Cal Poly, Department of Defense to Collaborate on Development of Sophisticated Distribution Systems

SAN LUIS OBISPO – Cal Poly President Warren J. Baker and Gen. Duncan McNabb, commander of U.S. Transportation Command, are among the dignitaries who will attend a Dec. 1 ceremony at Scott Air Force Base near St. Louis to mark the opening of a new collaborative research center sponsored by the university under a research agreement with the U.S. Department of Defense.

The Knowledge Management Laboratory (KML) Center, a nonprofit, hands-on lab outside Scott Air Force Base, opened in September. At the lab, Cal Poly students and faculty, representatives of information technology companies, and government researchers will work on ideas to streamline and improve the process of delivering equipment and supplies to U.S. military around the world (which is done through U.S. Transportation Command, or USTRANSCOM).

“We expect to gain a deeper understanding of concepts and capabilities through demonstration, hands-on experience and exploration,” said Robert Osborn (SES), acting deputy director of USTRANSCOM-J6 for C4 Systems and Distribution Portfolio Management. “Cal Poly’s faculty and students will gain access to the realities of large-scale military logistics operations, an invaluable component of tertiary education.”

The KML Center is the latest step in a relationship between Cal Poly’s Collaborative Agent Design Research Center (CADRC) and USTRANSCOM that dates to just after Operation Desert Storm. USTRANSCOM officials asked CADRC founder and Director Jens Pohl to create a computer program to streamline and cut costs in the military’s ship-loading process, after hearing about similar work CADRC had done for IBM.

After producing a successful demo, Pohl and the CADRC received a $1.5 million contract to create the software system, called Integrated Computerized Deployment Systems, or ICODES. That was followed by a five-year, $20 million contract to maintain the program, which led CADRC to launch a commercial arm, CDM Technologies in San Luis Obispo, to maintain and extend the ICODES software.

CADRC and CDM Technologies’ work on ICODES is ongoing. Two years ago, a Department of Defense committee decided the program should to be expanded to cover USTRANSCOM’s other shipping processes,
including aircraft, trains and trucks. CADRC and CDM Technologies will deliver a new ICODES program in 2011.

However, the KML Center and CADRC’s work with USTRANSCOM goes further. Pohl said the aim of the KML Center is exploring the distinction between data (words and numbers) and information (the context of how the data work together).

“With advancements in data storage, we are now almost overwhelmed by data,” Pohl said. “It is a necessity that today’s computers be able to interpret that data.”

KML scientists will experiment with ways to make software take that next step and work to create a system that would automatically filter and interpret data; use intelligent reasoning within the software to monitor events, plan and make decisions; and have the capability to monitor, diagnose and troubleshoot itself. It also would do away with conflicts in the interface between computer programs, Pohl said.

Pohl wrote a paper for USTRANSCOM in 2003 addressing some of these concepts and how they could streamline USTRANSCOM’s systems. The KML Center concept began to gel when Osborn became USTRANSCOM’s deputy director about a year and a half ago and then read the paper and began talking with Pohl.

The KML Center is part of a three-year Cooperative Research and Development Agreement that will be signed by Cal Poly and the Department of Defense before the Dec. 1 ceremony.

Pohl hopes the center will be joined and jointly funded by other commercial, government and academic organizations. CADRC has heard from interested outfits, Pohl said, and has several firm commitments from major corporations, including Microsoft.

The Dec. 1 ceremony will run 9 a.m. to noon (CST) in the Seay Auditorium at HQ USTRANSCOM (Scott AFB) and will feature opening remarks by President Baker, Gen. McNabb and others about the collaboration and objectives of the KML Center. The conference will be followed by a KML Center Open House from 1:30 to 4 p.m. at 723 Seibert Road, Suite 3 (just outside the gates of Scott AFB).

In addition to industry leaders, several high-ranking military members and Department of Defense civilian staff are expected to attend. U.S. Marine Corps Gen. James Cartwright, vice-chairman of the Joint Chiefs of Staff, has been briefed on the center and may attend.

For more information:

- On the KML Center: http://www.cadrc.calpoly.edu/kml/
- On USTRANSCOM: http://www.transcom.mil/

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