

IPG Automotive Releases Version 8.0 of the CarMaker Product Family

Simulation software with new functionalities for virtual test driving

From a physical lidar sensor model to high-performance computing on multiple GPUs and the training of artificial intelligence using semantic segmentation – the new release 8.0 of the CarMaker product family brings many additional functionalities. The effort involved in development and testing continues to increase along growing requirements in terms of driving safety, the improvement of ride comfort, the wide variety of electrified propulsion systems and developments in automated driving. Virtual test driving is becoming ever more indispensable as a result. In response to this development, the Karlsruhe-based company has strengthened the usability of its products particularly in the fields of generating and organizing scenarios.

Karlsruhe, April 23, 2019

The ongoing transformation in vehicle development through virtualization that we observe today requires software solutions which support the user during cross-domain tests throughout the entire development process of advanced driver assistance systems and automated driving functions, powertrains and vehicle dynamics systems with an even stronger focus.

With the release 8.0 of the CarMaker product family, IPG Automotive addresses the demanding requirements in terms of validating new systems in the fields of driver assistance and automated driving functions, and adds the sensor model Lidar RSI to its extensive sensor portfolio. This new model from the Raw Signal Interfaces (RSI) class enables lidar sensors to be modeled in detail. With this latest addition, users now have access to virtual models of all physical sensor technologies in CarMaker.

For high-performance application of the new Lidar RSI as well as the existing sensor models, the release 8.0 now enables the parallel use of multiple GPUs. This makes it possible to test the fusion of raw data from camera, radar, ultrasound and lidar sensors in real time – in the case of extensive test catalogs on an HPC system or in the cloud.

The sensor model Camera RSI encompasses a new function as well: It is now possible to obtain semantically segmented image data which is useful for the training and validation of algorithms based on artificial intelligence (AI). Time and costs can be saved as a result, as the manual extraction of features and the annotation of images to train neural networks is time-consuming and prone to errors.

Alongside the various new developments in the area of ADAS and automated driving, the simulation solutions of the CarMaker product family now offer new features in the fields of powertrain and vehicle dynamics. With the TestBed product line, a high-performance test bed interface for powertrain applications as well as suitable process integration tools for the integration of virtual test driving into test fields were added to the simulation software. In addition, new vehicle dynamics models for electric vehicle development introduced in the release 8.0 now enable streamlined vehicle dynamics evaluations of hybrid and fully electric vehicles due to the automatic consideration and positioning of EV-specific individual masses in the chassis.



Image: With the release 8.0 of the CarMaker product family, IPG Automotive offers a variety of new features for virtual test driving.

About IPG Automotive GmbH

As a global leader in virtual test driving technology, IPG Automotive develops innovative simulation solutions for vehicle development. Designed for seamless use, the software and hardware products can be applied throughout the entire development process, from proof of concept to validation and release. The company's virtual prototyping technology facilitates the automotive systems engineering approach, allowing users to develop and test new systems in a virtual whole vehicle.

IPG Automotive is an expert in the field of virtual development methods for the application areas of ADAS & Automated Driving, Powertrain and Vehicle Dynamics, committed to providing support to master the growing complexity in these domains. Together with its international clients and partners, the company is pioneering simulation technology that is increasing the efficiency of development processes.

By taking real test driving into the virtual world as a complement to on-road testing, IPG Automotive contributes significantly to technical progress and shares in shaping the mobility of tomorrow with regard to comfort, safety, economic efficiency and environmental friendliness.

In addition to the company headquarters in Karlsruhe, Germany, IPG Automotive provides innovative development services to its clients and partners at the national offices in Braunschweig, Frankfurt am Main and Munich as well as in the UK, France, Sweden, China, Korea, Japan and the USA.

Further information at www.ipg-automotive.com

Press contact

Katja Rische

IPG Automotive GmbH

Bannwaldallee 60

76185 Karlsruhe

Phone: +49 (721) 98520-209

Fax: +49 (721) 98520-99

E-mail: press@ipg-automotive.com

Press area: press.ipg-automotive.com