
THE CEEN SCENE

PETER KIEWIT INSTITUTE
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Editor's Note:

A new voice is heard from the halls of the Peter Kiewit Institute (PKI) this month. Professor Sedlacek's Creativity and Writing for Engineers class has organized and produced a newsletter for the Department of Computer and Electronics Engineering at the Peter Kiewit Institute. Individuals report the happenings at PKI where editors Lisa Vanzago and Daren Scott make the final cuts and revisions. Watch for our next publication in March.

IEEE Info:

The Institute of Electrical and Electronics Engineers (IEEE) is a professional organization that is dedicated to the areas of computer engineering, biomedical technology and telecommunications, electric power, aerospace and consumer electronics. The Student Chapter of IEEE at PKI is an organization on campus for computer and electronics engineering majors. The 2002/2003 IEEE Officers have had great success with a display during Fall Welcome Week. They also organized a highly successful faculty and student barbeque, assembled parts kits for Computer Design I, and welcoming high school students during an open house at PKI. They have also made progress in designing a new website for the organization. By getting more students involved, they hope to make further advancement in ensuring the future success of the organization and its role in making PKI a better place to learn. Networking, Spectrum Magazine, and volunteer opportunities are among the many benefits of becoming a member. For more information on joining IEEE, contact Marc Lombardo in PKI Room 341.

Daren Scott

Employer Spotlight:

Been thinking about the looming prospect of employment? What kind of company would better suit your needs: a large corporation, a small startup, local, international? It's never too early to start thinking about the direction of your future career.

If you prefer a multi-corporation company with international prospects then consider Cadence Design Systems, the world's largest supplier of electronic design technologies and services.

Employing 5,500 there's obvious room for PKI students and graduates. There are 54 job openings including 3 internships listed at cadencejobs.com. Prospects are available at their newest branch in Sunny, UT. The site accepts resumes online. For this opportunity and others, visit the Career Resource Center located in PKI, room 391.

Rachel Krzycki

Electronic Evolution:

The Intel 4004 Microprocessor, a four bit processor which ran at 108kHz, was debuted more than 30 years ago. It started a technological revolution because it was the first product to combine the elements of a programmable computer into a single chip. However, not too many people know that the 4004 chips were originally contracted to be designed for use in calculators for the Busicom Corporation. Intel was taking too long to design and manufacture the chips. Unsatisfied, Busicom demanded a discount on the chips. Intel, knowing that the chips had much more potential, bargained with Busicom. Intel agreed to cut the price if Busicom allowed them to maintain the rights to sell the chip outside the calculator market. Busicom agreed, and Intel was catapulted into the pinnacle of the computer industry.

Dustin Koppit

Non-Profit Corporation:

The new Peter Kiewit Institute Technology Development Corporation (PKITDC) has been approved. According to the Institute's Executive Director, Winnie Callahan, The Peter Kiewit Institute Board of Policy Advisors submitted Articles of Incorporation to the State of Nebraska for approval in early December.

The PKITDC officially "opened its doors for business" on January 13, 2003. "This new Nebraska Non-Profit Corporation provides tremendous flexibility for even more innovative partnerships between the Institute, business, and industry" stated Callahan.

Memoranda of Understanding and contracts will be generated with the PKITDC as appropriate endeavors surface. This corporation sits outside the University structure, has its own Board, and will help further advance initiatives that will contribute to the Institute, the community, the state, and real-time business solutions.

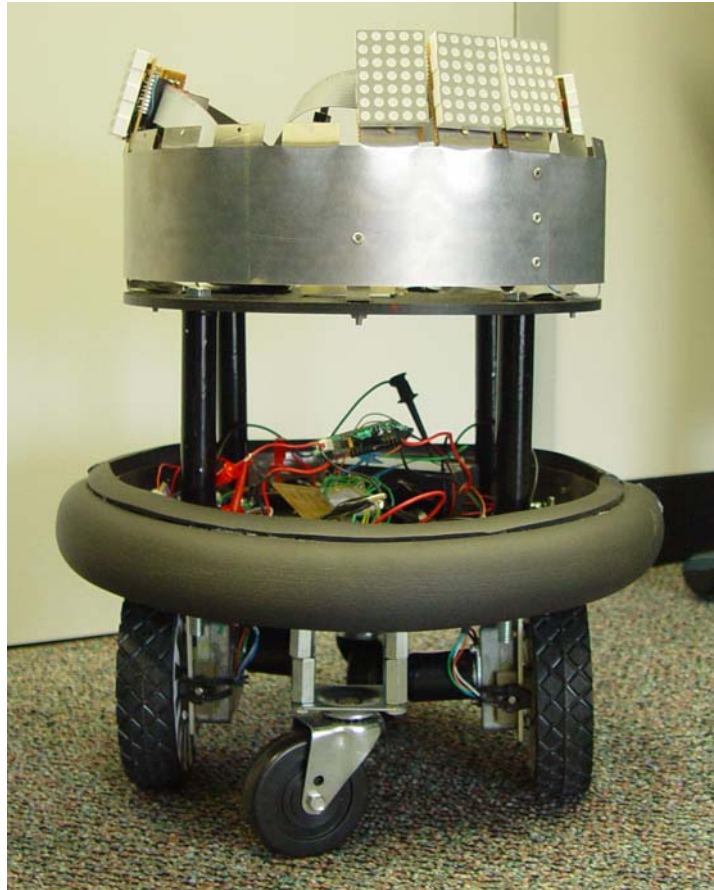
The PKITDC adds yet another way in which collaborations with the Institute can be built. Those research initiatives highly academic in nature will continue to flow through the University system and/or the appropriate College structure. Other corporations similar to PKITDC exist. In Omaha, UNIMED is one of the better known initiatives growing out of the University of Nebraska Medical Center.

Ardian Gjoca

Did You Know:

In 1854, at the age of 35, Cyrus W. Field laid the framework for a submarine telecommunications cable from the United States to England. Problems with insulating materials (plastic wasn't invented yet) plagued the first three attempts. However, in 1866, the first functional telegraph line between Europe and America was finally operational.

Dana Tompkins



Invasion of Integration

Although they didn't reach their initial dream of robots taking over the world and calling them father, PKI undergraduates Michael Beson, Mark Hanus, and Andrew Reynolds are conceiving a platform that could become a stage for studies in artificial intelligence. KAREL is a robotic platform that has a circular bump sensor array to enable it to react to contact with obstacles it encounters. Its name is reminiscent of an early prototype robot. It is controlled with a Ubicom SX28 microcontroller. The developers say that the primary purpose of their independent study was to explore hardware and software integration, which they feel is not covered "to the degree that we would prefer in our program." Their secondary motive is learning the functionality of a processor other than the Intel family. Beson, Hanus, and Reynolds began their work in the fall semester of 2002 and plan to complete their work this spring by adding infrared sensors for obstacle detection.

Kenneth Redler