

InnoVision controls quality with high-precision imaging

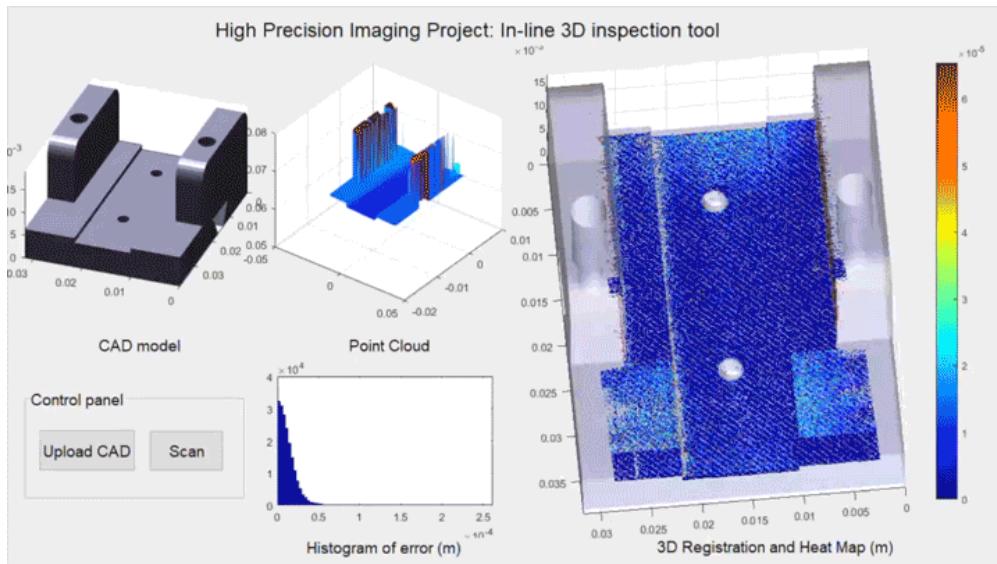
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By Erik Oehler, Innovation Specialist

I walked into the InnoVision lab unsure of what to expect from a project billed “High Precision Imaging.” A machine containing a silver track about three feet long with a small box mounted on it sat on a table. The track loomed over a tiny plastic part that looked like something you would throw out after assembling IKEA furniture and hope it wasn’t important.

“Here it goes,” exclaimed Robert (Bob) Johnson, seated at a nearby workstation. With the click of a mouse, the mounted box emitting a blue laser began to move along the track, across the part.



“And, there it is,” Bob followed, pointing to the screen in front of him. On it was a 3D scan and heatmap of the part below the machine. As the newest member of the team, it’s wasn’t clear to me what that implied for Kodak Alaris, or more importantly, for thousands of businesses around the world.

Laser-focused quality

The high precision imaging machine was pieced together via a combination of “dumpster diving” and strategic borrowing. Even the blue light laser on loan from Micro-Epsilon. Far from being an IKEA leftover, that part was computer numerical control (CNC) manufactured from a company in the \$200 billion plastic injection-mold industry. This sector is largely known to have underwhelming quality inspection, including some of the companies interviewed by the InnoVision team. They reported as high as 5% of their revenue being lost to scrap production or customer-rejected shipments.

3D laser triangulation solutions, which help to address quality inspection through varying methods, all come with one or more tradeoffs:

- Long setup and training times

- Low precision
- Long inspection cycles

The result is fewer parts inspected, more returns, and more scrap—or as Bob and the InnoVision team call it: **opportunity**. The team's mission is about positively transforming our company culture through employees empowered to identify and develop opportunities like this.

Speed, ease, value

Back at the workstation, Bob explains that the parts they've tested have produced outstanding results, scanning with a precision of 6 microns (extremely good), putting it well ahead of any current competitor.

Equally impressive, the device can scan in-line (over a conveyor belt) enabling a much higher percentage of parts scanned. With a swap of the part and one click, Bob scanned another. Integrating into the user's CAD catalog, the resulting report quickly identifies flaws, and will even let the user know well ahead of time when a mold or a component needs to be replaced.

Patent pending?

There are some patentable secrets to how this all gets done (we're working on that, too), but how many potential customers were ready to validate our new tech? Many of the almost 30 companies interviewed expressed interest, with several saying they would purchase the solution immediately if it could deliver on its promises.

This is, of course, just the beginning. We're continuing to interview companies and will be seeking partnerships with a few of them to develop useable prototypes for their specific product lines.

Stay tuned for more updates on this, and other exciting projects from the InnoVision team by following us on [Yammer](#) or [Sharepoint](#).

Erik

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