NASA
Glenn
Success
Stories

Non Destructive Evaluation Advances with NASA Algorithms

TECHNOLOGY

NASA Glenn is focusing on the development of embedded real-time image processing algorithms to overcome image interpretation response problems. This technology may be key for future non destructive evaluations of NASA space systems.

COMMERCIAL APPLICATION

Santec Systems, Inc. is a leader in the development of acoustography as an ultrasonic non destructive testing method for evaluating the material integrity of aerospace parts. Through ongoing partnerships with NASA Glenn, Santec has substantially improved its acoustography processes.

"The NASA partnership has enormously improved the value of our product in terms of its commercial viability, and will prove to be a major factor in our success in the future."

Jaswinder Sandhu
CEO, Santec Systems, Inc.

A new partnership with NASA Glenn, bolstered in part by an NICC commercialization award, is supporting two core technology improvements in Santec's systems. NASA is developing algorithms to capture sensor data on computer monitors , while Santec is developing improved main sound sources. Successful product development will allow real-time visual imaging in a cost effective, portable device.

SOCIAL/ECONOMIC BENEFIT

NASA Glenn's expertise in advancing image processing algorithms is improving the results attainable through Santec's acoustography processes. Santec's resulting products will fill a niche in the market by providing fast, cost-effective inspection of parts—a process that would be costly on a traditional robotic system but too labor-intensive to do manually. Commercial uses for this technique include the non-destructive evaluation of complex geometric component aerospace parts, resulting in improved safety and labor savings for industry. The technology can now be used in fielded structures. Santec estimates that NASA's assistance saved the company six months of development time and $50,000.

NASA APPLICATIONS

With NASA gearing up to develop new technologies and spacecraft for the Vision for Space Exploration, this project will support NASA's critical need for advanced, efficient and cost-effective non-evasive evaluation of critical spacecraft component parts.

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