ANSYS® HFSS™ Now Includes Circuit Simulation For More Efficient Electronic System Design and Validation

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PITTSBURGH, April 2, 2014 /PRNewswire/ -- ANSYS® (NASDAQ: ANSS) HFSS™ users can reduce design time and cost while optimizing complete electronic system performance, thanks to linear circuit simulation included with the latest version of this software. With a more streamlined simulation workflow, engineers can focus on enhancing complete system reliability and signal quality as well as analyzing electromagnetic interference. New HFSS product options for radio frequency (RF) and signal integrity (SI) analyses are also available — making high-frequency (HF) and high-speed electronic device design even more comprehensive.

For many years, engineers have used disparate technologies and extensive lab testing when designing wireless and electronic devices. However, as product speed and densities increased, fast and accurate electromagnetic analysis became essential to predict HF effects that traditional circuit simulation neglected like electrical coupling, electromagnetic interference, and radiation. The latest version of HFSS with circuit simulation addresses these challenges by combining the accuracy of electromagnetic analysis with the speed and capacity of circuit simulation, providing a comprehensive systems-level view of the design.

"It's important for our customers to quickly analyze the full electromagnetic system including circuit level components and high-fidelity electronic models," said Larry Williams, director of product management at ANSYS. "This product upgrade, coupled with our recent ANSYS SIwave™ product announcement, underscores our vision to deliver a seamless end-to-end simulation workflow and a Simulation-Driven Product Development™ approach to product design to our customers."

Combining HFSS with circuit simulation is beneficial for complex RF, microwave, and electronics design because engineering teams can study multiple results in larger systems, expanding the size and scope of designs. Antenna feed and matching networks, microwave circuits, and wireless radio channels, essential to many consumer electronic devices, can be quickly analyzed and optimized. Additionally, the software supports comprehensive SI design by allowing cascading transmission lines, connectors, printed circuit boards, sockets and IC package interconnects. The additional HFSS RF and SI product options provide more advanced circuit simulation analysis with specific capabilities targeting applications in RF/microwave engineering and high-performance electronics design.

The new technical product information is as follows:

- Enhanced ANSYS HFSS now includes linear circuit with integrated ANSYS® Optimetrics™ for full system design to complement its traditional 3-D and recently introduced 3-D layout interfaces and 2.5-D method of moments solver.
- When combined with HFSS, the new ANSYS RF Option delivers a high-performance RF simulation flow including harmonic balance circuit simulation for non-linear microwave circuit analysis, filter synthesis and DC, transient, oscillator, load-pull and envelope circuit analysis engines.
- The new ANSYS SI Option for HFSS provides a complete component-to-system simulation solution for signal and power integrity. It includes DC and transient circuit analysis, IBIS-AMI modeling, statistical eye analysis, Synopsys HSPICE simulation support, and the industry breakthrough HFSS 3-D transient finite element simulation engine for time-domain reflectometry (TDR) and visualization of 3-D electromagnetic fields.

The new release is now available for download for current customers via the [ANSYS Customer Portal](#). To learn more about the upgrades in HFSS, please visit:
http://www.ansys.com/Products/Simulation+Technology/Electronics/RF+&+Microwave

About ANSYS, Inc.

ANSYS brings clarity and insight to customers' most complex design challenges through fast, accurate and reliable engineering simulation. Our technology enables organizations — no matter their industry — to predict with confidence that their products will thrive in the real world. Customers trust our software to help ensure product integrity and drive business success through innovation. Founded in 1970, ANSYS employs more than 2,600 professionals, many of them expert in engineering fields such as finite element analysis, computational fluid dynamics, electronics and electromagnetics, and design optimization. Headquartered south of Pittsburgh, U.S.A., ANSYS has more than 75 strategic sales locations throughout

the world with a network of channel partners in 40+ countries. Visit www.ansys.com for more information.

ANSYS also has a strong presence on the major social channels. To join the simulation conversation, please visit: www.ansys.com/Social@ANSYS

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