DrivingVisionNews.com
Automotive lighting and driver assistance technologies

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Editorial

Thank You, Geoff—Have A Great Retirement!

When Geoff Draper informed me about his decision to leave the GTB presidency to relax and enjoy time with his wife Ann and their family, at first I didn't believe him—like me, he loves vehicle lighting and I just couldn't imagine him getting off the lighting community's boat. But it's really true.

Geoff, all the lighting community is sad to see you go, and astonished that vehicle lighting regulation's dean, the GTB President of over a decade's time is hanging it up. You've brought such animated passion to the DVN Workshops, and it's hard to accept your departure just when the boring regulation sessions were becoming pleasant things to anticpate eagerly. Be proud, good sir, of your crowning achievement, shepherding the massive rebuild of the UN Regulations on vehicle lighting to successful fruition.

After a long career in product design, manufacturing, project management, marketing, and senior management at Lucas, Carello, Magneti Marelli, and Koito, Geoff Draper became President of GTB in 2009. With the strong support of his colleagues of the General Assembly and Administrative Committee, he has successfully completed the restructuring of GTB. This will ensure that GTB continues to remain relevant as the unique NGO capable of bringing together all stakeholders of our global lighting community.

He will continue in his role as GTB President, including chair of the Administrative Committee, until the end of this year, but intends to stop all his professionnal activities by 31 May 2020, just after the DVN Tokyo Workshop. This week we bring you his report concerning the GTB meeting held this month in Den Haag, Netherlands.

Sincerely yours,

DVN President

In Depth Lighting Technology

GTB Meeting: Den Haag

Special to DVN by Geoff Draper – GTB President

Geoff Draper (front, centre) with GTB Expert Team in Seoul, December 2019

The GTB working rhythm consists of two plenary sessions per year in May and November and two intermediate working group sessions in February and July. This intermediate session, held at the Den Haag Central Mercure Hotel on 17–21 February, was attended by 35 experts.

GTB
The International Automotive Lighting and Light Signalling Expert Group

The programme for the week was as follows:
- 17 February:
Technical Steering Committee

-18 February:
Forum: "Global NCAP for Adaptive Lighting Systems"
GTB Vehicle Level Laboratory Test Procedure Task Force
GTB Task Force ADAS Sensors

- 19 February:
GTB WG Installation
GTB WG Safety and Visual Performance (GTB Scientific Group)

- 20 February:
GTB WG Front Lighting
GTB WG Signal Lighting & Focus Group ADS Lighting

- 21 February:
GTB WG Light Sources

Forum: "Global NCAP for Adaptive Lighting Systems" (Moderator: Geoff Draper)

The GTB Forum has become an annual event to select a significant topic to be discussed in depth over a period of five hours and it normally involves specially invited experts to present their activities and viewpoints, followed by an active discussion.

This year the subject of "Global NCAP for Adaptive Lighting Systems" was chosen because of growing interest in extending the work carried out by CIE TC4-45 to develop a laboratory method of assessment of headlamp performance. The work of TC4-45 resulted in the publication of the CIE Report CIE 188:2010 and Standard CIE S-021-2011, but it did not include a performance rating system and it did not take account of adaptive systems.

At the 2019 ISAL symposium in Darmstadt there were references to the imminent launch of a China NCAP assessment for vehicle lighting and to the initiatives in the USA.

The Forum consisted of five presentations:

1. Launch of a Lighting Assessment for C-NCAP

Zhao Bin, Deputy General Manager of CATARC Europe Testing and Certification

Zhao Bin explained that CATARC had been commissioned by the Chinese Government to develop a draft lighting assessment protocol for C-NCAP and has based the procedure on the CIE Standard S-021-2011. Some changes to the detail of the CIE Standard have been introduced to take account of the geometry of the Chinese roads, and a rating system has been introduced. No detailed assessment of the performance of ADB has been included but additional points in the rating system are attributed to the installation of ADB. The C-NCAP protocol was introduced in January 2020 and is now in an assessment phase with formal launch expected in 2021.

