

OAKLAND BUSINESS & Finance

OCC students create innovative 3-D worlds

BY JANICE TIGAR-KRAMER
SPECIAL WRITER
Virtual reality — a technology that was science fiction not so long ago — will be part of the curriculum this fall at Oakland Community College's Auburn Hills campus.

Using state-of-the-art computer hardware and software recently installed in the school's Advanced Technology Center, students will create and interact with artificial worlds on the computer screen without leaving their chairs.

The simulation software, already in use at Ford, Chrysler and General Motors, allows manufacturers to design and test a fabricating process not on the production floor where errors can be costly, but on a computer screen. The software can be adapted to any manufacturing process.

With "bleeps" and visual signals, the software will identify glitches in the production process programmed by the user, or spot an inefficient work station design that might cause stress or injury to an employee. The user can even factor in the age of the manufacturing equipment being used.

Computer-aided design, a big part of virtual reality technology, drastically cuts engineering time by eliminating many intermediate design steps previously handled by drafters, industrial engineers and pattern makers.

The benefits of simulation software seem endless. The key is training people — including workers not accustomed to high-tech work environments — to use this new-age technology.

'This system isn't as difficult as it looks because the users see what they're manipulating right on the screen.'

Steve Atma
OCC instructor

OCC intends to fill that niche, said Steve Atma, a manufacturing and computer integrated systems instructor.

"At some point, everyone needs to be retrained. The problem is the person who can't get educated at all," said Atma, who's successfully taught workers who don't have strong technical backgrounds. Users should know Windows and understand spatial concepts, he said. Knowing how to type is a plus.

"This system isn't as difficult as it looks because the users see what they're manipulating right on the screen," Atma said.

The college bought the sophisticated visual imaging system for \$200,000, but the software package that produces the three-dimensional images was donated by Denb Robotics, the software developer. Since the price of hardware needed to run virtual reality programs is continually dropping, OCC expects to have more terminals available to students in the near future.

The college's short-term goal is to turn its virtual reality lab into a solutions center, or research and

development facility, for local industry.

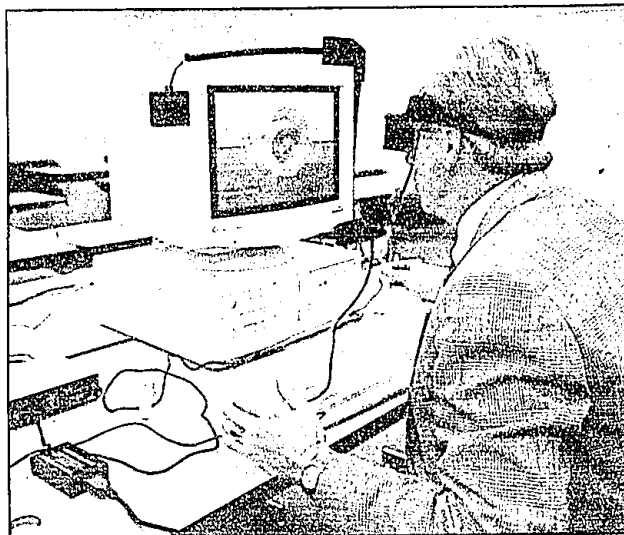
By 1997, the college will offer virtual reality instruction to colleges and industries worldwide, said Richard Saunders, retired president of the Auburn Hills campus. The college will use a \$9 million matching state grant to add 22 classrooms and learning labs to an existing building on the Auburn Hills campus, where a cable network will put the school in touch with qualified users around the world, Saunders said.

For now, virtual reality technology is primarily available to students enrolled in manufacturing, computer science and computer-aided design/computer-aided manufacturing (CAD/CAM) classes. An introductory class offered for the first time last semester drew humanities majors as well.

"Students were fascinated by the class," said Ron Pavlak, a mathematics and computer integrated systems instructor.

Pavlak's class appeals to non-technical majors, including landscape design and art students, because it teaches how to create simple artificial worlds using sight and sound. Instead of designing a production line and sending widgets to a loading dock, students in the entry-level class could design a room or build a simple structure.

