



In-Touch... Globally.

By Ken Ryan

Imagine extending the reach of Alexandria Technical College to students throughout the state, across the country, and around the world...

That is exactly what the staff and faculty at the Center for Automation and Motion Control (CAMC) have been up to for the past few years. The Remote Automation Management Project allows learners from anywhere on the planet, with access to the internet, to interact directly with instructors at Alex Tech to learn a broad range of advanced skills. Student from throughout Minnesota, several locations in the US, Canada, Ireland, Germany, and most recently Malaysia have used this technology to learn topics ranging from 3-D computer modeling to programming of advanced industrial automation.

Founded in 1965 as the Fluid Power Department, the current Center for Automation and Motion Control has always been a leader in advanced technology adaptation. In the early 1970s, instructors like John Seim and Robert Hoover recognized the power represented by the newly emerging digital control technology and moved quickly to embrace its inclusion in the fluid power curriculum. This commitment to program innovation

continues today. As more and more industry sectors from packaging to building automation move to include advanced control and automation, CAMC has gained international recognition as a leader in this very specialized form of technical education. With this recognition came a global demand for this center of excellence. The result was the Remote Automation Management Project (RAMP).

Once CAMC had a means to reach a global audience, it was ready to provide basic technology training to high school students, professional development training to secondary and postsecondary teachers, and just-in-time advanced technology training to industry technicians through the Customized Training Center. Additionally this technology can be used to diagnose and correct equipment problems on complex automated machines located anywhere in the world.

How does it work? Faculty members from Alexandria Technical Colleges Center for Automation and Motion Control, along with their partners in the

Customized Training Center, use the power of the internet to reach students in "real time" interactive learning sessions that provide the same visual, audio, and personal experience offered in an actual classroom environment. This is accomplished using advanced "virtual machine" technology that allows one "real" computer to function as 20 "virtual" computers.

Since the instructor and student both work in the same virtual environment, they can see one another's work in real time and collaborate on the learning objectives.

An extra monitor, attached to the learner's computer, serves as the instructor's screen for the delivery of PowerPoint slides. Together with the instructor's voice over an internet headset, the learner experiences the same education as he/she would by attending a lecture in the classroom. The student and instructor are in constant communication. In the case of more than one learner in a single location, the learners can all share a single "projection" of the PowerPoint presentation as well as a common voice communication link using standard conference calling hardware. The students' computers are used to access the virtual computer they share with the instructor. Together they can explore the software being taught with complete transparency to one another.

The RAMP is yet another example of imagination leading to innovation at Alexandria Technical College.



The following Alexandria Technical College students placed at the National SkillsUSA competition held in Kansas City, Missouri in June 2007.

Todd Van LeeuweCarpentry
 Travis LangMechanical Drafting
 Tyler JohnsonMachine Tool Technology