2. Development of Lighting Assessment Protocols in the USA

Michael Larsen, Technical Fellow – Lighting, General Motors

Mike Larsen provided a very comprehensive overview of the various assessment procedures of the Insurance Institute for Highway Safety (IIHS) and Consumer Reports and compared their testing methodology and results. The main issue relates to the question of whether the vehicle should be assessed in "as delivered" condition where the headlamp aim becomes a variable factor, or whether the headlamps should be aimed correctly prior to conducting the performance evaluation.

With regard to an NCAP protocol for vehicle lighting, NHTSA has been working on a proposal that is not finalised and, in response, SAE has a task force that has proposed

an alternative approach.

A further factor concerning the approach to headlamp performance testing relates to the NHTSA Notice of Proposed Rulemaking (NPRM) for ADB with its performance assessment mainly concerning glare measurements carried outside on a test track representing a series of road geometries. Currently NHTSA are working on a revision of the NPRM and industry is awaiting its publication.

3. Vehicle - Based Laboratory Testing

Choi Hang Kyu, Principal Research Engineer, Mobis Korea

In July 2019, Choi Hang Kyu presented his work to the GTB taskforce on Vehicle Level Laboratory-based Test Procedure (VLLTP). He is developing a procedure for the photometric performance assessment of a complete lighting system installed on a vehicle, using the recently constructed light tunnel—250 m long and 30 m wide—at the Mobis proving grounds. In addition to its ability to fully assess the beam distribution of the complete vehicle lighting system, the tunnel also has an LED based screen where video of actual road geometries and opposing vehicle scenarios can be presented to vehicles installed with ADB systems to assess their response and measure the glare to the oncoming driver. Choi Hang Kyu presented his latest research to refine the glare assessment method and he is actively contributing to the work of the VLLTP taskforce.

4. History of GTB Involvement in EuroNCAP

Rainer Neumann, VP of Global Technology, Varroc Lighting Systems and GTB WG-SVP Chair.

Rainer Neumann provided an overview of the previous GTB EuroNCAP taskforce that was launched in July 2003 following the decision of EuroNCAP to study the feasibility of including a protocol to rate vehicle lighting. The GTB taskforce was invited to join the EuroNCAP subgroup and a draft mandate to regularly report progress on the development of a lighting assessment protocol was agreed.

The GTB Taskforce held 21 meetings held between August 2003 and October 2005 including 3 validation test events (at Renault, Hella and IDIADA) and Geoff Draper (GTB EuroNCAP T/F Chair) participated in 17 meetings of the EuroNCAP sub-committee and the Technical Committee between September 2003 and September 2005. In January 2005, The EuroNCAP Technical Committee decided not to continue unless a clear justification from accident causation studies could be provided but GTB decided to continue to finalise its proposal.

In 2005 GTB decided to move its activity into CIE TC-4-45 to produce a CIE Standard. In total, 17 meetings of the Joint GTB/CIE TC4-45 were held from December 2005 to September 2010 including two validation events (at Koito Leuven and Fiat Balocco). In total 71 Experts contributed and the CIE report 188:2010 and CIE S-021 Standard were published in 2010 and 2011 respectively. The result was the internationally recognised CIE Standard but there was no attempt to define a rating system and the procedure does not cover adaptive systems.

In 2019, under the chairmanship of Gert Langhammer, CIE TC4-45 attempted to extend the procedure to include adaptive systems but due to lack of interest from industry it was not possible to make progress and CIE decided to close TC4-45 in June 2019.

The discussion at ISAL2019 with regard to renewed interest in NCAP protocols for headlighting, and particular ADB, induced Prof. Khanh of Darmstadt University to

convene a group of 27 interested experts to meet with the intention of developing a proposal to rate ADB systems. At a meeting on 30 January a proposal was drafted. The outcome was presented in the following presentation from Gert Langhammer.

