Spinning Off New Companies,
Transferring High Technology,
Assisting Troubled Industries,
Incubating Start-Up Firms
(pages 1-3)

MICHIGAN MEANS BUSINESS
BY JOHN WOODFORD

In the academic world, scientific research and business are often stereotyped as separate and occasionally antagonistic enterprises: Research is pure and selfless in its pursuits, while business is sullied and selfish.

But in reality, academic and business endeavors are productive activities that often use the same ingredients and share the same concerns despite differences in emphases and objectives. Research is like making cream: It's very enriching to our lives. Applying that research to broader uses in a profit-oriented market is like making milk.

The institution that best fosters cooperation between producers of cream and milk is the research university. The story of Steven L. Williamson, president of the Ann Arbor-based Picometrix company, illustrates how breakthroughs in scientific research can translate not only into new industrial techniques, but even into new industries.

Williamson was a university-based academic researcher in lasers for 15 years before he started his own company two years ago. It all began in the laser (or ultrafast optical electronics) laboratories directed by Gerard A. Mourou, professor of electrical engineering and computer science in the College of Engineering. Mourou brought Williamson and other members of his research lab to Michigan from the University of Rochester in 1988 and established the Center for Ultrafast Optical Science (CUOS) in the Institute for Science and Technology on the North Campus.

In 1990, in recognition of Mourou’s leadership in the field, the National Science Foundation (NSF) made the Center one of the nation’s 25 NSF Science and Technology Centers. CUOS received a grant extendable to 11 years that accounts for some $30 million in funding, after which time, like the other NSF centers, it will find new funding, move into its parent university or transform itself into something else.

No lab in the world produces lasers that pulsate faster than Mourou’s and his team of 50 scientists and graduate students. This year, in fact, he received the 1995 Wood Prize of the Optical Society of America for “introducing the revolutionary concept of chirped pulse amplification for laser systems to boost peak power to unprecedented levels.” The CUOS can generate laser pulses so fast that at first the available photodetectors couldn’t time them below 10 picoseconds (a picosecond is one trillionth of a second).

To switch from investigating natural phenomena because, like Mt. Everest, they are there to manufacturing and marketing products derived from your scientific knowledge is a tough challenge. Former U-M laser researcher Steven A. Williamson (see main story) credits a recently formed University unit, the Office of Technology Transfer (OTT), with helping him make that switch and found his own firm...

“We help faculty researchers and spinoff firms with promotion, exposure and advice in building partnerships with industries that need their imagination, expertise and investments,” says OTT Director George A. [Jay] Hartford, whose unit is part of the College of Engineering.

In addition to Picometrix, three other local firms have emerged as pioneers in the ultrafast optics industry: Medox Electro-Optics and Kaiser Optical Systems of Ann Arbor, and Clark Mox of Dexter. More firms are soon to spread their wings, and the state of Michigan may soon be a world center in the emerging ultrafast optics industry.

Hartford fits OTT’s operations in a bigger economic picture: “American manufacturers are cutting back research investments and pushing research on suppliers. Small and medium-sized corporations are faced with new research demands that they see as too costly. Meanwhile, the big research labs like Bell and AT&T are also reducing their research funding. The private sector has found that it is just as hard to transfer research out of their own labs into commercially productive ventures as it is to transfer research out of universities.”

The upshot, Hartford concludes, is that the nation’s university researchers and a variety of businesses and industries “have an opportunity to link together in facing the formidable economic challenges that have arisen at the end of our century and are likely to continue well into the next.”

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B-School Buys In To State's Economy

By JOHN WOODWARD

The University of Michigan is playing an increasingly complex role in the economic development of the state of Michigan, and in ways so varied and widespread that it is impossible to freeze-frame it long enough to fully number it. The series of stories that follow look at a few interactions—innovation, consultation, technology transfer, service, educational outreach—that are ongoing in just one unit of the Business School, the Business & Industrial Assistance Division (BIAD).

"The School of Business Administration established BIAD in 1987," says Marian Krzyzowski, director of the Division, "to provide management and technical assistance to small businesses and to assist communities in economic development."

BIAD programs are driven by faculty, staff, and students who factor in an array of social factors in determining what goes below the bottom line. BIAD is involved with more than 65 businesses or civic organizations in more than 49 Michigan cities; dozens of other firms and nonprofit agencies are now carrying on with activities that were successfully started through their ties with BIAD. The following are examples of the range of BIAD programs.

Saving Jobs in Grand Haven

The Challenge Machinery Company (CMC) in Grand Haven, on the southern shore of Lake Michigan, is the only remaining domestic manufacturer of paper cutters and paper drills for the graphic arts industry. The 125-year-old firm has had trouble finding the ropes. There were layoffs and even a sale of the company.

The firm was certified as "trade-impacted," which qualified it for 50-50 federal funding through the U-M Business School’s Great Lakes Trade Adjustment Assistance Center (TAAC), a BIAD unit directed by Maurenn A. Burns. TAAC’s mandate is to provide technical and management assistance to manufacturers in Michigan, Indiana, and Ohio that are hurt by imports and cutsbacks in military contracts. So far, TAAC has helped more than 100 companies turn their businesses around, saving or creating thousands of industrial jobs. Burn’s predecessor assigned TAAC senior researcher Sam Swaminathan to manage the project in 1993.

Challenge Machinery, a family-run business, was undergoing leadership problems, so Swaminathan temporarily relocated to Grand Haven and made many executive decisions while coming up with a TAAC Adjustment Plan. After several months, Larry J. Ritsema, a non-family member who had headed a Challenge division, took over the helm.

Ritsema and Swaminathan implemented a TAAC plan that reduced the product line by half, improved plant layout, cut tires with unprofitable foreign manufacturers, trained employees in quality-improvement practices and reorganized the board.

The Challenge-TAAC project was first place from the National Association of Management and Technical Assistance Centers’ rating of national programs that focus on the transference of academic-based information and knowledge to communities and businesses with the goal of furthering economic development. The citation credited TAAC with saving 169 jobs at Challenge and $6.3 million in employee wages and benefits, and preserving an additional 340 jobs for Michigan firms that rely on Challenge for their business. That was another $10.2 million for the state’s economy.

"From a business standpoint," Challenge President and CEO Ritsema told Michigan Today, "Challenge continues to improve, both from the help TAAC gave us and things we’ve implemented here on our own."

What Will Replace a U.P. Air Base?

BIAD’s University Center for Economic Development, directed by Lawrence A. Molnar and funded in part by the Department of Commerce’s Economic Development Administration, helps companies and communities meet global economic challenges.

"Developing reuse strategies for closed industrial and military facilities is one of the Center’s activities. This summer, Molnar and summer intern Allen White ’89 of Detroit, a graduate student in architecture and urban planning, are on a team working with the Sawyer Redevelopment Authority in Marquette to develop a reuse strategy for the Upper Peninsula’s Sawyer Air Force Base, which the Pentagon is shutting down. "I’m also working on BIAD’s statewide analysis of economic growth patterns,” White adds. “We hope to identify growing companies in various regions and analyze contributing factors for that growth.”

