OneSky and Ansys Expand Autonomous, AI-Based Advanced Air Mobility Solutions

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OneSky and Ansys deliver multi-domain mission simulation to develop and train AI-based perception and decision-making software in support of AAM

/ Key Highlights

- OneSky integrates its airspace domain expertise and technology with Ansys' solutions to help joint customers create AI-based software that streamlines and optimizes the development, validation, and certification of autonomous AAM systems
- Ansys equips OneSky with a comprehensive integrated solution, including digital mission engineering, physics-based sensor simulation, safety analysis, and model-based development of critical embedded software

PITTSBURGH, June 20, 2023 /PRNewswire/ -- OneSky Systems (OneSky) and Ansys (NASDAQ: ANSS) are collaborating to progress autonomy in advanced air mobility (AAM) solutions. OneSky is providing its airspace expertise and technology integrated with Ansys' solutions to develop artificial intelligence (AI)-based software equipped with perception and decision-making software.

The collaboration enables OneSky and Ansys AAM customers to train and validate neural networks (NN) with mission-driven simulation to significantly reduce the risk, time, and costs associated with physical testing required for airworthiness certification. The software accelerates and enhances the development, validation, and certification processes of autonomous AAM transport systems.

As the leading developer of uncrewed traffic management (UTM) and testing in support of urban air mobility (UAM) platforms, OneSky combines its operations simulation and flight planning methodologies with Ansys' autonomy solution to strengthen the fidelity of its systems-level simulations. This integrated solution provides aircraft developers and suppliers with end-to-end workflow solutions to help ensure unmanned aircraft systems (UAS) are safe, efficient, compliant, and scalable from one vehicle to a full fleet. From the concept of operations (ConOps) to mission validation, the integrated Ansys and OneSky solutions allow customers to safely train, test, and validate critical UAS and AAM applications, building confidence around AI-based software and autonomy in embedded systems.

"The integrated Ansys and OneSky solutions provide customers with a vast and thorough digital simulation range where we can position systems, supporting infrastructures, and simulations in a safety-critical space to analyze before building prototypes or physically flying in the airspace," said Bob Hammett, CEO at OneSky. "By enabling customers to carefully develop, validate, and certify their AAM software, Ansys and OneSky are helping support hundreds of innovative organizations to safely adopt, manage, and operate autonomous UAS and AAM vehicles."

Leveraging Ansys' model-based environment and OneSky (authoritative) airspace modeling, customers can drive the analysis, development, and airworthiness certification of autonomous software for AAM applications. Combining high-fidelity simulation and digital mission engineering helps enable customers to develop and validate systems in action against mission and agency requirements. Digital mission engineering expands simulation from a static model to an interactive model of the operational environment, which is critical in accurately predicting and validating the behavior of autonomous systems.

"As digital transformation continues to disrupt traditional aviation technologies, the need to test and validate autonomous and AI-based systems becomes even more necessary," said Walt Hearn, senior vice president of worldwide sales and customer excellence at Ansys. "Ansys' simulation and digital engineering platforms, combined with OneSky's airspace modeling, empower customers to model an entire system-of-systems inside a realistic and time-dynamic 3D simulation to gain a clear understanding of behavior and mission performance."

Visit Ansys at the 2023 Paris Air Show in France from June 19-25 to learn more about simulation's impact across the aviation industry.

/ About Ansys

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality with Ansys

simulation. For more than 50 years, Ansys software has enabled innovators across industries to push boundaries by using the predictive power of simulation. From sustainable transportation to advanced semiconductors, from satellite systems to life-saving medical devices, the next great leaps in human advancement will be powered by Ansys.

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