5. Including ADB Functionality into the CIE-TC4-45 Assessment Procedure

Gert Langhammer, International Legislation Affairs, Automotive Lighting – Marelli

Gert Langhammer provided a detailed summary of the development of the proposal to include ADB functionality into the CIE-TC4-45 assessment procedure. This work, mainly carried out by Automotive Lighting-Marelli and Audi, was initially presented by Gert Langhammer at ISAL 2019. ADB systems were assessed according to the extended CIE procedure and a rating system was developed. The outcome of the work was then presented to the 27 experts and accepted at the meeting on 30 January in Darmstadt.

Conclusion of the Forum "Global NCAP for Adaptive Lighting Systems"

Following a Q&A session and discussion of the outcomes of the presentations, it was decided to transfer the draft proposal, developed by the "Darmstadt Group" and presented by Gert Langhammer, into a GTB taskforce. The possibility to re-open CIE TC4-45 was considered but it was concluded that it would be preferable to use the GTB umbrella to quickly finalise the "Darmstadt Proposal" and to publish it freely on the GTB website as a GTB Recommended Practice. This GTB document would be publicly available to anyone by accessing the GTB website and downloading the proposal free of charge, in order to make it widely available to the global lighting family. The possibility of also presenting the draft protocol to GRE will be considered at the GTB meeting in May 2020.

A proposal to incorporate the NCAP Task force into the GTB SVP working Group, chaired by Rainer Neumann with Gert Langhammer as secretary, will be formally considered by GTB in May 2020. However, in the meantime the task force will meet with the objective of starting to develop a GTB consensus for the details of the test methods and the rating system.

Outcome of the other GTB Working Group Meetings in Den Haag

GTB Vehicle Level Laboratory Test Procedure Task Force

The progress of the task force, launched in February 2019, was summarised by its secretary, Thomas Reiners. The task force has developed a proposal for the methodology of a laboratory test of the ADB system installed onto a vehicle, based upon real recorded data of road scenes from the camera and other sensors. The next task is to develop a written test method and then to decide how this can be validated. The objective is to have a first draft available by the end of 2020.

GTB will consider the draft terms of reference of the taskforce in May 2020 and will also confirm the task force officers. Geoff Draper is currently acting as chairman but has invited a volunteer, preferably from a vehicle manufacturer, to take over the chair and work with Thomas Reiners as secretary.

GTB Task Force ADAS Sensors

This is a new task force that will investigate the requirements for installing ADAS sensors inside the lighting devices where a controlled operating environment can be

assured. The study will include the requirements for cleaning systems to ensure the required performance of the sensors is maintained.
The terms of reference and officers of this task force will be confirmed at the GTB meeting in May 2020 but initially, Eric Blusseau of Valeo has volunteered to take the lead.

GTB SVP Working Group

The SVP group reviewed the outcome of the research programmes sponsored by the GTB Strategy Group and received a presentation by Dr Roth and Mr. Studeny of VW on their ideas for supporting drivers with the help of road projections. These projections concern "optical lane assist", "optical crossing assist", and "optical lane departure warning". Communication to other road users is improved with the help of ambient road projections (direction indicator and hazard warning projections on the road, door opening indication, park assist, etc). After the meeting a shuttle service was organised to take all interested experts to a VW dealer in The Hague where Dr Roth and Mr Studeny showed a car with prototype signalling lamps that were able to project:

• Amber symbols for supporting the information given by direction indicators at all 4 edges of the car

• Shapes in white or red to the rear to indicate parking/de-parking situations to other road users and to support the driver with some additional information when driving rearwards.

VW are carrying out studies to demonstrate that such projections can help to increase traffic safety.

Other GTB Working Group Activities

Regarding the GTB Working Groups focussed on Installation, Front Lighting, Signal Lighting and Light Sources, the major priority is to complete the tasks associated with the delivery of Stage 2 simplification to GRE for its April 2020 session. This work is under the umbrella of the GRE SLR (Simplification of the Lighting Regulations) Informal group who are holding their 37th session in Brussels right now (2–5 March).

