



AGI and ANSYS Collaboration Streamlines High-Speed Hypersonic Weapon Defense System Design and Integration

August 7, 2019

PITTSBURGH, Aug. 7, 2019 /PRNewswire/ -- To engineer the U.S. military's next-generation missile defense system, [Analytical Graphics, Inc. \(AGI\)](#) and [ANSYS](#) (NASDAQ: ANSS) are incorporating high-fidelity, multiphysics simulations with multi-domain mission-level modeling into early stages of missile defense system development — effectively enabling warfighters to combat high-speed, highly maneuverable hypersonic weapons.

ANSYS_X43_IsoView_Schlieren_Temperature_Pathlines

The U.S. Department of Defense (DoD) has made counter-hypersonics a priority. To rapidly find, track and eliminate these threats, systems for missile defense and their related command and control infrastructure must be upgraded and fully interconnected. High-fidelity, multiphysics engineering simulation is needed early in the design cycle to conduct critical architectural and mission analysis.

To satisfy this urgent national security need, AGI has embedded ANSYS' high-fidelity, physics-based component models within its own expansive, multi-domain mission-level modeling. Providing an integrated system across key engineering and mission analyses will eliminate problematic engineering bottlenecks. Physics-based solvers expedite missile defense system development by more accurately predicting communication blackouts, forecasting vehicle trajectory and altitude control, calculating thermal field effects on antenna performance, and analyzing other scenarios.

"Historically, system development has been compartmentalized, with components developed within black box silos. Counter-hypersonics requires the connection of these black box systems at design inception," said Kevin Flood, vice president of engineering at AGI. "AGI and ANSYS look forward to interconnecting these systems, incorporating a high level of engineering fidelity into their architecture analysis and mission analysis."

"Engineering and modeling highly complex and integrated missile defense systems presents tremendous challenges," said Joseph Cole, Vice President, Federal, Aerospace and Defense at ANSYS. "AGI and ANSYS are helping both our DoD agency customers and their prime contractors address these challenges by incorporating ANSYS' detailed multiphysics simulations within multi-domain mission models. With this partnership the same high-fidelity physics models that our customers use to reduce design time, enhance reliability and streamline maintenance operations can now be leveraged to increase the accuracy of mission level modeling and simulations as well."

AGI and ANSYS will discuss their ability to incorporate high-fidelity, multiphysics engineering simulation into mission-level modeling at the Space and Missile Defense Symposium in Huntsville, Ala. A similar demonstration will be featured in an Aug. 21 [webinar](#).

About ANSYS, Inc.

If you've ever seen a rocket launch, flown on an airplane, driven a car, used a computer, touched a mobile device, crossed a bridge or put on wearable technology, chances are you've used a product where ANSYS software played a critical role in its creation. ANSYS is the global leader in engineering simulation. Through our strategy of Pervasive Engineering Simulation, we help the world's most innovative companies deliver radically better products to their customers. By offering the best and broadest portfolio of engineering simulation software, we help them solve the most complex design challenges and create products limited only by imagination. Founded in 1970, ANSYS is headquartered south of Pittsburgh, Pennsylvania, U.S.A., Visit www.ansys.com for more information.

ANSYS and any and all ANSYS, Inc. brand, product, service and feature names, logos and slogans are registered trademarks or trademarks of ANSYS, Inc. or its subsidiaries in the United States or other countries

ANSS-G

ContactMedia Mary Kate Joyce
724.820.4368
marykate.joyce@ansys.com

Annette N. Arribas, IRC
Investors724.820.3700
annette.arribas@ansys.com

ansys__inc__logo

 View original content to download multimedia:<http://www.prnewswire.com/news-releases/agi-and-ansys-collaboration-streamlines-high-speed-hypersonic-weapon-defense-system-design-and-integration-300897552.html>

SOURCE ANSYS, Inc.