The Role of Technology in Economic Development

"The development and marketing of a new product can easily cost 10 to 20 times more money than was spent on university-sponsored research, so there is little room for mistakes, certainly not in the small to medium-sized companies that are the most likely to risk commercializing new technology. We are now seeing a gap. "Gaps are part of the University to help close this gap between basic and applied research."

After working with the technology for 15 years, Williamson decided in 1993 that it was time to risk acting on his belief in it. Because he had developed the pico-speed photodetector under U-M, he patented it under the U-M Technology Management Office, and then relicensed it from the University. Then he founded Picometrix, to develop these and other ultrafast optoelectronic devices. He’d done well making cream; now it was time to deliver milk.

Williamson credits Moutrou with "going beyond the call of duty" to accommodate what began as a one-man fledgling business inside the Center. "After he shielded me for a while, the NSF program made his support of such startups more official." Williamson says. "Technical transfer is part of the NSF funding mandate, permitting industrial firms to associate with the NSF Centers and use experimental space, an arrangement that gives interested academic researchers a chance to explore the feasibility of transferring research findings into commercial ventures. (Three other Michigan companies also have spun off from CUOS. See technological transfer story.)

Williamson now has four other former CUOS scientists in Picometrix. "I didn’t need the Center. Gerard’s team is made up of scientists who are researchers at heart, mine is more interested in commercial applications. Soon after starting Picometrix, I partnered with Robin Risser, who is our CEO. Rob knows the business of business inside and out. Having someone with his skills is critical for any new company."

Although Williamson will continue to rent microfabrication lab space from the University to take advantage of the facilities and "tremendous intellectual climate," Picometrix will relocate this summer.

"Not everyone is cut out for this risk," he emphasizes. "It took us $500,000 to develop our ultrafast photodetector. Next we’ll make a device that faithfully measures that electrical signal. This country has pirated the pumps in ultrafast laser technology for 10 years. Now it’s time to use this knowledge base for everyone’s benefit."

Where will the impact be made? "Maybe in the fields of medicine and transportation," Williamson says, "but certainly ultrafast technology will play an increasing role in optical communications. Regardless, Picometrix wants to be positioned to develop and manufacture ultrafast optoelectronics for existing and future industries alike."

Likely Benefits of Ultrafast Optical Systems

CUOS Director Gerard Moutrou is a practical visionary when it comes to the applications

Mourou

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An Incubator in Niles

Another BIAD-linked unit studying the Sawyer Air Force facilities is the Office of Research on Industrial Facilities (ORIF). ORIF is an interdisciplinary team from Business, Engineering, Architecture and Urban Planning schools and the Institute of Science and Technology. With private sector support, ORIF investigates the extent to which old buildings can be rehabilitated for manufacturing or community service.

One ORIF project, in Niles, Michigan, involves the state's economically stressed southwestern corner, celebrated in 10th anniversary this spring. When the Kaiser company decided to move its aluminum manufacturing business from Niles to Georgia in the mid-80s, the City of Niles bought the 90-year-old brick plant for a dollar. The Greater Niles Economic Development Foundation leased the building from the city and asked an ORIF team to help the city decide whether the building was a good site for southwestern Michigan's first small-business incubator. (Business incubators generally offer field testing businesses reduced rent, shared supplies and equipment, and consultation services for a limited number of years.)

“We assessed the market for the Niles incubator, told them what it would cost to convert the building, told them what their cash flow would have to be to keep it going, and helped complete the real estate deal,” Molnar recalls.

Armed with that information, the Niles groups established the incubator as the Center for Business Development (CBD) in March 1985 and, assisted by the local Hunter Foundation, made a 25-year commitment to the project.

“Why we’ve had 80 tenants,” CBD manager Deanna Wolford says, “is that we have hatched into ongoing businesses that have already created at least 100 local jobs, provide employment for the firm to stay in business, and we have 31 tenants now. Ours tenants share machines, ideas and referrals. The camaraderie is great; even after they graduate, they keep in touch with us and other tenants.”

Helping Entrepreneurs in Detroit

Two Business School students, Cordell Hines of Chicago and Mario Stein of Miami, are deeply involved in a small-business incubator project in Detroit. They are interns in BIAD’s Michigan Business Assistance Domestic Corps, a program that provides technical assistance to nonprofit agencies for approximately 14 weeks in the summer between their first and second year.

BIAD Director Stein, who heads the program, says the Corps began in 1993 with seed money from private donors and Business School Dean B. Joseph White, who emphasizes that School’s duty to help students learn that “strong economies and healthy communities are in the best interest of business.

When it began in 1993, nine students participated, Krzyzowski says. The number grew to 12 in 1994, and this year 20 MBA students are hosting their management and business skills through contributing to city government, community economic development programs and incubators that stimulate entrepreneurship.

“We work with MBAs with a conscience, but also with bottom-line skills,” Krzyzowski says. “The organizations they help have low funds yet and they need to be highly accountable for them. To help them do that, we have this incredible pool of young, talented people, and a pool of organizations that never had access to these skills.”

Hines is internship with the Michigan Neighborhood Partnership (MNP) incubator project. The incubator is a collaborative effort between the U-M, Wayne State University and local businesses including Ford Health Systems, General Motors and UNISYS.

In addition to shared services and reduced rent, the facility will seek funding for tenants through a venture capital fund.

Another BIAD spinoff allows many Detroit-area entrepreneurs the opportunity to start businesses without economic burdens due to under-capitalization.

Hines says: “This will ultimately result in a stronger local economy as new jobs are created by these firms. My role involves coordinating the efforts of the research team in writing the business plan, as well as taking an active role in preparing the financial projections. I’m also responsible for obtaining commitments from various financiers and educating the neighborhood member organizations about the business planning process. This is a dream rehearsal for the kind of work I want to do when I graduate.”

Stein is managing the Mercado of Mexicantown in Detroit, an 11-week open-air market that offers produce, prepared foods, arts and crafts and entertainment, and also serves as a microbusiness incubator. The Mercado is the key small component of a new international Welcome Center at the US-Canadian border. A joint project of the Mexican Community Development Center (MCDC) and Ambassador Bridge Corp., it will be the first privately owned welcome center in the country, as well as the first bilingual one. Groundbreaking for the center is scheduled for late 1995.

MCDC Director Sally Rendos says she and Stein “are putting economic development together, as well as taking an active role in preparing the financial projections. I’m also responsible for obtaining commitments from various financiers and educating the neighborhood member organizations about the business planning process. This is a dream rehearsal for the kind of work I want to do when I graduate.”

Stein, whose wages are paid by the federal American Express program and the Business School stipend, is conducting customer satisfaction surveys and vendor surveys “to try statistically determine what are the priority areas to focus on. I’m interested in management consulting, and this job gives me the experience in advising people in business planning processes. It’s a chance to prove myself!”

Good Conductors continued

“Our office” Harvard continues, “is a broker between techies and entrepreneurs and the state’s 18,000 manufacturers. We build avenues leading to cooperation and fruitful relationships.”