Future GTB Sessions

- 11-15 May 2020: GTB 129th session – Tallinn (Estonia)
- July 2020: GTB Intermediate WG Meeting session – Date and venue to be finalised
- 16-20 November 2020: GTB 130th session – Germany (venue to be finalised)
- February 2021: GTB Intermediate WG Meeting session – Date and venue to be finalised
- May 2021: GTB 131st session – Hungary

See the new GTB website at **www.gtb-lighting.org**

Lighting News

Peugeot 208 Elected Car of the Year

The 90th edition of the GIMS, which was supposed to welcome the media from yesterday Monday, will finally not take place.

Despite the cancellation of the Geneva International Motor Show, the organizers have decided to broadcast the Car of the Year award ceremony. The award was presented by Frank Janssen, President of the Jury and car journalist from the German magazine Stern.

Seven candidates were part of the list of nominees for the Car of the Year 2020:
BMW 1 Series, Ford Puma, Peugeot 208, Porsche Taycan, Renault Clio, Tesla Model 3, Toyota Corolla

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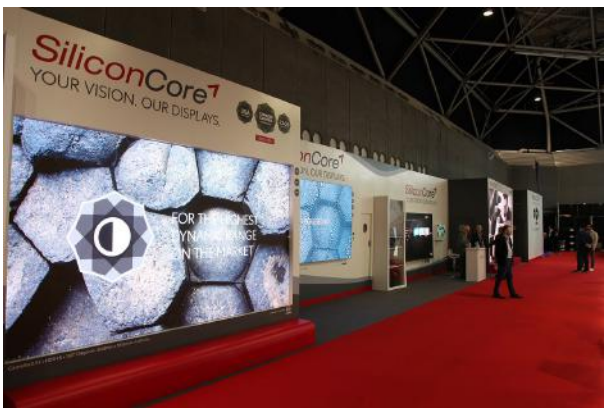
The small Peugeot, which offers a full-electric version, collected 281 points and 17 individual top votes.
With 242 points, Tesla Model 3 was second, while the last place in the podium was also for an EV, the Porsche Taycan, with 222 points.
The rest of the finalists for the award were the Renault Clio (211 points), Ford Puma (209), Toyota Corolla (152) and BMW 1-series (133).

Driving Vision News will take the opportunity of showing all the interesting world and European premiere through a report next week.

SiliconCore's 0.83mm µLED at ISE



SiliconCore showed their Lotus 0.83mm technology with a µLED display at ISE 2020. The µLED display, they say, is three times as bright and 50% more power-efficient.

SiliconCore say their new display features the lowest power consumption, highest brightness, and lowest operating temperatures. The Lotus 0.83mm LED display has a brightness of 2000 nits. It features SiliconCore's latest innovation, called LISA: a proprietary encapsulation process that guards the high density LEDs and ensures colour uniformity and a long lifetime. Its cool surface is dust- and water-resistant, which makes it durable and suitable for touch and custom installations. The specialised optical coating does not obscure the visual properties of the LEDs, and improves the contrast ratio to provide a more realistic image without glare.

SiliconCore CEO Eric Li says the new display "is a huge achievement for the SiliconCore innovation teams and delivers a viable and cooler high resolution LED display to the market (…) we are also open to licensing our technologies so that we can work with the best in the industry to push the boundaries of this technology".

ZKW's Revenue Report

The ZKW Group's revenue was maintained at a high level of €1.25bn despite the difficult conditions in the international automotive industry. At the end of the year, the ZKW Group employed around 10,000 people at 10 locations in eight countries.

The plant in Silao, Mexico will be expanded with 19,000 m^2 of new production space by the end of this year, and there are plans to double the staffing level by 2023. High-quality headlamps for premium car manufacturers such as BMW, Daimler, Ford, GM, Navistar, Nissan, VW, and Volvo are produced there. ZKW are investing a total of €67m at the site. The current area of the ZKW plant in Silao, Mexico, will be expanded from 22,000 to 41,000 m^2. The extension will be equipped with state-of-the-art technologies for the manufacture of innovative automotive lighting systems. Completion is scheduled for this October, and the start of production is scheduled for August 2021. The number of employees is to rise from 700 at present to around 1,400.

