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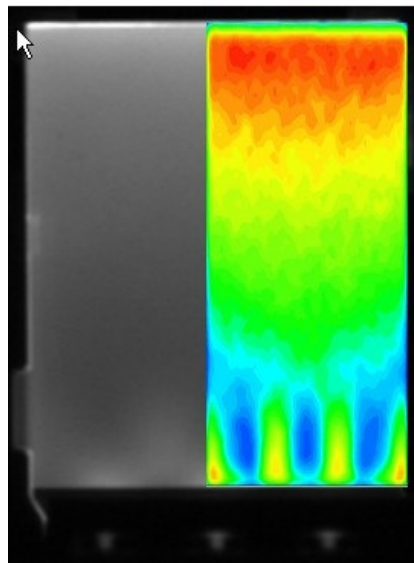
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**NewsBreak**
**Optis Integrates 3D Textures into OptisWorks**


TOULON, France, Jan 28, 2009 – OPTIS, the leading software developer for the scientific simulation of light, has announced that the functionality of its 3D Textures package has been integrated into OptisWorks, which is the SolidWorks add-in version of Optis's SPEOS software. 3D Textures For OptisWorks was released in January 2009.

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An LCD backlighting optimized using 3D Textures by OPTIS

Previously 3D Textures was available as a module within the stand-alone OPTIS software, SPEOS. But its redevelopment as a SolidWorks add-in module – with significantly improved performance – means that engineering designers can now model complex integrated mechanical and optical engineering tasks seamlessly within SolidWorks.

SolidWorks is a 3D mechanical CAD (computer-aided design) program that runs on Microsoft Windows. Currently one of the most popular products in the 3D mechanical CAD market, it was developed by SolidWorks Corp., now a subsidiary of Dassault Systems, based in Velez, France.

Optis is confident that the new 3D Textures For OptisWorks package will appeal to the substantial SolidWorks and Optis software user communities worldwide, targeting in particular the electronics market and the fast growing demands of the LED lighting industry.

To model optical performance of devices in conventional CAD packages has proved either impossible or extremely time-consuming. However, the 3D Textures For OptisWorks solution enables both improved design functionality and time-saving in challenging applications such as the modeling of backlit displays and the latest designs of automotive lights.

Gunther Hasna, Consulting & Services Manager at Optis, commented, "Among OEMs and suppliers we see a trend of increasing demand for integrated optical and mechanical design packages and for generic platforms. Using a standalone CAD package, the time taken to process a combined optical-mechanical design simulation would be very time-consuming.

"Without our integrated package it would be almost impossible to achieve the desirable combination of capabilities: simultaneous optical and design simulation, increased complexity of designs and surfaces and both of these at a higher rate than achievable with conventional packages."

For example, with 3D Textures For OptisWorks a designer can easily create tens of millions of modeled points on optical surfaces. The technical advantages of 3D Textures For OptisWorks include the following capabilities:

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- Number of possible modeled patterns in the millions
- Reduced memory required for the simulation (about 150MB needed for 1 million patterns)
- Rapid loading time (just 2s for 1 million patterns)
- Fast simulation time (16min for 4 millions patterns; and not linear with the number of patterns)

Besides its easy integration into the SolidWorks software, 3D Textures For OptisWorks also offers several improved optical design capabilities when compared with Optis's established SPEOS package and other types of "non-integrated" simulation software.

Advantages offered by OptisWorks include: the modeling of patterns onto any possible CAD shape and surface (SPEOS and others offer relatively basic functionality); modeling based on diverse materials of construction (compared with other packages' single material), much lower memory usage and up to 50 times faster simulations. OptisWorks also offers fully optimized multithreaded and 64bit operation, which other packages cannot match.

Existing SolidWorks users will be able to buy an add-in version of 3D Textures For OptisWorks so Optis is hoping to build sales in the SolidWorks market. Some application areas would be in the design of complex compound surfaces and textures such as in new designs of automotive tail lamps (that are increasingly complex), LED luminaries design or in backlights for PDAs and mobile phones. Also in DLP (digital light processing) projectors; the latest generations of projector devices ranging from micro-to macro-projects such as in screens for use in public spaces and stadia.

The integration of 3D Textures For OptisWorks at Optis's research laboratory in Toulon was conducted independently of SolidWorks – although Optis mathematicians operate a cooperative development programme working to industry standards of compliance and compatibility.

The new product is aimed at optical engineers using the SolidWorks platform. It is one of a series of Optis cross-platform software products designed to work with different CAD software packages. Other Optis software versions have been designed to function and integrate with engineering design packages such as Dassault Systems' CATIA V5 and most recently PTC's Pro/ENGINEER.

