

Doodles transformed to online purchases

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Enhanced software created by a company in the Purdue Research Park now has the capability to turn the doodling of a manufacturer or engineer into the online purchase of a product.

Names, part numbers and even keywords for items are not required by users of 3D-Seek, a search engine developed by Imaginestics LLC, a West Lafayette-based high-tech company.

From the submission of a simple freehand sketch, the firm can match the requested part with catalog inventories.

"In order to make such a search engine commercially viable, we had to overcome the challenge of matching something as rudimentary as a doodle to a 3-D object -- in seconds," said Imaginestics president and co-founder Nainesh Rathod. "This is important as Web users have become accustomed to retrieving information instantaneously.

"Our shape-search engine processes data that are far more complex than those handled by the leading Internet search engines, and yet still finds results quickly."

The 3D-Seek catalog contains more than 6,000 parts and continues to grow as suppliers manually upload their files and the system discovers other parts online.

Imaginestics received support from the National Science Foundation's Small Business Research program to create the search engine.

The software was built on technology also supported by NSF and created by Karthik Ramani and his colleagues at the Purdue Research and Education Center for Information Systems in Engineering.

"This search engine can help find the proverbial needle in the haystack," said a statement from Errol Arkilic, the National Science Foundation officer that oversees SBIR funding. "By allowing manufacturers to re-deploy and re-purpose parts from existing catalogs, the tool can make it easier for businesses to design complex mechanical systems."

In the future, the basic Imaginestics search engine also could be useful to ordinary shoppers.

For instance, instead of seeking information about a plumbing joint, bracket or tool by phone, a customer can sketch what they need and find an online match.

"It's the difference between describing a part over the phone and seeing it in person," Rathod said. "You

can look at it visually instead of explaining it in words."