The past financial year did not bring ZKW new record revenue due to the automotive crisis. Nevertheless, the signs are pointing to growth: Since last year, they've added a branch in Incheon, Korea. The former location of LG Electronics serves the development and distribution of rear lamps for the Asia-Pacific automotive market. The LG site in Ningbo, China, where rear lamps are produced, was also integrated. Furthermore, ZKW expanded plants in Slovakia and Mexico with additional capacities. Altogether, more than €210m will be invested.

Sensors and cameras are integrated into the headlights as part of "Project Dragonfly", to make vehicles fit for autonomous driving. Thanks to artificial intelligence, the sensors can recognise other road users and road signs, calculate distances and speeds, and generate control commands for the vehicle. Digital light from ZKW supports the sensor technology.

With high-resolution lighting systems, solutions for AV and innovative styling, ZKW are developing into a dynamic, globally active group. "Our goal is a 360° offering for the automotive industry. The expansion of the product range to include the rear lamps business is a milestone for ZKW", KKW CEO Schubert said.

Hella Strive to Continue Market-Beating Growth

Hella say they will continue to invest consistently in future-oriented automotive topics that follow the major market trends, while at the same time focusing on strict cost and efficiency management. The automotive supplier have now presented this central approach to investors and analysts at this year's Capital Markets Day in Berlin, while also providing information about further strategic developments.

"Global light vehicle production is unlikely to recover in the short term. On the contrary: In view of the current coronavirus epidemic, a further decline is to be

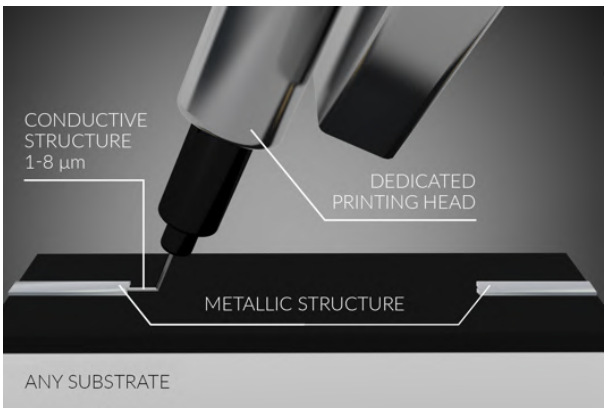
expected", said Dr. Rolf Breidenbach, Hella president and CEO, at the Capital Market Day. "In the medium term we expect stagnating or slightly growing markets. Thanks to our good strategic orientation, even in this environment we have all the prerequisites to develop significantly better than the market with sales growth of 5% to 10% and profitability of over 8%.

Numerous major orders for the latest lighting technologies and electronic solutions underline the strength and future viability of the Hella business model.

• Hella have recently started series production of 77-GHz radar sensors and high-voltage battery management systems for electric and hybrid vehicles in order to further promote key market trends such as autonomous driving and electrification. "These customer orders illustrate once again that we are already profiting from the transformation of mobility and are occupying key growth areas. We therefore expect to be able to significantly increase sales in these areas in the next few years", said Dr. Breidenbach.

• Hella are pushing the digitalisation of automotive lighting with the headlamp technology "Digital Light SSL | HD". The technology is a consistent further development and miniaturisation of existing matrix LED systems. With over 30,000 light points, it makes a wide variety of new safety- and comfort-relevant functionalities possible, such as optical lane assistants or projected protection zones for cyclists and pedestrians. Serial production of SSL | HD technology will start in summer 2022.

Osram Opto Team With XTPL



Osram Opto Semiconductors recently began to work with Polish 3D-printing company XTPL to initiate evaluation of adopting 3D printing technology solutions to address the challenges connected with the manufacture of future generations of lighting elements.

