Synopsys Advances Virtual Simulation of Adaptive Headlights

New Version of LucidDrive Supports Analysis of Headlight Road Performance in Dynamic Traffic Situations

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Highlights:

- Provides the new LucidDrive Traffic Simulation feature for virtual simulation of headlight road performance in dynamic traffic and road conditions
- Includes multiple vehicles in night-driving scenarios, each programmed with different characteristics and velocities to enhance realism

Synopsys, Inc. (Nasdaq: SNPS) today announced the availability of version 2017.03 SR1 of its LucidDrive® software for night-driving simulations to evaluate road performance of vehicle headlight designs. LucidDrive technology provides precisely controlled simulations of vehicle lighting beam patterns and their appearance on the road, allowing designers to assess and improve design performance throughout product development. The latest version of LucidDrive software delivers a new Traffic Simulation feature for realistic simulations of headlight response to dynamic traffic and road conditions, such as traffic jams, lane changes, bends in the road and oncoming vehicles.

The LucidDrive Traffic Simulation feature delivers the following capabilities for night-driving simulations:

- High-accuracy calculations of traffic flows and patterns based on an intelligent driver model
- User-defined parameters, such as vehicle speed, acceleration, deceleration and braking capabilities
- Automatic lane changing maneuvers
- Support for LucidDrive scripting to program customized vehicle behaviors
- Expanded library of road scenes for simulations

By simulating changing driving conditions and individual vehicle behaviors, the Traffic Simulation feature can effectively analyze adaptive front-lighting system (AFS) headlights, which must adapt the light distribution, detect and illuminate obstacles, and automatically mask out the high beam to prevent glare for oncoming vehicles.

"Virtual night-driving simulations are gaining importance for newer headlight types such as AFS, where it is critical to validate beam patterns that must respond to changing driving conditions and driver behavior," said George Bayz, vice president and general manager of Synopsys' Optical Solutions Group. "The LucidDrive Traffic Simulation feature demonstrates how technical advances in night-driving simulations can help designers assess and improve AFS capabilities."

About LucidShape Products

Synopsys LucidShape® products provide a complete set of design and analysis tools for automotive lighting. With dedicated algorithms optimized for automotive applications, LucidShape software facilitates the design of automotive forward, rear and signal lighting, and reflectors and lenses. In addition, the LucidDrive tool provides night-driving simulations that generate realistic lighting scenes in real time, which allow designers to quickly and accurately evaluate beam patterns of vehicle headlamps prior to expensive fabrication and testing. Learn more at http://optics.synopsys.com/lucidshape.

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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