

DCS PRESS RELEASE

Dimensional Control Systems Inc., University of Wisconsin Madison, and Illinois Institute of Technology Chicago, have been awarded a collaborative research grant valued at approximately \$500,000.

This award comes from the prestigious National Science Foundation GOALI program. The combined efforts will focus on the development of sensor placement strategy / decision making methodology for effective dimensional quality control of complex manufacturing processes.

Troy, Michigan. January 25, 2006 Dimensional Control Systems Inc., University of Wisconsin Madison, and Illinois Institute of Technology, Chicago, have been awarded approximately \$ 500,000 Collaborative Research Project by the prestigious (NSF) National Science Foundation GOALI (Grant Opportunities for Academic Liaison with Industry) program to develop a comprehensive multi-sensor planning, integration, distribution, and decision-making methodology for effective dimensional quality control of complex manufacturing processes.

The research will establish and integrate:

A new dimensional sensing system to provide spatially- and temporally-dense dimensional measurements of intermediate and final products. The basic approach is to integrate different coordinate measurement sensors with such characteristics as touch-probe point sense with high accuracy but low speed; and area optical sensor with low accuracy but high speed.

A math-based decision making methodology for effective root cause identification of process variation in complex manufacturing processes by integrating sensing data and a vast array of product and process design information;

A system-level optimal sensor distribution strategy for sensor distribution to achieve optimal diagnosability and inspectability for quality and productivity improvement.

The methodology and resulting technology will be based on, tested and implemented in Dimensional Control Systems 3DCS software. The multi-sensor planning, integration, and analysis techniques will link such varied areas as system theory, computer aided design, optimization, and advanced statistics to solve problems on manufacturing process control. As a result, a new sensor and multi-sensor network system will be developed to help manufacturers significantly reduce process variation while providing improvement in productivity and quality. This technique, when developed, will provide a substantial boost to the overall competitiveness of US industries.

A major objective of the National Science Foundation (WWW.NSF.GOV) is to improve the nation's capacity for intellectual and economic growth. It does this by supporting the acquisition of new knowledge and the enhancement of a skilled workforce. The GOALI initiative aims to synergize university-industry partnerships by making funds available to support an eclectic mix of industry-university linkages. This initiative targets high-risk/high-gain research with a focus on topics that would not have been undertaken by industry, new approaches to solving fundamental problems, development of innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry. Further information about NSF-GOALI is available at <http://www.nsf.gov/pubs/1998/nsf98142/nsf98142.htm>.

Prof. Darek Ceglarek (darek@engr.wisc.edu, Tel.:608-265-3457) of the University of Wisconsin - Madison is the Principal Investigator and, Prof Shiyu Zhou (szhou@engr.wisc.edu, Tel: 608-262-9534) of the University of Wisconsin-Madison and Ramesh Kumar (kumarr@3dcs.com, Tel: (248) 269-9777) of DCS are the Co-Principal Investigators for

this project. Leading researchers from the Illinois Institute of Technology, Chicago will assist in the execution of this project.

Dimensional Control Systems, Inc. (DCS):

Dimensional Control Systems, Inc. (<http://www.3dcs.com/>) is a world-class provider of Dimensional Engineering consulting services and software solutions. DCS, established in December of 1994, is a privately held company, by Robert A. Kaphengst, President and CEO, and John H. Mathieson, Executive Vice-President and COO. Leading organizations such as General Motors, DaimlerChrysler, Mitsubishi, Lockheed Martin, Northrop Grumman, Boeing Corporation and major tier 1 and 2 suppliers throughout the world have chosen DCS and its software solutions to optimize product and process design and manufacturing processes, thus improving quality and reducing overall costs. DCS provides organizations with full service "turnkey" dimensional quality solutions that outfit themselves into the Design for Six Sigma Initiatives. 1DCS, DCS-DFC, 3DCS, GDM-3D and 3DCS CAA V5 Based are all trademarks of Dimensional Control Systems, Inc.