PRESS RELEASE

VIRES VTD 2.2 Expands Autonomous Driving Simulation

Revamped Visualization & Advanced Sensors, New Car Models, New Open API, User Experience Enhancements

(BAD AIBLING, Germany, January 31, 2019) – VIRES, part of Hexagon AB, and a member of the MSC Software family, today announced that it has expanded its groundbreaking autonomous driving simulation capabilities with a number of enhancements to Virtual Test Drive (VTD), its open platform for the development and testing of advanced driver assistance and autonomous driving systems. Key highlights include a new Physically Based Rendering (PBR) technology for better photorealistic simulation visualization, new advanced visual sensor models, an expanded visual database to improve usability, and a new VTD API for easier connectivity with external vehicle dynamics and sensor models.

PBR Technology for Better Visualization

Physically based rendering renders graphics in a photorealistic way that more accurately models the effects of light in the real world. Incorporating PBR technology into VTD greatly improves its graphics quality and makes the virtual models closer to reality. With advanced material texturing powered by Quixel Studio, users have access to a large library of materials created by scanned data, making their VTD models future-proof.
Advanced Visual Sensor Models
With more granular definition of different materials and their surface reflectivity, this PBR technology has been extended in VTD 2.2 to increase the fidelity of the many LiDAR and RADAR models within the software. With PBR-based LiDAR models, users can now identify more details from LiDAR visualization like a glass window on a building, or a puddle of water on a road surface.

Expanded Visual VTD Database to Improve Usability
With this new release of VTD, more than 40 new vehicles have been added to the database, along with a new, more extensive demo database featuring a German town. Furthermore, a previous static dummy pedestrian model has now been replaced with an animated pedestrian. Expanding the VTD visual database within the base package improves the usability of VTD and reduces the need for customization from end users significantly.

More than 40 New Vehicles Available in the VTD 2.2 Base Package
VTD API for Easier Connectivity with External Models
A new VTD API in V2.2 makes it much easier for engineers to connect VTD with their external vehicle dynamics or sensor models. It provides a common interface and reduces the need for users to write their own codes to incorporate external components into the VTD environment. As a result, it improves the user experience for various applications and enhances the simulation's physical accuracy.

This release also contains additional performance and visualization enhancements to major VTD components such as ImageGenerator, ModuleManager, and TaskControl. For example, additional improvements have been made to post-processing to increase efficiency and applicability. Through these new features and improvements, VIRES and MSC Software now offer a complete workflow for virtual development, testing and visualization of Advanced Driver Assisted Systems (ADAS) and Autonomous Driving (AD) systems.

“This is an exciting release of VTD that is packed full of new capabilities and technologies for our users and the fast growing autonomous vehicle industry,” said Marius Dupuis, Managing Director of VIRES Simulationstechnologie GmbH. "It pushes the boundaries of what’s possible in ADAS and AD simulation.”

About VIRES
Founded in 1996 and based in Bad Aibling, Germany, VIRES has evolved from being a mere Services company for 3d-content in the early days to a full-scale Product provider with attached Services. The key product is the tool-suite "VIRES Virtual Test Drive (VTD)" around which a whole range of additional tools and services is centered. VIRES is a main contributor and partner in standardization projects for the automotive industry generally, and helped to establish the de-facto standards OpenDRIVE, OpenCRG and – more recently – OpenSCENARIO. OpenDRIVE has laid the foundation for the standardization of Road Networks. OpenCRG established the standard of Road Surfaces. OpenSCENARIO will define the new standard for the definition of dynamic content. For additional information about VIRES products and services please visit: www.vires.com

About MSC Software
MSC Software is one of the ten original software companies and a global leader in helping product manufacturers to advance their engineering methods with simulation software and services. As a trusted partner, MSC Software helps companies improve quality, save time, and reduce costs associated with design and test of manufactured products. Academic institutions, researchers, and students employ MSC’s technology to expand individual knowledge as well as expand the horizon of simulation. MSC Software employs 1,400 professionals in 20 countries. For more information about MSC Software’s products and services, please visit: www.mscsoftware.com
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