Osram signed an agreement with XTPL last month to access the possibility of implementing XTPL's technology in Osram's production processes for create conductive interconnections for semiconductors. The technology, according to XTPL, is similar to the solution developed for repairing open defects in displays and the smart glass industry. Osram and XTPL are now collaborating at the proof of concept stage based on previous results.

The technology of XTPL can add conductive structures on the individual micron scale (1-8 µm) without using electric fields, which fully eliminates the risk of damage to the substrate and other electrically active components.

Project to Turn Valeo Into a European Company

On 20 February, Valeo's Board of Directors approved the project to transform Valeo into a European company (*Societas Europaea*, SE).

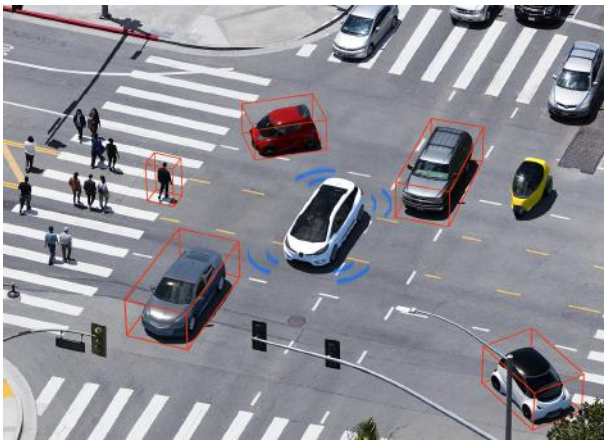
The legal status of European company will better reflect the European dimension of the group with regard to all stakeholders, in particular employees and customers. Of the 115,000 employees of the group, 47,500 are located throughout Europe, with a strong presence notably in France, Germany, Poland, Spain, Czechia, Hungary and Romania. And practically all European automakers are Valeo customers.

The transformation won't affect Valeo's stock market listing or change Valeo's governance.
The project will be submitted to Valeo's General Shareholders Meeting to be held on 26 May, 2020.

In 2004, the European Union has adopted a regulation establishing the statute for a European company and a related directive concerning the participation of workers in European companies. This legislation allows companies to reduce their administrative costs and provides them with a legal structure adapted to the internal market, avoiding the legal and practical constraints which result from the multiplicity of national legal orders.

Driver Assistance News

Osram's New IR Laser For Short–Range Lidar

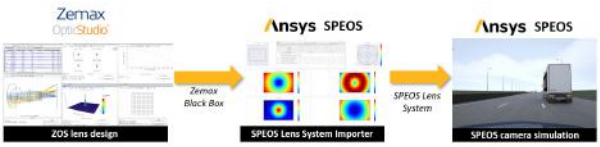


Osram Opto Semiconductors have announced the SPL DP90_3, with which has been specially developed for high-resolution, near-field detection in lidar systems.

Long-range lidar is used to detect objects up to approximately 250 metres away. The immediate surroundings of the car must also be reliably captured by short- or midrange lidar, which covers a distance up to approximately 90 metres. Short- or midrange lidar covers classic traffic situations such as passing cars on highways or driving in urban traffic.

With SPL DP90_3, Osram are presenting a new single-channel pulsed laser with improved beam quality and unusually compact dimensions of just 0.3 × 0.6 mm. An efficiency of around 30% helps reduce the overall cost of the system during operation, as well. With an optical output of 65W at 20A, the component not only has a unique selling point but is also ideally suited for capturing the immediate vehicle surroundings, ensuring high-resolution images for subsequent systems.

SPEOS Radically Shrinks Simulation Time



The Ansys SPEOS lens system importer, created in partnership between Ansys and Zemax, is designed to streamline workflows and protect intellectual property. This new end-to-end solution for camera testing and validation merges the component-level design, modelling, and simulation capabilities of Zemax's OpticStudio® with the modeling, simulation, analysis and visualisation benefits of SPEOS.

Ansys VP and GM Eric Bantegnie says "As we move towards a future of AV, drivers will benefit from efficient cameras that can identify hazards at night or in adverse weather conditions. This technology collaboration represents an important step forward for the industry".

