Synopsys' LightTools Delivers Leading-Edge Illumination Analysis

LightTools version 7.2 is now generally available

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Highlights:

- Enhanced charting component provides many options to customize illumination simulation results to meet personal, company or industry standards
- Beam statistics allow detailed analysis and optimization of luminaire performance
- CAD file elements enable iterative, seamless design with CAD software
- Native compound parabolic concentrator objects improve efficiency of luminaire and solar concentrator designs

Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the availability of enhancements to its LightTools® illumination design and analysis software, acquired as part of Synopsys' acquisition of Optical Research Associates (ORA®). LightTools 7.2 delivers features that will help users graphically analyze simulation results, compute important metrics when designing for the lighting industry, iteratively design with CAD software and improve the efficiency of luminaire and solar designs. These capabilities enable lighting designers to more easily explore design alternatives, study light behavior and improve product quality early in the design process.

"Our goal is to deliver software innovations that help engineers create high-quality illumination designs and accelerate their design processes," said George Bayz, vice president and general manager of the Optical Solutions Group at Synopsys. "The latest enhancements in LightTools offer users customizable analysis that allows them to access system performance data quickly and efficiently and to display that data in the exact format they need to communicate results to design teams, project management and customers."

Customize Simulation Results

The LightTools LumViewer, an interactive charting capability, has been significantly enhanced with a new look and many additional features to customize illumination simulation results to meet personal, company or industry standards. Users can rotate and zoom 3D charts, change fonts and colors, view data on a logarithmic scale and make many other customizations as needed. Users can also save charting customizations in a template to reload for later use, or to set as a default for all LightTools charts.

"LightTools version 7.2 has some great enhancements to the LumViewer," said Joshua Cobb, senior optical engineer, Corning Tropel Corporation. "This is now my primary analysis tool, and it has been straightforward to come up to speed quickly with the new user interface."

Beam Statistics

The LightTools simulation output now includes detailed beam statistics to provide lighting designers with access to beam and field width information for analysis and optimization. These statistics are useful for determining the angular or spatial spread of a beam pattern generated by an optical system, such as a luminaire. Designers also have the ability to automatically optimize the optical system to match a specified beam spread.

CAD File Element

With the new CAD file element, LightTools entities can be associated with an externally created CAD file, enabling users to update geometry with the click of a button without losing optical properties, names or relations with other elements of the LightTools model. CATIA, IGES, SAT and STEP formats are accepted. This capability simplifies the process of using CAD geometry in LightTools and ensures data integrity throughout design iterations.

Native Compound Parabolic Concentrators

3D compound parabolic concentrators (CPCs) and CPC reflectors are now available as native elements in LightTools. The CPC objects are useful in luminaire and solar design for collimating light from a source or concentrating light onto a receiver. The elements are fully optimizable; for example, users can automatically optimize a CPC's size and angle to match a target

illumination distribution, intensity, total power or flux on a receiver.

Availability

The LightTools 7.2 release is available now and can be obtained by emailinginfo@opticalres.com.

About LightTools

Formerly an ORA product, LightTools is a 3D optical engineering and design software product that supports virtual prototyping, simulation, optimization and photorealistic renderings of illumination applications. ORA is now part of Synopsys, Inc. For more information visit https://www.synopsys.com/optical-solutions.html

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at http://www.synopsys.com/.

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