



## **RSoft Releases OptSim™ 4.5**

### **The New Major Upgrade of RSoft's Optical Communication Design Suite Supports New Applications for OCDMA and 10 Gigabit Ethernet Multimode Systems**

**July 19, 2005 – Ossining, NY** – RSoft Design Group, the global leader in photonics design automation software, announced the release of *OptSim 4.5*. The new release improves the overall usability of the tool for new major applications such as optical code division multiple access (OCDMA) and 10 Gigabit Ethernet multimode systems. *OptSim 4.5* also includes several new technical advances such as stimulated Brillouin scattering (SBS) modeling and enhanced interfaces to the RSoft Photonics Component Design Suite. OptSim 4.5 is the latest update of RSoft Optical Communication Design Suite, which won Lightwave's OFC/NFOEC 2005 Attendees Choice Award in the Design Tool category.

In *OptSim 4.5*, new documentation, application notes and examples provide comprehensive guidance on how to design optimal OCDMA and 10 Gigabit Ethernet multimode systems. *OptSim* enables the user to enhance the spectral efficiency and reduce the multiple-access interference (MAI) of OCDMA systems. The multimode fiber manufacturing imperfections and the components misalignments can be taken into account to assess the performance and optimize the design of 10 Gigabit Ethernet multimode systems based on the IEEE 802.3 ae standard.

*OptSim 4.5* also includes new documentation, application notes and examples on both FTTH/FTTP and FSO communication systems. *OptSim* enables the user to optimize the fiber length, the splitting ratio and the number of optical network termination (ONT) units for FTTH/FTTP systems employing passive optical network (PON) architectures. The turbulences of free space signal propagation can be taken into account to study the performance variation and optimize the geometry of FSO links.

One of the advanced features newly implemented in OptSim 4.5 is SBS modeling, which simulates the interaction of light with acoustic waves within optical fibers. When power levels surpass a certain threshold, the acoustical-optical interaction produces a non-linear effect, which backscatters light and degrades optical signal quality. For CATV analog RF video transmission, SBS can have significant detrimental effect on the carrier-to-noise ratio (CNR).

Other new features in *OptSim 4.5* include an improved interface with RSoft's industry leading passive component design tool *BeamPROP™*, allowing comprehensive mixed-level simulation of the optical communication system; Er-Yb co-doped double clad fiber

amplifier model; improved VCSEL optical phase modeling; built-in library of commercial multimode fibers; and a new vortex lens model.

For further information on *OptSim 4.5*, or other RSoft Design Group packages, please contact RSoft Design Group at [info@rsoftdesign.com](mailto:info@rsoftdesign.com). RSoft Design Group will also be exhibiting at ECOC in Glasgow, Scotland, September 26<sup>th</sup>-28th, booth # 447-461.

### **About RSoft Design Group, Inc.**

RSoft Design Group is the worldwide leader in photonics design automation software and serves several industries including optical communication, optoelectronics and semiconductor manufacturing. Within optical communications, RSoft is the only company to provide a full range of design, optimization and planning software for the entire component to network-level hierarchy. RSoft also provides design tools for passive and active optoelectronics components and subsystems as well as advanced electromagnetic modeling software for optical metrology and lithography.

RSoft Design Group, Inc. is a privately held corporation with offices in the US, Japan and Europe and supports over 10 distributors worldwide.

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