

## (UK) The Hartree centre selects OPTIS as Virtual Reality partner for its new HPC and Visualization centre



**Daresbury UK – Monday 17th December** - OPTIS, the leading software developer for the scientific simulation of light and human vision, today announced a unique partnership with the Hartree Centre at the Science and Technology Facilities Council's Daresbury (UK) to develop and demonstrate Virtual reality applications in support of UK industry.

Underpinned by £37.5 million of Government investment and combining the UK's premier supercomputing environment with an unrivalled depth and breadth of related skills and experience, the partnership will focus on the development and demonstration of the use and benefits of Virtual Reality to UK industry. The facility at the Hartree centre includes 4 Virtual reality suites including a new 8 meter 140 degree VR screen, a 6 meter x 3 meter powerwall as well as a 150 seat lecture theatre and a new 54 workstation training facility.

Building on the delivery of several successful innovative projects for UK industry in collaboration with the Virtual Engineering Centre (VEC) at Daresbury, OPTIS will now provide software and expertise to the Hartree centre as part of the partnership to help UK businesses explore how Virtual Reality; underpinned by OPTIS' new Real Time simulation software THEIA-RT; can be used to simulate products and processes through experiencing how the product will look and function, many months – or in some cases years – before the product itself is built.

Used primarily within the automotive and aerospace industries, the simulations performed through the use of Optis' software allows engineers and designers to evaluate different lighting conditions using immersive VR to fully explore how the product will perform in many different lighting conditions including human perception of light and colour, analysis of critical reflections, glare, and how the eye adapts to changing light conditions.

SPEOS software enables engineers to verify that a particular design works well at all levels by the exact analysis and measurement of both the ergonomic criteria and perceived quality of material surfaces from the observer's perspective and under unlimited ambient lighting conditions. This solution helps designers to optimize and improve the layout of; for example; a car interior and illuminated graphics by precisely developing multiple, virtual prototypes and verifying the design integration.

"The partnership with Hartree provides us with a unique environment through access to, not only a world leading Virtual reality installation, but the huge computing resources and expertise available to us at Daresbury" states Chris Grieve – Country manager and VR Business Development Manager at Optis Northern Europe, "we have already been very successful in demonstrating the benefits and pushing the boundaries of what VR can bring to the design and manufacturing process through our close partnership with the VEC at Daresbury, this new facility expands our capability to provide a completely integrated solution for our end users and partners.

OPTIS's physics-based rendering SPEOS software is fully integrated in the all the major CAD PLM solutions. This is a key advantage as it processes the CAD-data generated in the design process and optically models the performance. It simulates the performance of the vehicle from the relative position of the occupant and helps engineers to visualize how the interior reacts with light in different conditions. It helps accurately model light sources and surfaces from the perspective of each occupant.

"The Hartree Centre is delighted to have formed this partnership with OPTIS. One of the Centre's key objectives is to bring the power of modern, high performance computing to bear on industrial and commercial applications and this partnership is a key example of how we intend to deliver on this objective. With OPTIS' deep domain expertise coupled to the Centre's facilities and skills we can offer real benefits to our industrial partners and win them competitive advantage in their markets".

*John Bancroft.....Hartree Centre Project Director.*

**About OPTIS**

OPTIS is the world leading software editor 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 SolidWorks in 2001, CATIA V5 in 2002 and Pro/ENGINEER in 2008, 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 6000 licenses to 1600 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, luminaires, military detection systems and optics for industrial vision, defence and medical applications.

More information can be found at <http://www.optis-world.com>  
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**About VEC**

The Virtual Engineering Centre (VEC) is a leading centre for world class virtual engineering technologies and a focal point for industry communities in this sector. The Virtual Engineering Centre is a University of Liverpool initiative in partnership with the Northwest Aerospace Alliance, the Science and Technologies Facilities Council, BAE Systems, Morsons Projects and Airbus.

The VEC's expertise is underpinned by cross-disciplinary research institutes and academic research from the University of Liverpool. The University of Liverpool is a member of the Russell Group of leading research-intensive institutions in the UK.

Located at the Daresbury Laboratory of the Science and Technology Facilities Council, the Virtual Engineering Centre is partially funded by the Northwest Development Agency (NWDA) and European Regional Development Fund (ERDF).

The VEC has a strategic partnership with the Science and Technology Facilities Council (STFC) Hartree Centre. VEC@ Hartree brings together the VEC's strong expertise in developing virtual prototypes into solutions for industry, combined with STFC's world renowned expertise in computational science and its UK leading resources in High Performance Computing.

**About THEIA\_RT****Right First Time Decision Making**

THEIA-RT is the real time tool you and your management can rely on to review and choose colors, materials, light effects... without the wait. Real time is even better than interactive - it gives instantaneous results without the progressive process.

THEIA-RT is unique in giving quantitative feedback on your design as well as real time visualization. Thanks to OPTIS background as leaders in the optical simulation field, we perfectly understand light-matter-human eye interactions which can be the only basis for truly physics based rendering. As THEIA-RT is fully physics based, it does not need to introduce any artifact to add reflection, caustics, or hot spots, so there are no complex parameters to manage. All these phenomena are automatically computed - its your data which provides the realism.