GEORGIA TECH VIDEO:

COMPACT COMPUTER VISION SYSTEM COULD IMPROVE U.S. MANUFACTURING

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Lower manufacturing costs, better product quality and improved U.S. competitiveness could be the end results of computer vision capabilities developed at Georgia Institute of Technology and licensed to an Atlanta-based company.

The "Stinger 70" vision system being marketed by Dickerson Vision Technologies (DVT) uses special optics and light to create high-contrast, gray-scale images with little distortion. A charge-coupled device (CCD) allows the system to scan and process only needed information -- just a single word or number instead of an entire product label, for example.

The system could improve quality by detecting defective products and keeping them from being sold, thus improving U.S. competitiveness. It also could do menial, painstaking tasks -- such as recognizing defective products passing through an assembly line at high speed -- that humans either do not do well or cannot perform, said Ken Oosting, DVT principal/founder.

VISUALS AVAILABLE:

*The Stinger 70 scanning moving DVT logos, indicating which ones do not fit the image it recognizes.
*Vision system being programmed.
*Computer screen readouts produced during programming.
*Close shot of fingers typing on computer keyboard.
*Interview with Ken Oosting, principal/founder.

The Stinger 70 weighs two pounds and is housed in a small, thin, rectangular case about the size of a book. The system costs less than $2,000 and can be accurate to within 1/1,000 of an inch.

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One application for the system is checking label quality and placement. When integrated into an assembly line, the vision system compares each product moving past it with an ideal image of a correctly labeled product it is programmed to recognize. The Stinger 70 then flashes a green light for each correctly labeled item and a red light for each item labeled incorrectly. A manufacturer could use that signal to divert defective products.

The system also performs such tasks at high speed. It makes 38 inspections per second -- that's fast enough to sense the movement of a penny dropped in front of the system's lens at a speed of 32 feet per second.

Currently DVT develops programs that vision system users can use to interface the system with their current manufacturing equipment. The company sometimes develops software for clients, and has begun offering a software development kit to those interested in creating their own software for the Stinger 70.

The vision system technology was originally developed for Georgia Tech's Material Handling Research Center (MHRC), by mechanical engineering professors Dr. Steve Dickerson, Dr. Kok-Meng Lee and other researchers. The MHRC is a consortium of four universities and 30 member companies interested in material handling issues.

Dickerson, Lee and the other developers will be active in research of advanced vision technologies. Researchers are currently working on programming the system to detect differences in color and measurement.

The licensing of the technology to DVT is part of a new initiative to encourage commercialization of technology developed at Georgia Tech. DVT is headed by president John Salyer, formerly of Hewlett Packard Company, and Oosting, who is a Tech graduate. Stan Segal, formerly of Hewlett Packard, and Bill Rhoades, a former partner with Arthur Andersen and Company, are also principals. Most of the company's engineering staff is made up of Georgia Tech graduates or graduate students.

If you are interested in reporting on this research and need more information or a tape of this video news release, please call David Kennedy at (404) 894-2453 or Lea McLees/John Toon at (404) 894-3444. Ken Oosting can be reached at (404) 872-2189.