In addition to helping entrepreneurs like those who have moved out of the Center for Ultrafast Optical Science, OTT brings major manufacturers into University labs.

“Industry can work jointly with University researchers by paying a fee to affiliate with units like the Ultrafast Center and work side by side with our researchers in a state of the art lab,” Harvard says. Other interactions have led to greater cooperation between the OTT and the University’s Technology Management Office (TMO), which oversees the licensing and transfer of inventions and other intellectual property. Harvard reports that Robert L. Robb and Mitchell A. Goodkin of the TMO “are handling and structuring our new patentable innovation a week out of the College of Engineering alone.”

Other relationships with businesses are less formal but no less fruitful. J. Dowell Harrod, who heads the OTT’s industrial conferences, is strategically developing conferences that place U-M researchers and spinoff entrepreneurs like Steve Williamson of Picometric in touch with major industries.

Herold says that the Center for Display Technologies places MBA students interns at the University at the College of Engineering is trying to spark another major new industry in the state. He has organized conferences of University and industrial researchers so they can “stargaze on how to incubate a Michigan industry” from research and development to manufacture and marketing of flat panels and other high-tech display devices.

“The US flat panel industry is an infant phase,” Harvard says, “but those who have already started up as a result of our DTM Center. Japan is the leader in flat panels, but our state is a logical site for the industry. The big industrial users—auto and furniture industries as well as the computer industry—are strongly represented here. Aerospace and military firms would also be big users.”

OTT conferences are designed to establish good relationships between the faculty and industry by providing opportunities for consultation, establishing good relations and learning how to ease the transfer of technology from researcher to industry.

Herold says the industry representatives “give academic researchers a reality check by letting them hear the real-world results of manufacturing, engineering and scientific viewpoints.”

Among other important OTT-related partnerships are the following:

- The Astrom Group, in which the U-M has equity, produces cancer stem cells for medical research. Bernstein of Advanced Biosciences, MIT, and Aromis Prof. of Chemical Engineering, is the CEO. Aromis has already attracted more than $30 million in international investment.

- The Software Council, which links state universities and the U-M in developing opportunities to commercialize the Internet.-JW.
Regents say code must be revised

The Regents in April approved continuing the current Statement on Student Rights and Responsibilities, known as the "student code," and adopted President for Student Affairs Maureen Hartford to return in the fall with a simple statement of values that does not infringe on First Amendment rights.

The text of the Nebraska's concern on non-academic conduct an interim basis in January 1993 and has been reviewed by the Regents each year. In putting forth the motion, Regent Rebecca McGowan (D--Ann Arbor) said the Board wanted "a clear, concise statement, understandable and fair process, that is less legalistic and ponderous" than the current document.

The Regents also said that the drafting process for the new version of the statement should include "direct consultation with students who are popularly elected and others at her [Hardford's] determination." Regent and former Berkshire (R--Alfred) who voted against retaining the current statement on an interim basis, said that "codes of conduct written poorly can be speech codes" and said he thought Regent's Bylaw allows the president sufficient authority to act when necessary. Nevertheless, he said he might support a "simpler and better" code.

On the Thursday preceding the Regents' Friday vote, approximately 100 students entered the lobby of the Fleming Administration Building to voice their opposition to the code currently in force. "We are peaceable, nonviolent students who simply want to tell the Regents that we care and that the code is wrong," stated Flint Waines '96 of Birmingham, Michigan, who is the Michigan Student Assembly (MSA) president.

Some students said that MSA's judicial body should assume responsibility for handling student disputes, but others opposed that position, and argued that the courts should decide judicial matters and the University should stay out of the judicial system.

Regent Philip H. Power (D--Ann Arbor) said the code should function separately from the legal system: "And Regent Shirley M. McFee (R--Benton Creek) said the value of a code of conduct is to help students make the transition from a parent-dominated environment to one in which students have more responsibility for their actions. "Any code, any process, has to have an educational and participatory element," she said.

Students Against the Code rally at Fleming Building

Publication underscores U-M commitment to diversity

The Office of the President has recently published a monograph titled Diversity at the University of Michigan.

The nine-page booklet reaffirms the U-M's commitment to diversity and to the Michigan Mandate for increasing the number of faculty and students from minority groups that have endured systemic discrimination.

"The history of diversity at the University of Michigan has been complex and often controversial," the policy statement declares. "Yet, unlike many other universities, wide access and equality have always been a central goal of our institution."

The following excerpts from monograph illustrate the rich social strands that the institution has continued to weave into the fabric of the Michigan community:

"By 1869, 40 percent of our students "served" from other states and foreign countries. Today more than 100 nations are represented at Michigan."

"Native Americans became the first major donors when they were "persuaded" by General Cass during negotiations of the Treaty of Portage to give 1,290 acres of land. It was not until 1932, over a century after the gift, that the Regents established five scholarships for Native Americans."

"The first African American students arrived on campus in 1868, without official notice. In the years after Reconstruction, however, discrimination increased. Black students joined together to support each other. Early in the century and staged restaurant sit-ins in the 1920s."

"Michigan was the first large university in America to admit women students... the first women who arrived in 1869 were true pioneers, the objects of intense scrutiny and resentment."

"In the late 1800s, Michigan became one of the first universities to admit Asian students. We were the first university in the United States to award a doctoral degree to a Japanese citizen."

"Over the years, [Latino] students have formed a number of vibrant organizations. [but] Latinos face exceptional challenges on this campus, and the number of Latino faculty remains low."

"Naturally, equal opportunity and freedom from discrimination are the foundations upon which the University is built."

Copies of Diversity at the University of Michigan are available by calling (313) 764-6270; writing to the Office of the President, 2074 Fleming Admin. Bldg., Ann Arbor, MI 48109-1340; or sending an e-mail request to thardy@umich.edu.

Headway in '96 funding

After months of controversy, collaboration and compromise, Michigan's public universities made some headway in their bid for adequate financial support from the state of Michigan.

As Michigan Today went to press, a final higher education budget for fiscal year 1996 had been sent to Gov. John Engler's desk for the governor's signature.

The budget contained a $3 percent increase for all three U-M campuses plus an additional $8.5 million state one-time-pool from lapsed funds that is to be distributed to all 15 of the state's public universities.

The additional funds are slated for maintenance and technology purposes at the public universities. If the lapses do occur as expected, the additional funds will not be available until after FY95 closes on March 31, 1996.

The budget emerged from a joint Conference of the Legislature, which resolved differences between House and Senate versions. The Conference reports eliminated a specific reference of $308 million of the percentage of out-of-state students not exceed 30 percent in entering undergraduate classes.

That language was replaced by wording that included the following statement:

"The Legislature recognizes that a major obligation of the public universities is to provide undergraduate instruction to academically qualified citizens of this state. The public universities shall ensure that educationally qualified Michigan residents are afforded the greatest opportunity to attend these institutions. Michigan residents shall comprise a substantial majority of each university's undergraduate population. Further, the universities shall report to the chairperson of the House and Senate appropriations committees on higher education annually regarding their efforts to comply with the requirements of this section.

