



RSoft Design Group Introduces MOST, the Multi-variable Optimization and Scanning Tool

Software is dedicated to the Automation and Analysis of Parameter Scanning and Optimization.

March 2, 2005 – Ossining, NY – RSoft Design Group, the established leader in photonics simulation software, is now releasing MOST, a Multi-variable Optimization and Scanning Tool, a dedicated engine for the automation and analysis of parameter scanning and optimization. This tool is a driver for RSoft's entire arsenal of photonic design and simulation software packages including *BeamPROP*, *FullWAVE*, *BandSOLVE*, *GratingMOD*, *DiffractionMOD*, and *LaserMOD*.

The ultimate goal of a design project is to produce an optimal structure that has the highest possible performance given any required design constraints, whether physical or financial. While a prototype can usually be improved by a trial and error search for better designs, the most efficient and effective means to approach design evolution is to utilize optimization algorithms. Automated optimization enables engineers to quickly find design solutions that satisfy specific requirements. For example, the cross-section of a microstructured fiber can be designed such that the fiber has specific desired dispersion characteristics, or a taper-based mode converter can be created which has the lowest coupling loss within a maximum device length.

MOST provides optimization algorithms that allow optical engineers to explore systems which are highly complicated and have either a local or a broad parameter space. Local optimization routines allow the user to quickly find an optimal design given a few initial guesses at parameter values. Global optimization routines, though computationally more demanding than local algorithms, allow the identification of global maxima/minima in a broad parameter space and allow the user to create non-obvious solutions to difficult problems.

MOST includes a number of exciting features. It is fully integrated with existing RSoft products and provides dialogs for specifying optimizations and scans over an arbitrary number of variables. Numerous pre-defined "measurements" for each tool automate generation of 2D and 3D plots of virtually any simulation quantity. The package includes a large number of single and multi-dimensional optimization algorithms including root-finders, minimizers, simplex search routines, genetic algorithms, and other stochastic routines. Moreover, MOST is highly extensible. Users can define arbitrary additional measurements and a simple but flexible API allows users to add custom algorithms

through their own C++ DLL's or Python modules.

For additional information or a demo of MOST, please visit the RSoft Design Group booth (#2021) at OFC/NFOEC 2005, or contact RSoft Design Group at info@rsoftdesign.com.

About RSoft Design Group, Inc.

Offering a comprehensive suite of design and business analysis software solutions to the telecommunications, photonics, and semiconductor industries, RSoft Design Group is the only company that provides a full range of simulation and planning software and services across the entire component to network-level hierarchy. The company's award-winning products are used by researchers, manufacturers, systems integrators, and service providers to address design challenges ranging from the physics of component design to the business implications of planning networks. RSoft Design Group, Inc. is a privately held corporation with software development offices across the United States, and global marketing operations in the Pacific Rim, Europe, and other worldwide locations.

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