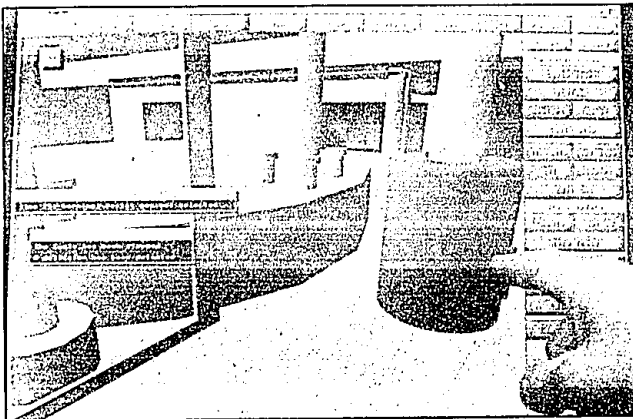
Said Bill Rose, OCC's dean of manufacturing and technological services: "We've just scratched the surface with this technology. Computer-generated technology will open up a whole world of new job opportunities."



STAFF PHOTO BY DAN DEAN

For beginners: Ron Pavlak, a mathematics and computer integrated systems instructor at Oakland Community College in Auburn Hills, demonstrates a virtual reality program used in an entry-level course.

Hands-on: Oakland Community College students use an interactive computer screen to run a 3-D simulation of the manufacturing process. The latest virtual reality software performs quantitative analysis and can be adapted to any manufacturing process.



Step one: Steve Atma, an OCC manufacturing and computer integrated systems instructor, explains a process flow diagram that will be used as a model for virtual reality simulation.



Interactive: Ron Pavlak, an OCC mathematics and computer integrated systems instructor, explains the power glove used to manipulate 3-D figures on the computer screen.

BUSINESS MARKETPLACE

Marketplace features a glimpse of Oakland County business news and notes, including corporate name changes, new products, new store or office openings, new affiliations, new positions, mergers, acquisitions and new ways of doing business.
Write: Business Marketplace, Ecentric Newspapers, 805 E. Maple, Birmingham, MI 48009. Our fax number is (810) 644-1314.

RESTAURANT VP
John Kaufman was promoted

from general manager to vice president of operations for Steamers Seafood Grill, Farmington Hills and Troy. Kaufman, who oversees both locations, said Steamers will open a third restaurant specializing in New England- and New Orleans-style seafood dishes next year.

The Grosse Pointe resident has 35 years of restaurant management experience. He was a guest lecturer at Cornell University's Restaurant Management School for seven years.

MACHINE TECHNOLOGY
Oakland Community College's Center for Dislocated Workers is offering a 16-week program in machine tool technology/CNC operation. The 24-credit program at the Auburn Hills campus begins in early September. Credits can be applied to an associate degree in machine tool technology.

The program includes hands-on instruction and job placement assistance. Unlike most traditional college programs, training in machining provides job opportunities early in the course work, the college said. Entry-level tool-makers earn about \$25,000 a year during a four-year training program. Precision metal workers can earn \$40,000-\$50,000 a year.

Scholarships are available for laid-off workers who qualify for the program. For information, call Sharon Miller (810) 340-6787.

ASSETS ACQUISITION
Teleflex Automotive, Troy, has acquired certain assets of Handy & Harman Automotive Group,

Auburn Hills. Terms of the deal were not disclosed.

George W. Hoffman, Teleflex Automotive president, said the acquisition broadens Teleflex's line of cable controls and gives the firm "strategically important manufacturing capacity in Mexico."

Teleflex Automotive supplies automatic and manual transmission shift controls, accelerator, cruise, park, lock and other cable controls to the automotive industry. The firm's 1994 sales volume

was more than \$160 million.

FINISH LIBRARY DESIGN
TMP Associates, an architectural/engineering firm in Bloomfield Hills, has completed a design for the new Westland Public Library.

The 35,000-square-foot facility will include a local area network for in-house computers, a public access catalog for modern access from outside the library, CD-

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