The 3 percent budget increase agreed upon in Conference would provide $288,746,982 to the Ann Arbor campus, $170,815,015 for the Dearborn campus and $17,916,994 for the Flint campus. Grand Valley State, Michigan State and Western Michigan universities received Governor Engler's recommended increases of 6 percent, 75 percent and 78 percent, respectively.
Speaking shortly after the murderous bombing of the Oklahoma City federal building, Commencement speaker Marian Wright Edelman called the atrocity "a loud wake call to every American about our homefront struggle for the soul, values and future of our great nation."

Edelman said that the nation has yet to answer the question Dr. Martin Luther King Jr. asked in 1968: "Where do we go from here, chaos or community?"

She stated that "something is out of balance in an America where 36,000 poor families with children lived on less income in 1993 than in 1991 anent world industry executive. Continuing to focus on the plight of children, Edelman made the following points in her address:

- "I'm like one of those middle class parents who cried a lot when my children went off to college. I hope we don't have to cry harder when you move out of our home."
- "If we tell our daughters not to engage in premarital and irresponsible sex and have children before they are prepared to parent and support them, and do not tell our sons the same thing, then we are a part of the problem and not the solution."
- "I hope we will stand up to political leaders who think it's OK to slash $46 billion from child nutrition programs and from child care and from student loans, in order to give a $189 billion tax break to non-profits. Donald Trump doesn't need another tax break. We need to educate our children."
- "I believe it is healthy to debate the roles of federal, state and local governments and of the private sector. I think it is healthy to assess what works and doesn't work in a reasonable and thoughtful fashion."
- "But I think we ought to slow down and understand what is happening in our great nation before we shred a 60-year-old safety net for hungry, neglected, abused, disabled and poor children, and for working families and average Americans, before we talk about change."

In an open meeting in March, Neal reviewed the grim statistics as they work to get a grasp on what the public expects from management education through an innovative package that providestudents with courses at the B School.

"The program here is just a baby," said Lynn Carbó-Goerlitz, an assistant professor of Spanish, who was involved in a similar program at Penn State. "Only Spanish and German are involved right now. But it is definitely growing."

One way the program can really grow if students take advantage of the "contract" LAC option, which involves independent work for extra course credit. Amrine said any student can approach any professor and set up a program to get LAC credit. So far, however, no student has contracted additional independent LAC credit for a normal English-speaking course. "We need to be moving toward more interdisciplinary types of courses," said Carbó-Goerlitz. "History, business and all sorts of students need to understand that language is useful to them and we need to provide them with courses that can teach them language and also be interesting to them."

Language Across the Curriculum

By Liz Dalton

The increased globalization of communication has made knowledge of foreign languages crucial for Americans in many fields. That is why the College of Literature, Science, and the Arts has expanded students' opportunity to gain proficiency in using languages other than English. A recent innovation in LSA is the Language Across the Curriculum (LAC) program, which combines language with such other disciplines as psychology or history to offer students an opportunity to strengthen and deepen their knowledge of German or Spanish.

"LAC is the future of language instruction at this university," said LAC committee chair and German Prof. Frederick Amrine. "We are committed to internationalization, and if that means anything, it means to study not only the literature of the country as a foreign language student, but other subjects as well. Language Across the Curriculum gives new definition to the language requirement."

The program is less than two years old but already offers a variety of classes for students to choose from: A psychology/German mini-course titled "Freud auf Deutsch,"" offers students a chance to read Freud's original lectures in German. "Calculus auf Deutsch" provides an unusual opportunity to do calculus work in German. Besides mini-courses, LAC offers additional sections for normal lectures such as History 476, "Latin America: The Colonial Period." The extra section reads and discusses the material in Spanish, and students earn one additional credit for the extra work. "The program here is just a baby," said Lynn Carbó-Goerlitz, an assistant professor of Spanish, who was involved in a similar program at Penn State. "Only Spanish and German are involved right now. But it is definitely growing."

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**M Global Blue!**

President James J. Duderstadt helped kick off an intensive 16-month Global MBA program for 40 top Business School students, all top officials of the Daewoo Group in the Republic of Korea, into a videoconference lab at the B School.

The Business School has forged a partnership with Daewoo, one of the world's 40 largest corporates, to provide management education through an innovative language program that includes videoconferencing, ongoing Internet communication, short in situ classes taught by the faculty in South Korea, and two terms of classes in Ann Arbor.
Peer instruction is one of the most effective recent innovations in higher education. At Harvard, physicsProf. Eric Mazur uses interactive computing during his lectures to immediately test students on how well they understand a concept he's just introduced. Each student answers a question on his or her hand-held computer. Those who catch on first are designated peers, and they then tutor those who pass while the peer instructors explain the concept to students sitting around them. Then the lecture proceeds.

University of Wisconsin chemistry Prof. Arthur Ellis adapted Mazur's technique and says it "makes the classroom much more lively."

Peer instruction and tutoring has operated at Michigan for several years in various guises in many departments. One such program is the decade-old peer tutoring program of the English Composition Board's Writing Workshop. Students learn to tutor in a first-semester seminar, then receive credit for tutoring fellow students who want help in writing research papers.

Karen Sabgir, a 1993 graduate from W. Virginia, Ohio, describes the program and its adoption of new information technology from the student-tutors' point of view in the stories that follow.

The The flies with and

Computers are increasing the effectiveness of student peer tutors

By Karen Sabgir

The Angell Hall Computing Center where I worked is open 24 hours a day, a great resource for students doing research or writing papers. But it still presents a daunting and sometimes disorienting atmosphere at 9 p.m. the night before a paper is due.

Students, with their heads clutched to their knees, working on the clicking cursor in front of them, can't help but notice that theirs are among the few quiet keyboards in a room of about 500 beamng computer screens.

When I first started tutoring two years ago, the thought of trying to help a desperate writer frightened me. All the details—grammar rules, thesis statements and general topics—are just that, details. I was scared of giving wrong advice or, worse, ruining someone's grade.

Papers, even with topics like the Mongolian writing system, are personal. Anytime you transfer something from your head to a sheet of paper, something personal latches on and is unveiled for all to see. Even after a couple of years, one section of ECB 300 was offered a year; then, after a couple of years, one section per semester. The paid student tutors jumped from 16 tutors to 27 last winter; the number of conferences increased from 200 during the 1991-92 school year to 727 during the 1993-94 school year.

Why have peer tutors? "There are two reasons," Condon says. "The first and probably main one is that they have grammar problems, so they tell me to go to a trained peer tutor, which is not always the case.'

Student interest in becoming a peer tutor has grown with the demand. When the program started, only one section of ECB 300 was offered a year; then, after a couple of years, one section per semester. Starting next winter term, two sections will be offered each semester. The paid student tutors jumped from 16 tutors to 27 last winter, this winter, the number of tutors will double.

