From May 2003 *High Frequency Electronics*

EM Simulation Software Features Integration, Automation, New Tools

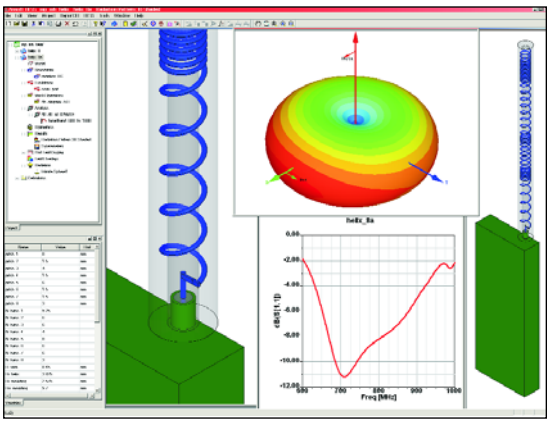
The latest version of this 3D electromagnetic simulation EDA tools has added new productivity-enhancing features to its proven computational capabilities

Ansoft Corporation has introduced HFSS v9 3D electromagnetic (EM) simulation software for the design of RF, microwave, packaging, and optoelectronic products. HFSS v9 incorporates a highly integrated architecture, enhanced automation and a rich palette of new features that reduce engineering time and increase designers' productivity.

Enhancements in HFSS v9 include a new design environment called the "Ansoft Desktop," advanced design capture, state-of-the-art analysis, and new visualizations. The Ansoft Desktop provides levels of design-flow automation that have been unavailable in the EM simulation environment. A Windows-based look and feel makes basic operating features intuitive and simple to use. Highlights include a solution-management/project tree, hierarchical design management, parameterization, and standard scripting capabilities.

HFSS v9 supports 3D geometry created in the integrated modeler, or models created in 3D CAD and 2D EDA layout tools. All industry-standard 3D geometries can be imported, and there are database links to IC and PCB tools from Cadence, Mentor Graphics and Synopsys. The enhanced graphics of the solid-modeling environment includes translucency and a Windows-standard color palette.

HFSS now includes increased speed of automated mesh generation for both the initial mesh and adaptive refinements. It also allows arbitrary frequency dependence or predefined dispersive behavior to be specified for materials such as FR4.



Complex geometries such as this fully-parameterized, variable-pitch helix antenna can be designed quickly with HFSS v9.

The report generator plots both frequency and time responses as well as arbitrary parameter-swept data for all results (S-, Y-, Z-parameters). Data may be extracted from n-dimensional, swept-parameter data and plotted as families of traces in 2D or as color-shaded 3D graphics. All reports may be dynamically updated as solutions are performed and as parameters are changed.

Ansoft also has enhanced the visualization of local and radiated fields. Many built-in quantities, such as magnitudes, vector components, and specific absorption rate (SAR) are available for display. Each of these visualizations may be animated with respect to phase or any swept parameter, including frequency.

Ansoft Corp.
Tel: 412-261-3200
Fax: 412-471-9427
www.hfss.com
HFeLink 302