

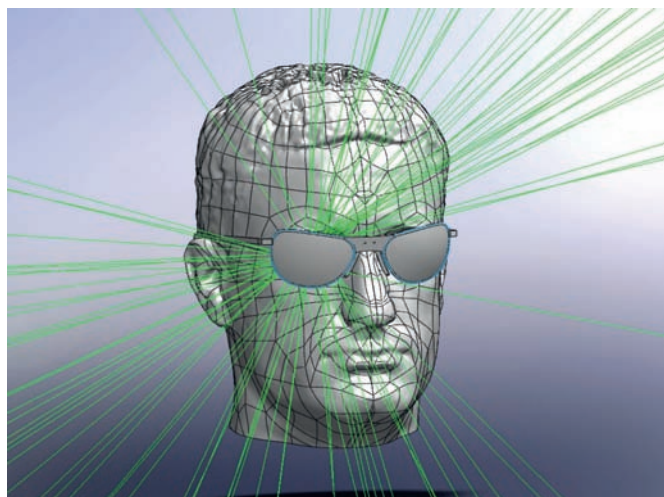


# PRESS RELEASE

For immediate release

## US Air Force Research Lab deploys OPTIS software to simulate and evaluate laser eye protection

Troy, MI, USA – Tuesday, June 22, 2010 – Optis announces today that the United States Air Force Research Lab, (AFRL), 711<sup>th</sup> Human Performance Wing, Human Effectiveness Directorate, Directed Energy Bioeffects Division, Optical Radiation Branch (AFRL 711 HPW/RHDO) Brooks City-Base, TX, has adopted their unique light and color simulation software OptisWorks to simulate laser protection eyewear.



*OptisWorks simulation of Laser Vulnerability with Laser Eye Protection*

AFRL 711 HPW/RHDO has successfully deployed Optis software solutions to simulate the performance of various manufacturers' proposed designs of anti-laser eyewear. The Optis software solution enables AFRL711 HPW/RHDO to approve or reject a manufacturer's design for use by military aircrew. Among the reasons for choosing OptisWorks was its complete integration into the SolidWorks CAD program and OptisWorks' capability to carry out accurate color simulations.

In order to maximize combat survivability and crew effectiveness, air crews need an effective means of protecting their eyes from the risk of injury from lasers. Traditional laser eye protection (LEP) gives some degree of physical protection by filtering out the undesirable wavelengths of light while still transmitting visible light. However, the disadvantage of these traditional designs is that the color filters, used to block laser light, can interfere with the air crew's reading of cockpit instrumentation by altering their whole light environment.

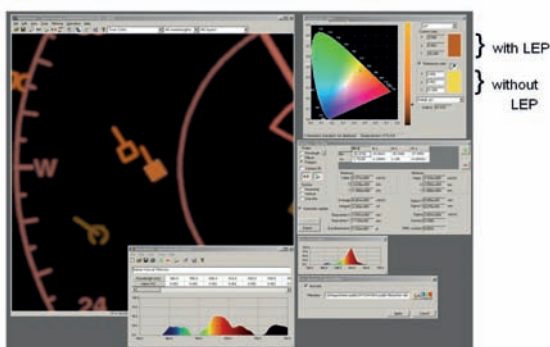


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AFRL 711 HPW/RHDO, with support from optical specialists from TASC, employs Optis solutions for testing two aspects of LEP. Firstly, to analyze geometric coverage of the LEP, they use OptisWorks' reverse ray tracing techniques, whereby the eye is considered as a source and each ray emitted around the eyewear is deemed to be a possible entry path for a laser. While this is not a physical reality, it is an effective means to determine the coverage area. The only alternative – to determine the infinite possibilities of where a laser in space could be positioned to bypass the eye protection – would be a practical impossibility.

The second challenge faced by AFRL 711 HPW/RHDO was simulating and analyzing how colors appear when seen through the LEP. Using OptisWorks' advanced colorimetric simulation capabilities and its ability to take into account human vision and a sunglass filter kit, where the special LEP filters are defined, engineers can ascertain the degree of color change that occurs when a specific element of cockpit instrumentation is viewed through LEP. This enables them to determine whether a pilot will be able to correctly interpret avionic information from displays, warnings, and illuminated controls on the cockpit interface. Correct color perception is of critical importance in a flight deck, particularly at high speeds and in stressful combat situations.



*Left : Simulation and measurement of color change that occurs when instrumentation is viewed through LEP*

“By using OptisWorks software we have cut out months of costly, time-consuming human testing and simultaneously improved the reliability of our findings. When we compared simulation results and real measured results the difference was almost zero,” commented Bill Brockmeier, Optical Engineer, Advisory Services (TASC), Brooks Air Force Base, Texas.



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## About AFRL 711 HPW/RHDO

AFRL 711 HPW RHDO, based at Brooks City-Base, Texas is a scientific research organization operated by the United States Air Force Materiel Command, dedicated to leading the discovery, development, and integration of affordable aerospace warfare technologies; planning and executing the Air Force science and technology program; and provide warfare capabilities to United States air, space, and cyberspace forces.

## About TASC Inc.

TASC is the premier, non-conflicted provider of advanced system engineering, integration and decision-support services across the intelligence community, Department of Defense and civilian agencies of the federal government. Formerly a unit of Northrop Grumman Corporation, TASC became an independent company in December 2009. For more than 40 years, TASC has partnered with our customers toward one goal—the success of their missions. Our broad portfolio of services includes system and policy analysis; program, financial and acquisition management; enterprise engineering and integration; advanced concept and technology development; and test and evaluation. For more information visit [www.tasc.com](http://www.tasc.com).

## 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 defense 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, 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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