The English Composition Board seminar where students train to become Writing Workshop peer tutors began with lots of reading and discussion about the theory and practice of tutoring. Then the 20 of us split into groups by our majors and discussed characteristics of writing from our disciplines—English, political science, archaeology, psychology, marketing, kinesthetics and chemistry in my seminar.

We wrote papers about the genres of writing and distributed drafts around the class. Like amateur beauticians, we all had dummies on which to practice; models who could stand if we were too modest or used too much force.

We began with real paper in our hands and interacted with each other face-to-face, but soon our instructor, Barbara Monroe, introduced us to interacting in cyberspace. Monroe united us on our own computer "virtual conference," and we began to comment without looking anyone in the eye. Soon we were referring to face-to-face contact as "FLI".

We downloaded our papers and copied them to each other, I would pull up a copy of a classmate's paper on my screen, read it and e-mail my comments back for him to pick up at his leisure. At the same time, I was receiving messages from members of the seminar with general comments and specific questions about my own paper.

All of this served as an incubation period for theOWL—the On-line Writing Lab—when it was piloted last fall. Pilot clients "flew" OWL by simply sending an e-mail message to owl@umich.edu, requesting a cybertutor's suggestions on papers-in-progress.

Then last winter, two tutors, Jonas Kaplan and Brian Abrams, along with their instructor, Becky Rickly, put the OWL on the World Wide Web, where it can be reached at http://www.umich.edu/~nesta/OWL/owl.html.

This fall, the OWL officially takes flight, offering its services campuswide on both (email and the Web).

Students can send their papers to the OWL at any time, along with a brief description of the assignment and of the help they seek. OWL tutors read client requests daily, guaranteeing a response within 48 hours. Even though the OWL wasn't open to the public last year, usage increased beyond the pilot client group, the news spreading by word of mouth.

Virtual conferences are conducive to hectic schedules because tutors have time to think about

Before becoming English Composition Board (ECB) peer tutors, students must complete an intensive training course, ECB 300. The next semester, in ECB 301, students begin tutoring on-site for academic credit. After they complete ECB 301, tutors are certified and may earn $8 an hour.

Peer tutoring is a small fraction of ECB services, which also include assessing all students' writing, teaching practicum (classes and administering upper-level writing requirements.)

ECB director Bill Condon is pleased with the positive feedback from students who seek help from peer tutors in ECB's Writing Workshop. The evening hours (usually 7-11 p.m., convenient locations (Angell Hall, North Campus and various residential halls) and lack of professional authority and intimidation are special to peer tutoring and a big draw for students who want assistance. The number of conferences increased from 290 during the 1991-92 school year to 727 during the 1993-94 school year.

When the program started, only one section of ECB 300 was offered a year; then, after a couple of years, one section per semester. Starting next winter term, two sections will be offered each semester. The paid student tutors jumped from 16 tutors to 27 last winter; this winter, the number of tutors will double.
Computers boost students' yield in research on ancient plants

By John Woodford

Paleoethnobotany is the study of how people used plants. It involves determining which plants were collected and managed, and how they were used, whether for food, fuel, decoration or tools. How did people process the plants? How did they detoxify other poisonous plants for food? When did they learn to cultivate various plants? What were the effects of consuming specific plants?

Addressing these and other questions requires collection, sorting and organizing huge amounts of data not only from archaeological sites, but from laboratory work and research projects from several disciplines as well, including anthropology, history, biology, botany, biochemistry, ecology, nutrition, public health and wildlife sciences.

To help his graduate seminar students develop expertise in this challenging field, Richard I. Ford, Arthur F. Thurneau Professor of Anthropology and Biology, and chair of the department, worked with Todd Fakoori of the Information Technology Division's Office of Instructional Technology, who designed a group software database especially for the class.

"It's a shared database," Fakoori said, "which allows students to work and communicate with each other simultaneously from their individual terminals. This permits them to share data among themselves, compare and contrast them and discuss their findings and ideas." The database also contains data from research projects throughout the world.

"Now we can sit in that class and collect and examine data from around the globe," Ford said. "I might tell the students that a certain edible grass was deficient in the amino acid lysine, and then ask them if any other food in the prehistoric menu might compensate for the deficiency. They can pull up all of the data on the grass, on other foods the people ate, on the nutritional value and composition of each, and look for a pattern in the food use that might suggest a source of lysine."

"Or," Ford continued, "I might ask whether domesticated plants have greater yield than their ancestors. The students can use the database to study the fluctuations of the yield of the wild ancestor, and see how domestication of the plant stabilized the annual yield. They can derive these generalizations themselves rather than have me telling them what happened. We can share information from one to another and learn from each other. The computer aids in the democratization of education and promotes collegial sharing."

Each student becomes an expert on a single plant, placing in the database and exploring all the literature about its origin, history, geography, use, nutritional value, effect on ecology and so on. This mastery of information about a single plant leads to deeper discussion of paleobiological issues.

Liz Sobel, a doctoral candidate in archaeology, focused on a member of the family Chenopodiaceae that is commonly known as gooseweed, lamb's quarter or pigweed. Its domestic relatives are still valued for their nutrient content. Sobel has been working on an ancient record of Chenopodiaceae in the historic era.

"The plant's earliest archaeological record is about 3,500 years ago," Sobel said. "It appears to have been domesticated in what is now Tennessee." The plant's seeds have been discovered in storage pits, old woven bags and "middens"—the archaeologist's term for garbage dumps. The seeds differ in shape from the seeds of wild varieties and also are more wealth "probably because they had the advantage of having more edible species that could be domesticated," Ford said. "In the Americas, aside from the dog, only the alpaca and llama were available, and they lived only in the high Andes of Peru and Bolivia."

Pocket Fluff and List, and the Ethnographers' Trut. MOOs can get bogged down with gossip and chatter, but they do provide a forum for live discussions in any field, building international lines of communication for both academicians and novices. While MOOs cover numerous academic areas, from biology and astronomy to post-modern culture, peer tutors have discovered other MOOs and conferences across the Internet where they can hold virtual and real-time conversations about their work.

ECB Lecturer Becky Ricky, who helped Michigan students make alliances with other universities, directed peer tutors to various sites, including the Writery in the Daedalus MOO, where one evening we spoke with peer tutors and directors of peer tutoring programs nationwide.

In a two-hour session we debated the advantages and disadvantages of on-line tutoring; we described our successes and our trauma with different kinds of students, and we also had a few moments to kick back and enjoy an icy-cold virtual drink.

Sessions at the Writery and other computer conferences, extensive use of the OWL, plus brief jaunts through the World Wide Web, have enabled many of Michigan's peer tutors to take advantage of as well as acclaim themselves to the Internet—a daily-expanding means and resource to people and information across the globe.

For more news on the OWL and interactive writing MOOs, contact the Web address in the OWL story above, or Barbara Monroe at bmonroe@umich.edu. The phone number is 734-763-7200; the e-mail address is beckystef@umich.edu. For general campus computing information, write to the Information Technology Digest, 325 W. William, Ann Arbor, MI 48103-4943.

