



TEN TECH LLC SUCCESS STORY

Structural Analysis Toolkit increases TEN TECH LLC's productivity by over "1000%"

Customers rely on TEN TECH LLC's structural mechanics analysis group for quick turnaround of complex dynamic simulations. Yet when it came to base-driven random analysis, their Nastran-only solution could not meet the challenge. To make matters worse, aerospace workflows typically involve multiple random load cases.

Business Challenges

The performance of the NASTRAN-only random vibration simulation caused delays to downstream activities, which ultimately resulted in delivery delays and penalties for the project management team.

Solution

SAToolkit Pro for Nastran has allowed TEN TECH LLC to confidently tackle random vibration analyses of increasingly large, complex and representative models.

Results/Benefits

A typical 3-axis random analysis of a 200,000 element model with 100 modes used to take in excess of 12 hours and require 100 GB of scratch space: Now SAToolkit Pro solves it in a matter of minutes, with a scratch file memory usage of around 6 GB. A more challenging simulation involving 900 modes, and which TEN TECH LLC would never have previously attempted, now solves in less than 2 hours with SAToolkit Pro.

Once the most dreaded portion of a project, random vibration analyses are performed in record time by SAToolkit Pro and without the need for further interpretation, an experience which has totally changed the way TEN TECH LLC's CAE engineers work.

Project Highlights

- TEN TECH LLC engineers now obtain greater insight into the designs they analyze, in a much shorter period of time
- TEN TECH LLC can now confidently build higher fidelity models
- The need for computing resources is greatly reduced
- SAToolkit Pro flawlessly passed all test cases

Quote

"Structural Analysis Toolkit turned a 2 day analysis (200,000 elements model with 100 modes with 3 random vibs cases) using a competing product, into a 6 minute job. Well worth the investment!"

William Villers, Director of Engineering at TEN TECH LLC

