Electronics Enhancements In ANSYS 15.0 Bring Increased Fidelity To Users

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PITTSBURGH, Dec. 23, 2013 /PRNewswire/ -- ANSYS Inc. (NASDAQ: ANSS) today announced that upgrades to ANSYS® 15.0 for electronics provide users with unique capabilities that offer the most advanced approach to the design and optimization of complex electronics products.

(Logo: http://photos.prnewswire.com/prnh/20130430/NE03388LOGO)

Released earlier this month, ANSYS 15.0 offers users a wealth of capabilities across its products portfolio. As the final in a series highlighting improved functionality across three main physics areas, ANSYS today focuses on the enhancements to its electronics offerings at release 15.0.

"At ANSYS, we predict real-world product performance using fast, accurate and reliable simulation," said Larry Williams, director of product management. "Our new release allows engineers to analyze electrical performance of smartphone circuit boards, stealth aircraft, and even the noise made by a washing machine."

The latest release of the electronics products suite delivers advanced solver and meshing technology and automated workflows for high-performance electronics design. ANSYS 15.0 also includes new multiphysics analysis for noise, vibration and harshness (NVH) for electric machines and other electromechanical devices.

Release highlights include:

- For high-frequency electromagnetics, advanced phi meshing for 3D electrical CAD/layout is optimized for meshing silicon substrates, redistribution layers, electronic packages, and printed circuit boards and advances the ANSYS HFSS™ 3D electrical layout design. This customized environment automates the process of preparing electrical layout data of printed circuit board (PCB), electronic packages and custom integrated circuits for analysis using HFSS. The Phi meshing technology augments this design flow by creating initial 3D meshes up to 30 times faster than previous releases while increasing capacity and reliability of meshing very complex ECAD geometry.
- In ANSYS 15.0, users now have an option to choose curvilinear element types that deliver high accuracy for simulating models with curved and/or blended surfaces for HFSS-IE. Reflector antennas commonly used in satellite communications are a classic example where large curved surfaces must be modeled. Additionally, many modern stealth technologies rely on blended surface designs to minimize radar reflection back to the source. The addition of curvilinear elements enables more accurate and efficient solution for radar cross section and antenna placement problems consisting of blended surfaces.
- A new product, SIWave-DC, targeting the DC analysis of low-voltage, high-current PCB and IC packages, allows critical end-to-end voltage margins to be assessed to ensure reliable power delivery. SIwave-DC quickly identifies areas of excess current density and thermal hot spots to reduce risk of field failure. SIwave-DC is the first product to be released in an ongoing development project to deliver complete signal integrity and power integrity solutions. Additional products will be released with ANSYS 15.1 in early 2014.
- A new multiphysics work flow that couples ANSYS Maxwell® with ANSYS Mechanical™ allows electromagnetic force calculated by Maxwell to ANSYS Mechanical's Structural Dynamic solver to evaluate the frequency spectrum of displacements and further compute the Acoustic Field. Noise, vibration, and harshness (NVH) analysis is critical to engineers in the automotive, aerospace and consumer appliance industries tasked with delivering electric machines that are quiet and fault tolerant.

ANSYS 15.0 contains many more new capabilities, which are detailed at http://www.ansys.com/ansys15.0 or check out our blog and the ANSYS 15.0 webinar series.

Current customers can download the latest version on the ANSYS Customer Portal.

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 2,500 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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