Pocket Fluff and List, and the Ethnographers' Trut.
Talk English, kid, I'm dying here!

A scene from Nicholas Delbanco's In the Name of Justice: The Philadelphia. Harvey Andrews, who has founded a hospice for hospital patients with terminal disease as Trowmen-Andrewes medical center. Andrews has just learned his heart is failing. He discusses his options, and the hospital's medically-unsupportable death threat, with his medical proctor (and suspected murderer) Dr. Peter Julius.

Through all of this, Harvey Andrews becomes more and more desperate. He is not ready to go. He is not ready to die. He is not ready to accept the hospital's medically-unsupportable death threat, with his medical proctor (and suspected murderer) Dr. Peter Julius.

"Talk English, kid, I'm dying here!"

"But I'm not dead, yet!"

"Yes, but you are!"

"No, I'm not!"

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"Yes, you are!"

"No, I'm not!"
My father and grandmother moved back when my father was only 8—a grandfather position recently confirmed by the latest DNA test. That name was prominent in our own family history.

The Evil Dr. Holmes YOUR ARTICLE noted that a former student, Jam Handy, had gone on to achieve some fame following his brief attendance at Michigan. You might be interested in the enclosed article which I wrote for the May 1973 issue of University of Michigan Medical School publication, describing the activities of a Medical School alumna who went on to achieve fame for a somewhat different reason. 

John W. Livingston, MD
Bessemer, Alabama

Jam had a collection of paddle boards, and the three of us would paddle to the Dexter Yacht Club and back. Jam even had one with a sail which he operated in the groyne position while steering with his feet.

The last time I saw Jam a companion helped him sit on the edge of the pool. Jam put his feet in the water and gently kicked. He couldn’t get in or out of the pool even with help, but he still wanted to swim.

Jon Heinrich ’76
Southfield, Michigan

Clicking in the Classroom SINCE THE ARTICLE on multimedia (‘Guernica’ of the Holocaust,” Barbara Hurst in the May 1977 Michigan Songbook, Deadline for Contributions) has created a buzz among the University of Michigan community, it is imperative that we spread the word about this great opportunity. The deadline for submission is this Friday. All proceeds benefit the UM School of Music Scholarship Fund.

Editors’ Note: Dr. Livingston recounted the story of an 1887 graduate of the Medical School, H.W. Macagie, also H.H. Holmes. Holmes built a large house in Chicago that is known as ‘Necropolis Castle’ for its secret passages, its vines and under-ground laboratories. ”Not content with the removal of his formal name, apparently women of unusual beauty,” Livingston wrote. ”Holmes entered young ladies into his castle, and after evening dances, or whatever form of evening entertainment they saw fit, they were deposited in the basement via the chute and when their husbands came looking for them, they were found dead in a pulp mill.”

Victorian sensibilities would welcome such a mild murderer now. Nowadays, the cosmetics industry and the Star Spangled Banner

JIM HENDRICKSON

MICHIGAN SONGBOOK

Checks should be made payable to: UNIVERSITY OF MICHIGAN MUSICOLOGY FUND

MBA

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All proceeds benefit the UM School of Music Scholarship Fund.

Pueblo West, Colorado

Holocaust Painting

In reference to the March article, ‘The Generosity of the Holocaust’ by Bruce Zeter is treading on very sensitive ground.

Susan (A John) Maudlin Pueblo West, Colorado

Ann Arbor, MI 48106 • 313-665-7408

DVDs

Address

Name

City, State, Zip

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Saturday, June 10, 1989

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3-400

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Clicking in the Classroom

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THE JAM HANDY SAGA

IT WAS FASCINATING to read in the March 1995 issue of the University of Michigan’s Jam Handy article about Prof. Thomas Trueblood’s class in “Love Making.” Today’s administra-
tors would wel.

THE JAM HANDY SAGA

IT WAS FASCINATING to read in the March 1995 issue of the University of Michigan’s)
marshland, with her suggestion that this painting, by Azriel, 1846, been given official recognition. Why? Barbara Zetter wants Jews, especially, to see Hitler raised to such an exalted posi-
tion? To place this disagrcement above the myriaded souls who died at his hands, indicates that someone is not understanding the horror that was the Holocaust. This painting is an affront to every Jew. Yael Waisman was greatly offended by this painting.

Zetter further concludes that academia "neglects to present works from the Holocaust." Only now are survivors telling their stories. I AM ONLY indirectly related to U-M know was how many of us he influ-

versus Georgia Tech. For many of us unfortunately equates the Holocaust to his hands, indicates that someone is not

This episode labeled me forever left with a racial dilemma. They solved a Caucasian girl found a conscience that 1

out of town to scout a future team.

However, the night before the game, because of the threat of a campus school with screams of student anger, and "Kill Georgia Tech" was heard throughout the stadium we did. I don't remember the scene on the field, but football players left field on stretchers.

This overprotected, Northern, Conciliatory attitude that day, as did many others, as we began to understand the degradation of minori-
ties. This episode labeled me forever, had its effect.

Women. "In the next column Provost standing tradition with the U of M. A..." I WAS PLEASED to see the short to my life. No one could read my article on "Alan Curtis D. Thanya, an outstanding specialist in Romantic poetry." I was pleased to see the short article on "French and Spanish civil wars." I

There Oughta Be a Law

even though I moved to Dayton in 1949 and served on the Legal staff of the US Air Force at Wright-Patterson Air Force Base for 3 years (1949 to 1982), the U of M and the Great State of Michigan have always retained their deep appeal for me. It occurred to me that some of your readers may have missed a letter I published in May, 1962 Michigan State Bar Journal. The letter's story is based upon a real event which occurred in our back yard more than 50 years ago when our then-7 year-old daughter Carol had stopped her stuffed Easter Bunny in the presence of a playmate's Staydog in the back yard. In recovering the bunny, Carol also obtained a dollar bill from the dog's mouth. Neither child knew the dollar's origin but both claimed it after Carol returned home.

An eventful trial, but it raised issues of the operation of legal principles of finding a dollar bill. Receiving a Law is a marvelous tradition, but there are events in which the operation of constitutional law principles becomes humorous.

Incidentally, my family has a long-standing tradition with the U of M. A great uncle, Elliot Wilcox, was in the Michigan Legislature from Pontiac, and in 1867 introduced the resolution which authorized coeducation at the University of Michigan in 1899, the first year that the fight song "The Victors" was published. Archibald W. McMillan, '35, '88 Law Day, Ohio State University, which had its first successful program last June, is dedi-
cated to provide training to women in the business of running for office and running a campaign: field work, fund raising, media relations and strategy. The key to change is positive power. I hope that the women at Michigan persevere not only with mail, but by insisting on monthly meetings until a plan is firmly established and a medium of success is achieved. Actions speak louder than words! Joyce Donn Hirschhorn '46

Michigan team and the University was

New York Times

I AM ONLY indirectly related to U-M know was how many of us he influ-

ties. This episode labeled me forever left with a racial dilemma. They solved a Caucasian girl found a conscience that

I WAS PLEASED to see the short article on "French and Spanish civil wars." I

The Origins of GO BLUE?

