ANSYS Introduces First Big Data and Machine Learning System for engineering simulation

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PITTSBURGH, May 19, 2016 /PRNewswire/ -- ANSYS (NASDAQ: ANSS) has married the advanced computer science of elastic computing, big data and machine learning to the physics-based world of engineering simulation – offering the industry a first look at the future of product development. Available today, the unique ANSYS® SeaScape™ architecture enables organizations to innovate faster than the ever. ANSYS® SeaHawk™ is the first product taking advantage of this new platform capability to deliver accelerated design optimization of next-generation chips.

Engineering simulation generates tremendous amounts of data – far more than most organizations can effectively leverage for future product designs. A typical integrated circuit, for example, has billions of variables that can be simulated. At the same time the highly specialized engineering supercomputing resources are not keeping pace with the demand for even higher fidelity simulations needed for increasingly complex products. By leveraging such big data technologies as elastic compute and map reduce, SeaScape provides an infrastructure to address these issues in the context of almost any engineering design objective. These results provide more useful insight to product developers early in the design process so they can more quickly innovate their offerings. ANSYS has collaborated with Intel Corporation to optimize SeaScape to take full advantage of the many-core Intel® Xeon® processor and Intel® Xeon Phi ™ processor families.

The first product on the SeaScape infrastructure, SeaHawk, dramatically transforms electronic product design through significant improvements in simulation coverage, turnaround times and analysis flexibility. The combination of big data techniques and ANSYS' proven simulation capabilities arms SeaHawk users with a broad range of capabilities to reduce size of the chip and its power consumption without sacrificing performance or schedule constraints. Early users have realized an average of 5 percent reduction in die size, which could result in millions of dollars of savings during production.

"Die size and development time reduction are targets that electronic design engineers have pursued with marginal success given the limitations of today's in-design solutions," said John Lee, general manager, ANSYS. "ANSYS SeaHawk bridges the in-design and sign-off needs by bringing unprecedented simulation performance and design insights without sacrificing sign-off accuracy and coverage. We're excited to offer SeaHawk to the EDA industry today and equally excited to offer other SeaScape-based products across our entire simulation portfolio in the future."

Using flexible low-memory compute infrastructures, SeaHawk – which is available now for customer engagements – has demonstrated significant performance and turnaround time improvements. Those rapid insights help to drive in-design optimization. ANSYS is bringing its gold standard sign-off simulation power to now also benefit the earlier stages of the chip development cycle.

"The performance increases ANSYS SeaHawk delivers for engineering simulations enable users to freely optimize and innovate designs without constraints," said Hugo Saleh, director of marketing, High Performance Computing Platform Group at Intel Corporation. "The collaboration between Intel and ANSYS continues to deliver innovation and performance for our respective customers, providing great value and performance for reduced time to results. Together with ANSYS we're delivering leading simulation capabilities to market utilizing the Intel® Scalable System Framework."

About ANSYS, Inc.

ANSYS is the global leader in engineering simulation. We bring clarity and insight to our customer's most complex design challenges through the broadest portfolio of fast, accurate and reliable simulation tools. Our technology enables organizations in all industries to imagine high-quality, innovative and sustainable product designs that have an accelerated time to market. Founded in 1970, ANSYS employs almost 3000 professionals, more than 700 of them with PhDs in engineering fields such as finite element analysis, computational fluid dynamics, electronics and electromagnetics, embedded software, system simulation and design optimization. Headquartered south of Pittsburgh, U.S.A., ANSYS has more than 75 strategic sales and development 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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