ledas press-release

LEDAS Helps CAD/CAM/CAE Developers Efficiently Model Large Assemblies with LGS 3D Geometric Solver Version 1.5

Novosibirsk, Russia – February 26, 2009

LEDAS Ltd. (www.ledas.com), an independent software provider of computational components and services for PLM and ERP markets, releases the next version of its LGS 3D variational geometric solver that is used by CAD/CAM/CAE software development companies to implement parametric modeling capabilities in engineering applications.

New version 1.5 of LGS 3D significantly improves the performance of moving under constraints functionality that now runs five times faster than previously, as measured on a test base extracted from several hundred user scenarios of LEDAS customers. This functionality is used in the context of assembly design and kinematics simulation applications, where a mechanical assembly is composed of 3D parts linked with assembly constraints or kinematic joints. LGS 3D 1.5 is able to follow a user's trajectory as close as possible while keeping hundreds of constraints/joints satisfied in real time, so it serves as a base for efficient modeling of large assemblies in CAD/CAM/CAE applications.

LGS 3D performance on static constraint solving (model updating functionality) has been improved by 30%, as measured on a test base of 3,000 industrial parametric models.

LGS 3D 1.5 also provides new integration possibilities for CAD/CAM/CAE developers. Its new thread-safe code solves an arbitrary number of parametric models simultaneously. The Lege'n'd 3D demo application has been moved to Open CASCADE version 6.3.

The robustness of LGS 3D has been proven by its integration into several industrial software packages including ADEM Assembly by ADEM Technologies and ClassCAD by AWV. More than 4,000 users worldwide appreciated the added value of LGS 3D during beta testing of the Driving Dimensions plugin for Google SketchUp, a popular 3D modeling software application. This plugin combines direct geometry editing with parametric modeling capabilities and implements the so-called variational direct modeling approach. Everyone can use Driving Dimensions for free to test the power of LGS 3D. For more details visit www.DrivingDimensions.com.

About LGS 3D

Variational geometric solver LGS 3D, developed and supported by LEDAS, is offered for licensing to all CAD/CAM/CAE software development companies at an affordable price. It is used as a parametric engine for 3D modeling, assembly design, kinematics analysis, history-free geometry editing, and other applications. LGS 3D is a cross-platform software package. It is a set of binary libraries running under all 32- and 64-bit Windows, Linux, *BSD, AIX, HP-UX, Sun Solaris and other OS. Coded in C++, LGS 3D has a C-based API that allows integration into a broad range of software applications.

LGS 3D supports creation and modification of the geometric models by means of either explicit or implicit constraints. Typical geometric objects are points, lines, circles, planes, cylinders, spheres, parametric curves, surfaces and swept surfaces. Objects can be fixed in the absolute coordinate system or with respect to each other (last feature is provided by so-called rigid sets of objects). The supported set of geometric constraints includes logical constraints between geometric entities (coincidence, parallelism, tangency, etc.) and dimensional constraints that specify the required values for given distances, angles or radii. LGS 3D moves and rotates objects to positions where all constraints are satisfied with minimal possible transformations of initial configuration. Other LGS 3D functions implement advanced features of CAD/CAM/CAE systems - diagnostics of over- and under-defined parts of a model, engineering variables and equations, help points and tolerance management.

A sample 3D modeling application called Lege'n'd 3D is available as a free download at the LEDAS web site with a set of representative examples of different 3D assemblies. This application can be used by anyone to test functionality, robustness and performance of LGS 3D. It was created with the Open CASCADE open-source application framework. The source code of Lege'n'd 3D is available under special request.

To learn more about LGS 3D. visit LEDAS web-site at http://ledas.com/products/lgs3d/.

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About LEDAS

LEDAS Ltd. is an independent software development company founded in 1999; it is based in Novosibirsk Scientific Centre (*Akademgorodok*), Siberian Branch of the Russian Academy of Science. A leader in constraint-based technologies, LEDAS is a well-known provider of PLM components: geometric constraint solvers for CAD/CAM/CAE, optimization engines for Project Management, Work Scheduling and Meeting Planning as well as interval technologies for Knowledge-Based Engineering and Collaborative Design. The company also provides services for PLM and ERP markets: software development, consulting, reselling as well as education and training. Detailed information about LEDAS is available on the Internet at: www.ledas.com.

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