Synopsys Announces New Release of LucidDrive Software for Automotive Night-Driving Simulations

With Version 2017.12, Designers Can Simulate Pixel Light Technology to Improve Headlamp Safety and Efficiency

MOUNTAIN VIEW, Calif., Dec. 12, 2017 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) today announced the latest release of its LucidDrive® software product, which allows designers to simulate the performance of automotive headlamps when driving at night. LucidDrive version 2017.12, now available, includes a new feature for simulating pixel light technology, which is a type of adaptive front-lighting system (AFS) that provides individual light cell illumination on the road with high resolution. A pixel light system subdivides the headlamp light pattern into angular segments that can be controlled individually and adjusted to accommodate changing driving and traffic conditions. Because the adaptability of pixel headlamps can substantially increase night-driving safety, advancing this technology has become a focus for automotive OEMs and lighting suppliers.

The LucidDrive AFS Masking PixelLight feature simulates pixel light technology by detecting oncoming and overtaking traffic, calculating bounding boxes and creating user-definable shadow masks in headlamp light distributions. These functions are useful for automotive designers in both development and testing phases of pixel light systems.

In addition, LucidDrive simulations have been improved in this release with performance enhancements:

- Vehicle models for right-hand traffic have been streamlined to reduce their calculation power consumption
- Vehicle detection has been enhanced to achieve higher performance when detecting traffic participants in AFS and advanced driving beam (ADB) simulations

"Virtual night-driving simulations provide an ideal platform to assess the dynamic-response capabilities of AFS systems," said George Bayz, vice president of Synopsys' Optical Solutions Group. "The LucidDrive AFS Masking PixelLight provides high-performance, reliable verification of pixel light system response to drive curves, steering inputs, traffic encounters and other road situations, without requiring expensive physical prototypes to complete these tests."

To learn more about LucidDrive, visit https://www.synopsys.com/optical-solutions/lucidshape/luciddrive.html.

About Synopsys LucidShape Products

Synopsys' LucidShape® products provide a complete set of design, simulation and analysis tools for automotive lighting. With dedicated algorithms tailored for automotive applications, LucidShape software facilitates the design of automotive forward, rear and signal lighting reflectors and lenses. In addition, the LucidDrive tool provides the ability to perform virtual night-driving simulations that generate realistic lighting scenes in real time, which allows designers to quickly and accurately evaluate beam patterns for exterior automotive lighting applications on the road, traffic signs and surroundings prior to expensive fabrication and testing. For more information, visit https://www.synopsys.com/optical-solutions/lucidshape.html.

Synopsys Automotive: Enabling Safe, Secure, Smarter Cars – from Silicon to Software

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Editorial Contact:
James Watts
Synopsys, Inc.
650-584-1625
jwatts@synopsys.com

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