THE LEFTREN described as a couple dyed-in-the-wool Michigan fans who "named professors," nor was any among the 1943 and 1944 football teams in 1949.

The Leaders of the Band

the "longest hour" of the redshirts' day. I WAS PLEASED to see the short article on "French and Spanish civil wars." I

Michigan persevere not only with e-

THE LETTER describing a photo of a

women on corporate boards. In the last

millions benefit from the Ann Arbor Area Community Foundation, a non-profit organization that funds civic and social projects.

michigan today

11

...and a Forgetting?"

I AM a graduate of the class of 1932 but I still tell my grandchildren about U of M. However, I have a wonderful memory of a gentleman who taught a course on World War I history at the University of Michigan in 1931 or 1932. What was his name? I cannot remember his name but he was so much to my life. No one could read Wordsworth as he did. There must be other books that were influenced by his teaching: Josephine Work Balassone '32

Doris Kays Kraushaar - Photographer

Doris Kays Kraushaar - Photographer

Keep Your Reference Letter File Active and Up to Date

To maintain a current, active file, a student or alumni/must have conducted one or more interviews with potential employers; or have completed an internship or employment process; or have received new letters to the file; or have a new degree, address, or newly acquired job. (e.g. current address, telephone or newly acquired degree).

Each year, 2000 new letters are filed for inclusion in your file. There is no charge.

To reactivate a file that has not been directed to: Reference Letter File Active and Up to Date

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DONORS SHAPE FUTURE THROUGH STUDENT SUPPORT

By Rick Krupinski

A 1960 when Andrew White, professor of history and of English literature, established with the Regents the first formal scholarships at the University of Michigan, he did so for reasons other than providing financial aid.

Student costs were less than $400 a year then, so it was relatively easy for students to work their way through college.

White, who went on to become Cornell University's first president, was establishing awards $100 prizes to challenge all the students of the Literary Department.

Now, scholarships provide an indispensable form of financial aid and often become the deciding factor not only in students' ability to attend their schools-of-choice, but also in a school's ability to attract top students.

Like Professor White, today's Michigan benefactors often designate their scholarship gifts in ways that broaden benefits beyond aiding students; they often direct funds so as to make an impact on disciplinary fields, social issues or geographical regions in which they have special interest.

From establishing scholarships for students from their high school or local area to encouraging students to enroll in certain fields, donors find that helping prepare tomorrow's leaders in ways close to the donors' hearts offers an appealing means of personally shaping the future.

Civitas Initiative

In the School of Social Work, the Civitas Initiative, a national nonprofit program established by Chicago attorney Jeffrey Jacobs, honors scholarships and practicum stipends for two years with $2,000 gifts to the School totaling $40,000.

Civitas (a Latin word that means “citizenship” or “community”) supports talented students committed to taking their education and skills directly into the community. Students who receive Civitas scholarships pledge to use their degrees and training to benefit maltreated children and specifically to pursue careers that directly serve such children for the same number of years for which they received Civitas awards.

Jacobs, who is not a U-M alumnus, has established Civitas programs at Loyola School of Law in Chicago to train law students to become specialized advocates for maltreated children, and at Baylor College of Medicine in Houston to train child psychologists and mental health professionals specializing in abused and neglected children.

"I believe that if we train professionals who want to come into contact with these children," Jacobs says, "then we can reduce the cycle of crime and violence. By providing children, we protect our community and make it safer. Child protection is tantamount to crime prevention."

The Bentley Scholars

For students in the College of Literature, Science, and the Arts programs, the Alvin M. Bentley Foundation in 1983 established the Bentley Scholarships for Michigan residents who have demonstrated academic excellence and promise.

The late Alvin Bentley '40, '63 AM was active lifelong in government and civic affairs. He served four terms as 8th District representative to the US Congress, and, with his wife, Arvelia, created a legacy for Michigan students that stands as one of the premiere programs of student support.

The Bentley Scholarship provides $7,500 annually for four years, conditionally on remaining in good academic standing. Two scholarships are awarded to incoming freshmen each year, maintaining eight Bentley scholars at the U-M in any given year and encouraging the brightest and best of Michigan resident students.

Bentley Scholarships are matched by LS&A Dean’s Merit Scholarships of $3,000, bringing the total award to $10,000 a year.

Martin Luther King Scholarship

'To honor and continue for future generations the ideals of the Rev. Dr. Martin Luther King Jr., the U-M's Alumni Association and its African American Alumni Council have awarded the Martin Luther King Scholarship since 1982. Supported by alumni contributions at all levels, awards are given to exceptional incoming African American freshmen to defray first-year costs and increase student numbers. "Winning it gave me confidence; it meant a lot to have the University of Michigan say, "Yes, you can!" adds Dr. Bega, who went on to graduate from the U-M Medical School in 1992. She is now completing her residency in geriatrics at Cambridge (Mass.) Hospita,

As the cost of providing education has increased, so has the University's efforts to see that students obtain adequate financial aid. Scholarships complement federal and state grants and loans, and provide varying levels of support to meet the needs of individual students. Some scholarships are awarded on the basis of need, others on merit, and still others on a combination of merit and need.

"Winning it gave me confidence; it meant a lot to have the University of Michigan say, "Yes, you can!" adds Dr. Bega, who went on to graduate from the U-M Medical School in 1992. She is now completing her residency in geriatrics at Cambridge (Mass.) Hospital, which is associated with the Harvard University Medical School.

Michigan has been saying "Yes, you can!" to students for a century and a half, thanks to the foresight and generosity of countless benefactors.

Huetwell bequest helps many projects

The University received a gift of nearly $16.8 million from the estate of Frederick G.L. (Fritz) Huetwell '38, a longtime Michigan friend and benefactor who was profiled in the March 1995 issue of Michigan Today. Portions of the Huetwell bequest will support the University's School's endowments, the University Library, student financial aid, the Michigan Speech and Hearing Camp, the University Marching Band, and construction of an Arts Ador campus Visitors Center.

The Visitors Center, a 19,000-square-foot addition to the Student Activities Building on Maynard Street, will be named in Huetwell's honor.

Beneficiaries of additional portions of the estate are yet to be designated – RK.

UNIQUE CAMPAIGN

Scholarship variety meets a variety of needs

Unlike Professor White's students in the 1860s, today's students face a college education pricing that can easily seem out of reach. Tuition for undergraduates is 250 times what students of the mid-1860s paid, and rate of state general costs have multiplied 572 times. Now "working one's way through college" is but one component—rather than the sole means—of financing a college degree.

As the cost of providing education has increased, so has the University's efforts to see that students obtain adequate financial aid. Scholarships complement federal and state grants and loans, and provide varying levels of support to meet the needs of individual students. Some scholarships are awarded on the basis of need, others on merit, and still others on a combination of merit and need.