#### **Examples of application of OptisWorks/3D Textures**

##### **Tail Lamp Design**



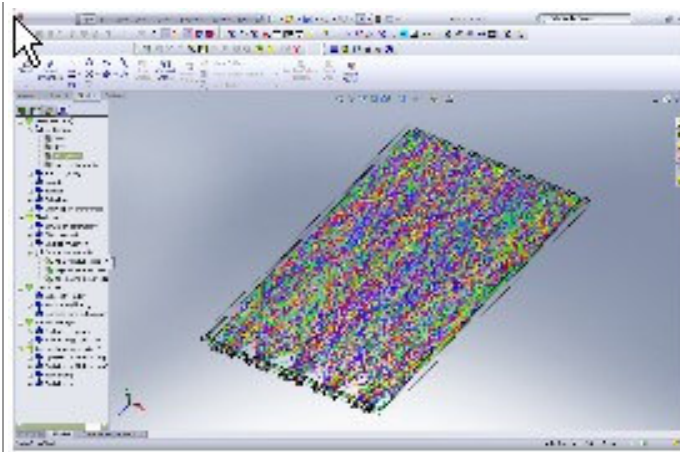
**Textured light guides of a tail lamp**

Inside the latest designs of vehicle tail lamp units there are various complex combinations of components, elements and surfaces (often made of different polymers) that guide the light around the unit and out for other road users to see. From the typical multiple-LED source the light passes through channels and into reflectors embedded in the plastic unit.

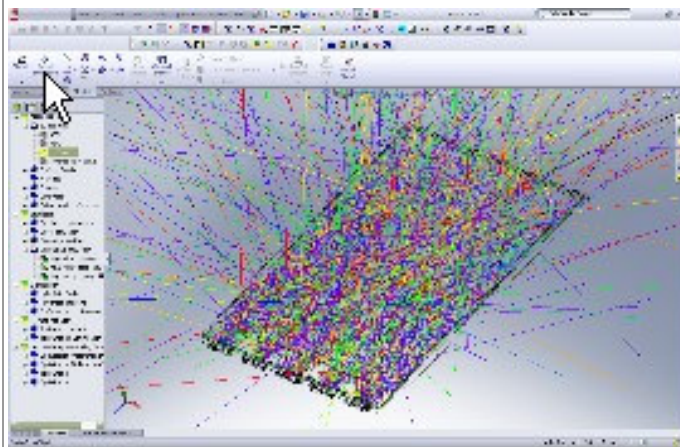
The complexity of light source arrangement and the materials, angles and surfaces of the lamp units are an ideal environment to show the versatility and speed of the latest Optis software package. User benefits are not just the speed and flexibility of 3D textures for OptisWorks, but also the possibility of easily reducing the number of light sources – and therefore cost and power draw – without compromising brightness and clarity of the light.

Gunther Hasna commented, "Tail lamp design is an iterative process, in which the designers are constantly wanting to refine and modify the internal structures. With 3D Textures For OptisWorks, we can now simulate the progress and flow of the light from the tail lamp as the internal design is modified; we can then optimize the light distribution so that it performs in the optimal way. By this means we can effectively simulate the "lit" appearance of the tail light/reversing/brake lights."

##### **Display Design**



without 3D Textures; most light is not transmitted from display



with 3D Textures, significantly more light is dispersed and transmitted from the display

The backlight unit of any display, such as for a mobile phone handset or PDA, is typically textured. Up to millions of microscopic polymer "pyramids" are placed on the backplane to redirect or diffuse light that usually comes from an LED source (or similar).

3D Textures For OptisWorks allows display designers to simulate the exact result of changing designs and distributions of the all-important pyramids.

It is also worth considering that there is not a uniform density of pyramids in a given backlit display; there is a need for more diffractive elements on the further edge from the light source to compensate for light drop-off away from the source.

Examples of the kind of design improvements that are possible with 3D Textures/OptisWorks is the reduction in number of LEDs needed in a lighting design from 12 to 3! An in one particular mobile phone display the number was reduced from six to just one – and with a better distribution of light.

Images 1 and 2 contrast the "with 3D Textures" and "without 3D Textures" of the optimization of pyramid placement in the design of a backlit display. A design engineer with easy access to integrated optical simulation software – such as in 3D Textures For OptisWorks – can easily optimize the delivery of light from a display, improving energy efficiency and even reducing the number of light sources required to maintain brightness.

#### About OPTIS

OPTIS is a leading software developer for the scientific simulation of light and human vision within a Virtual Reality Environment. Its solutions allow designers, ergonomists and engineers to simulate and optimize lighting performance, product appearance as well as the visibility and legibility of information on human machine interfaces, in a fully-immersive environment.

Since integrating its SPEOS solution in CATIA V5 in 2002, OPTIS is still the only company to provide a light simulation solution fully based on a physical model inside a CAD/CAM software.

OPTIS has delivered more than 5500 licenses to 1500 customers in 36 countries worldwide. Users include most of the major automotive, aerospace, electronics, white goods and lighting manufacturers, as well as architects, universities, research laboratories and defence agencies. They use the SPEOS technology to design, simulate and visualize in a virtual reality environment, products as diverse as automotive lighting, mobile phone screens and keypads, dashboard and cockpit displays, LCDs, LEDs, luminaries, and optics for industrial vision and medical applications.

For more information, visit [www.optis-world.com](http://www.optis-world.com).

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