The SPEOS lens system importer can bring any camera lens design from Zemax's optical design software, OpticStudio, into SPEOS simulation software. The SPEOS lens system importer workflow reduces camera perception simulation time from hours to minutes while also protecting lens supplier IP throughout the workflow—the system can be transferred as a black box, so IP is protected without limiting the simulation analysis.

European Project: Centimetre-Level AV Positioning

Autonomous vehicles and ADAS need robust, precise positioning information to enable reliable operations, which will be particularly important during the early transitional phase of the technology when other vehicles around them will not be automated. And innovative new positioning solution was developed in the European PRoPART (Precise and Robust Positioning for Automated Road Transports) project, which has involved Swedish truck maker Scania and six other partners. The project team believe the centimetre-level positioning system could be a key enabler for autonomous transport in the future.

The solution was demonstrated in a recreated motorway situation at the AstaZero test facility in Sweden, with a connected autonomous truck and two unconnected manned cars. As part of the test, a Scania self-driving truck executed a safe and efficient lane change in traffic. The manœuvre was managed by the new system, relying on centimetre-level positioning combined with collaborative perception sensor data.

The project demonstrated that it was possible to pinpoint the position with 10-cm accuracy. The truck could execute the manœuvre due to the precise positioning and an accurate representation of the whole surrounding environment. This was achieved by fusing data from the truck's camera and front and side radars combined with radars mounted on roadside units (RSUs).

Coordinated by the RISE Swedish Research Institute, the project received funding from the European GNSS Agency under the European Union's Horizon 2020 innovation programme. The multinational PRoPART project combined Real Time Kinematic (RTK) positioning software from Waysure (Sweden) with satellite measurements from Fraunhofer IIS (Germany). The satellite positioning was augmented with an ultra-wideband ranging solution from Spanish research institution Ceit-IK4. The self-driving truck was supplied by Scania, with Hungary-based V2X company Commsignia providing the short-range communication technology. Baselabs from Germany provided sensor data fusion of onboard and roadside sensors and developed a situational assessment for the intended automated lane change manœuvre.

Ford Tech to Stop Dooring Bicyclists

"Dooring" accidents are when cyclists fall over (or are otherwise injured by) car doors being opened into the cyclist's travel path. Ford are now developing a special exit warning function to combat dooring. When sensors detect a possible collision, they give audiovisual warnings. If necessary, the door could also be

prevented from opening until the collision danger is no longer.

The new technology uses a Blind Spot Information System (BLIS), which has been available for some time now and automatically detects cyclists and can initiate emergency braking. The sensors used for the BLIS are also used for the new exit warning function. The system analyses and understands movements of approaching bicycles or e-scooters, both on the driver and passenger side of the vehicle.

In addition to the existing warning LED in the exterior mirror, the new system now provides a further warning by means of a red LED strip along the interior door panel, which is visible to approaching road users when the door is opened. The engineers are also testing a new mechanism for the car door that temporarily prevents it from opening fully until the exit warning function detects that the passing cyclist is no longer on a collision course.

Following in-house tests with drivers and cyclists, Ford engineers will also conduct customer surveys in the coming months. Among other things, the tests are intended to ensure that the technology fits the needs and habits of road users in the various markets, taking into account right- and left-hand drive vehicles and different road and lane configurations.

Velodyne Lidar's Idriverplus Sales

Velodyne haveannounced a sales agreement with Idriverplus to provide Puck sensors over three years. Idriverplus will use Velodyne lidar sensors in mass production of commercial autonomous vehicles.

This year, Idriverplus plan to place into commercial operation in China thousands of their unmanned electric street cleaning vehicles, called Woxiaobai, each equipped with two Puck sensors to ensure security and perception.

Idriverplus also are developing two autonomous cars: an L^4 vehicle designed to drive in closed parks and some public roads, and an ADAS for automatic parking and highway following. The company's WOBIDA product applies self-driving technology to the logistics industry, providing a safer and better last-mile delivery experience.

