced an agreement that will entail the companies sharing basic vehicle designs to be sold under their respective brands. With this new alliance, GM and Honda will work together to develop a range of electric and petroleum-powered vehicles. This means the car companies will use the same machinery and physical structures for their various models of EVs.

The Honda and GM electric car alliance isn't the first of its kind. In 2019, Toyota and Subaru, followed by Ford and Volkswagen, announced team-ups on self-driving and electric cars.

The alliance between Honda and GM builds on an announcement from April, when GM said they had signed an agreement to develop the basic underpinnings of two electric vehicles for Honda, using GM's in-house "Ultium" battery technology. Under that agreement, Honda will still be creating the exterior and interior designs of the cars that could result.

It's not GM's first time cooperating with a Japanese automaker; from 1984 to 2010 GM and Toyota co-produced cars at their NUMMI plant in Fremont, California—later taken over by Tesla to become their pilot plant.