



VISUAL COLLABORATION TECHNOLOGIES INC.

Simulation-Driven Decision-Making

Unlocking the Full Potential of Simulation Results

The manufacturing industry's movement towards zero physical prototype testing and the consequential shift towards increased digital testing represent a historic turning point in the simulation world. This transition highlights the critical need to embrace and implement new classes of tools to support the management and sharing of simulation results data. Foremost among these tools are Simulation Process and Data Management (SPDM) and Rapid Results Review™ (RRR).

Simulation Process and Data Management

SPDM facilitates collaboration among team members, streamlines workflows, and enhances productivity in simulation-based projects. By centralizing simulation data and automating processes, SPDM optimizes decision-making, reduces errors, and enhances the efficiency of engineering and research endeavors.

SPDM is playing an increasingly important role in modern product development and engineering. Through SPDM, many companies have realized measurable and sustainable gains in product development time, quality, and cost. As industries strive for innovation, agility, and cost-effectiveness, the significance of SPDM cannot be overstated.

Rapid Results Review

While SPDM handles a wide range of simulation data and processes, the integration of Rapid Results Review emerges as a vital component of every successful SPDM installation and acceptance. RRR contributes to shortening product development cycles, improving product performance, and minimizing time-to-market. All within the SPDM framework.

Traditional CAE results review processes were often displayed and documented in 2D graphical static formats, such as PowerPoint. Preparing these non-fidelity reports was a tedious and time-consuming task that pulled the analyst away from the role of performing simulations. Conversely, RRR technologies provide complete simulation results management capabilities, including full 3D dynamic, web-based, interactive access to quickly interpret analysis results. This allows stakeholders to thoroughly review, discuss, and acquire necessary insights to make faster design decisions. Furthermore, RRR's smart results extraction capabilities improve resource usage by decreasing results file sizes while preserving crucial simulation data integrity, allowing for the long-term storage in SPDM, visual collaboration, and sharing of key simulation insights across the company.



The Integration of SPDM and RRR

This opportunity led to the formation of Visual Collaboration Technologies, Inc. (VCollab). With global headquarters in Troy, Michigan, VCollab maintains offices throughout North America, and Asia and is represented globally through an extended network of partners and resellers.

Leveraging digital 3D data transforms and streamlines simulation reporting across the extended enterprise and with global OEMs and suppliers. Reducing or eliminating non-value-added manual tasks (with the potential of human error), bottlenecks, and delays. With VCollab, analysts can automatically extract, create, update, and share results in minutes. CAE Managers, Analysts, Designers, Release Engineers, and other stakeholders can collaborate freely and in real-time making comparisons and annotations eliminating the time-consuming back-and-forth communication for design decision making.

SPDM, when supported with VCollab, enables enterprises to expedite simulation results-related operations, optimize resource allocation, and enhance design collaboration among interdisciplinary functional teams, both internal to the company and external suppliers. This can significantly advance innovation, accelerate product development, and separate the company from competition.

By seamlessly integrating RRR technologies into SPDM systems, engineering enterprises may optimize their results processing workflows, speed up design iterations, and improve product quality. This transforms the administration of simulation results data within SPDM, allowing engineers to create, visually collaborate, and compete in today's disruptive automotive environment.

VCollab enables engineering enterprises to make informed design decisions, manage risks, and capitalize on emerging opportunities by closing the simulation-decision gap. This has a transformative effect on simulation data management. It provides advanced capabilities for multi-physics simulation data integration, post processing, Results Reviews, WEB-based simulation results visualization, analytics, and finally CAE reporting, allowing end users to extract actionable insights quickly and effectively from complex multi-physics simulation datasets.

Rapid Results Review allows engineers to go directly from analysis to design decision-making through:

- Smart automation and efficient multi-format graphic displays.
- Ease of sharing graphical results data with the engineering teams using HTML capabilities
- Allows a drastic reduction in output file sizes. It means you can store results output and be able to go back in the future for any additional information needed.
- Automatic digital report generation. Both transitional reporting during the development phase and final documentation report of program results.

Improving the Bottom Line

Today, leading manufacturers and product development organizations are integrating cutting-edge RRR solutions into leading SPDM platforms. In doing this they are assisting engineering enterprises in overcoming critical results data management and results data processing challenges when integrating multi-physics simulation results. Such solutions enable organizations to improve innovation, achieve long-term growth, and contribute to profitability.