

Aras Addresses the Expanding Simulation and Analysis Market

CIMdata Highlight

Aras, a leader in the enterprise product lifecycle management (PLM) software market, recently announced¹ its core tenets for managing simulation data in anticipation of exponential growth in demand for simulation at all stages of the product lifecycle. The company projects a growing wave of simulation and analysis driven by increasing product complexity, competitive pressures to reduce time to market, and enabling technologies such as IoT and Digital Twin.

As part of this simulation and analysis strategic initiative, Aras has also just announced the acquisition of Comet Solutions Inc., a provider of software for simulation tool integration and process automation. Using Comet's technology, manufacturers are able to create SimApps that automate a wide range of heterogeneous tool design simulation processes to increase the efficiency of dedicated simulation analysts as well as to provide more widespread use of simulation results by design, manufacturing, and application engineers. The integration of Comet's capabilities in the Aras PLM Platform will provide a way for organizations to connect simulation data—and simulation experts—to mainstream product engineering processes for access, reuse, and traceability of simulation results across the entire product lifecycle.

Enabling Simulation Impact Analysis Across the Product Lifecycle

The business benefits and rationale for the broader use of simulation as an enabler for early design optimization and validation, reducing reliance on multiple physical prototypes, are well documented and the concept is in fairly widespread use today across most areas of the manufacturing industry. While simulation's business impact has been limited by the deep technical domain knowledge required to accurately model and predict complex multi-physics and multi-domain product behaviors, the far greater barrier to simulation's inclusion in mainstream engineering processes has been the limited adoption of existing simulation process and data management (SPDM) tools. Despite the availability of simulation process automation and data management tools for nearly two decades, the utilization of such tools in industry has been far less effective and pervasive in comparison to 3D CAD data management, especially outside of the major OEMs in the automotive and aerospace and defense industries.

As product complexity has continued to increase dramatically with the increased adoption of electronics and software content and as businesses seek innovative opportunities for growth, the need to use simulation to understand, predict, and optimize the performance of cyber-physical systems is now becoming a competitive business imperative. Virtual performance simulation is also moving to the forefront for strategic capabilities around the Digital Twin in predictive maintenance and closed-loop sustainability, as well as for enabling generative design processes that leverage the use of topology optimization with additive manufacturing.

Without an effective SPDM capability, organizations will not be able to efficiently incorporate simulation into these more holistic, systems-oriented engineering processes or to accurately connect simulation models and results with product design and product configuration data throughout development and manufacturing, much less simulate an asset in service for

¹ <http://bit.ly/2NTBChm>

decades such as in the shipbuilding, power and utilities, AEC, and aerospace and defense industries.

An enterprise simulation strategy and multi-year implementation roadmap supported by SPDM is critical to unlock the business value of simulation and enable its application throughout the product lifecycle, including customer usage and support as part of a next generation Digital Twin strategy. CIMdata applauds Aras' entry into this application area of PLM and looks forward to tracking their progress in deploying SPDM solutions for the industry.

About CIMdata

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