Idriverplus were the first company in China to mass-produce driverless products and receive orders for 1,000 driverless vehicles. The company's founders all come from Tsinghua University, China's leading research university.

"We selected Velodyne sensors because of the outstanding lidar quality and mass production scale they provide," said Idriverplus CEO Dr. Zhang Dezhao. "Our successful experience working with Velodyne lidar shows it delivers cutting-edge performance. Teaming with Velodyne will help us achieve our goal of high-volume manufacturing of commercial autonomous vehicles."

Velodyne Puck sensors provide rich computer perception data that allows real-time object and free space detection needed for safe navigation and reliable operation. The

Puck is a small, compact, efficient and polyvalent lidar sensor that delivers 100-metre range.

General News

PSA Profits Jump Ahead of FCA Merger

PSA Group say their operating margin reached a record 8.5% as the company lowered costs and sold more expensive models such as the Citroën C5 Aircross SUV. Group revenue increased 1% to €75bn despite falling vehicle sales which fell 10% at 3.49 million units, PSA said in last week.

PSA CEO Carlos Tavares has turned around the automaker by focussing relentlessly on cutting out overhead and adding scale since he arrived from Renault in 2014.The automaker has trimmed costs in areas such as purchasing as it integrated its acquisition of Opel and Vauxhall.

PSA see the European car market shrinking 3% in 2020 and Russia declining 2%. PSA's outlook adds to a souring of the global car industry in recent weeks, with China grappling to contain the coronavirus epidemic that has closed factories and hobbled distribution chains spanning continents.

ADAS Pushing Down U.S. Fatalities: Report

Traffic fatalities on U.S. roadways reached an estimated 38,800 in 2019, the second consecutive year the country saw a small decline in road deaths. That's according to gigures released last week by the National Safety Council.

The 2019 total represents a 2% decline from 2018, which saw slightly more than 39,400 road deaths, and a 4% decline from 2017, when about 40,230 people died in vehicle crashes, according to the NSC.

Preliminary estimates suggest the United States may be benefiting from "risk mitigation actions implemented in the last few years," the council said in the news release. One example the group cited is the Vision Zero initiative, a strategy gaining momentum in major cities such as Los Angeles, Chicago and New York that works to improve traffic safety by taking actions such as redesigning high-crash areas. Another proven safety measure is lowering the legal alcohol-concentration limit for drivers.

The organization also said systems such as automatic emergency braking, lane-departure warning, backup cameras, and adaptative headlights help prevent or reduce the severity of crashes.

The group say it is still too early to determine the exact cause-and-effect trends behind the 2019 fatality figures, but final data from 2018 showed distracted driving and drowsiness continued to be factors. "Roadway deaths can be prevented by doubling down on what works, embracing technology advancements and creating a culture of safer driving," Lorraine Martin, CEO of the National Safety Council said.

Clio, Capture are "High Performing Cars": Le Borgne

Renault's interim CEO Clothilde Delbos brought on Gilles Le Borgne, new executive VP for engineering at Renault, at the automaker's 2019 financial results presentation.

"I saw huge assets, but also huge areas for improvements," Le Borgne told investors, analysts and journalists who had gathered at Renault headquarters in Boulogne-Billancourt on the outskirts of Paris. "Engineering and capex-wise, we are really far from excellence", he said, referring to capital expenditure.

Le Borgne is expected to play a central role in getting the alliance back into the black, Delbos said, adding that he was joining other "new talents" on the executive committee, including Denis Le Vot, the former head of Nissan North America, and incoming CEO Luca de Meo.

Le Borgne is a leading star of the French automotive industry. Earlier this month, he was named Man of the Year by the French magazine Journal de *l'Automobile*, which cited his efficient and innovative R&D work at PSA and the expectation that he will revitalise Renault.

Le Borgne has driven each car in Renault's lineup. The new Clio small hatchback and the Captur, which will both get the system this summer, in particular, "are really gorgeous and really high-performing," he said.