Ranging from one-time honorariums of $250 meant to supplement other forms of aid, to programs like the Colton and Bentley scholarships, which cover all or a major portion of four-year expenses, Michigan's network of financial assistance has made it possible, year after year, to meet the full financial need of Michigan residents—and some non-residents—who apply and qualify for aid.

Scholarship funds are primarily supported by gifts of any amount from individuals and corporate donors and often honor alumni, mentors or loved ones.

The Campaign for Michigan seeks to increase endowed scholarships, including the Campaign's goal of $125 million to increase the number and the amount of scholarships and fellowships offered to University of Michigan undergraduate and graduate students—RK.

For information on making a gift to U-M scholarships, contact the Campaign for Michigan at (313) 998-6000 or the Office of Financial Aid at (313) 763-4119.
**Screenwriting Guru**

**By Brett Forrest**

“I am an institution,” Bob McKee says. “I’ve become famous in the strangest way anywhere in Hollywood ever has.” A 1991 Wall Street Journal article noted that McKee has become a millionaire by charging $1 million for a story roughly 100 pages in length. Is that wildly out of order? “For a million. Yes, $6 million for a story roughly 100 pages. One percent of what it’s going to cost them to make the film is the writing. One percent. I don’t know what Michael Crichton got for Jurassic Park, but it was not enough.”

McKee says his style comes not from dramatic, but confidence in his knowledge, much of which he says he gained during his 10 years at Michigan, where he earned a BA in English literature in 1963, his MA in ’65, and also studied cinema arts. “It was such a conducive environment for learning. The camaraderie, and spirit was just so pleasant, so pleasing, he says of Michigan. “I had a terrific education.”

It was at Michigan that McKee laid the foundation for his insights into story-telling. He directed and/or acted in over 30 theater productions. “There was a stretch there senior year where I was auditioning for one play while I was directing another,” he recalls. “I did nine major productions in a row.”

Since leaving Ann Arbor, he has appeared on Broadway and studied Shakespearean production at the National Theatre in London as an artist-in-residence. He was also a story analyst for United Artists and NBC and served on the faculty at the University of Southern California School of Cinema and Television, where he developed his Story Structure class.

His strongest love, however, is for writing. He has penned episodes for the television shows Quincy, Columbo, and Spencer: For Hire, and his program Abudram appeared on TNT last winter. And he won the BAFTA Award (England’s equivalent of an Emmy) for best arts program of 1991 for Enemies Civilen Knee, a television program he wrote and hosted.

He confesses, however, that even though he’s sold all nine of his screenplays, he still lacks a screen credit. “The world is full of people who teach things they themselves cannot do,” he says by way of explanation. He cautions his students that it takes 10 years of working at the craft before one can possibly expect to write a screenplay of top quality. That’s a decade of solid dedication.

McKee still pursues that first credit and his ultimate goal of directing a film. Meanwhile, he continues to teach what he knows well. “There are certain aesthetic principles of the nature of an art form that distinguish music from noise, painting from a doodle and aimless meandering from a story,” he says. And for a measly $435, he will explain the difference to you.

**Craig Taborn ’95: Non-Piano Man**

**By Joan Wodarz**

“Craig Taborn ’95 arrived at Michigan, he’d already studied piano, musical theory and composition with university professors in his hometown of Minneapolis. And when he moved to New York City after graduating this April, he’d already released his first CD, The Craig Taborn Trio (Trio Records, Tokyo, 1994).

Gigging several times a semester in New York, Europe and other jazz meccas with Carrer or with his own trio prolonged Taborn’s undergraduate career. He regrets that his performance schedule forced him to take an extra year and not graduate when he was here, but somehow never got around to it.”

What he did get around to was jamming and performing with various School of Music jazz groups in the Jazz Program directed by Prof. Ed Sarărah, and with Detroit jazz artists. The musician Taborn would later really hit his stride with his now-comcoming jazz giant James Carter, the Detroit saxophonist who, like Taborn, is 25 years old. Taborn is the pianist on all three of the James Carter Quartet’s highly praised CDs released over the last two years: J.C. On the Set, Jaimant Classics and The Real Quintetts. The second force, Taborn says, is trumpeter-
Non-Piano Man continued

One critic has described Taborn's own aesthetic as "serious whimsy," a productivity that parallels his taste for "old stuff" is the canon," Taborn says, "and I tend to be stiffly?

wittily titled piece "David the Golliath," on his CD signaled to many reviewers that the piano, by which he means making the piano sound more like the African balafon, a forerunner of the xylophone, or arranged instruments like the kora, "I don't even hear a piano when I work with harmony and melody in my own music, and I like acoustic instruments. But I can be quite detail-oriented about the composed section, and lay down in great detail what everyone is supposed to do and how they should do it." The composer, wittily titled piece "David the Golliath," on his CD signaled to many reviewers that Taborn has a shot at slinging his way into the back of an airliner seat. Taborn and fellow mechanical engineering team members Gary Bruff, Chad Reid, Derrick Anderson and Jason Schultz designed and built this prototype for alan Scott Halpert, a local entreprenuer. Halpert thinks the device would not only help passengers bothered by popping ears, but relieve passenger demands on stewardesses as well. After designing the dispenser and making a wooden mold, the students got it vacuum-formed in plastic. Electrical engineering students gave them a hand with the electronics. The machine is 5' x 5' by 3', holds eight standard-size packs of gum and complies with FAA safety regulations.

Twenty-eight other student projects were displayed at the Department of Mechanical Engineering and Applied Mechanics third annual exposition of the work of students in ME 659- Senior Mechanical Design. Most of the projects were sponsored by state industries, including General Motors, Johnson Controls, AM General, ITT Automotive, Ervin Instrument-PDC, Sarns 3M, Aeroquip and the NTN Technical Center. Oh, yes: the tiny vending machine worked reliably, and its designers pointed out that it could dispense products other than gum just as well. -JW.

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By Liz Dalton

As "Hall to the Victors" blared triumphantly in the background, the Wolverine men’s swimming and diving team stepped forward to accept the NCAA championship trophy March 25. It was U-M’s 15th NCAA title in all sports, tying Ohio State for the most all-time national championships ever, and U-M’s first since the basketball title in 1989.

"This victory was not just for today’s team," said swimming coach Jon Urbanchek ’61, who was also named NCAA Men’s Coach of the Year. “Since ’85 we’ve gradually been climbing a step higher each year, and all those kids have worked to allow us to take this final step. This championship is for the people who’ve helped to build this team for the past 10 years.”

The swimming and diving team was truly ready for such a victory; this was their first title since 1981, when Urbancheck himself captained the team and U-M was a ship without a compass.

In this year’s championship meet, the Wolverines led from start to finish, and have now won the title in each of the three three-year defining championships and top-rank Suffolk, 561-475. Auburn nipped Texas A&M by six points.

The Michigan team was led by sophomore long-distance freestyler Tom Dolan of Arlington, Virginia, and senior sprint freestyler Gustavo Borges of Barbosa, Brazil; the All-Americans are swimmers who have been to nationals at the meet to score a perfect 60 points. Dolan not only won all three individual events in which he participated, but set collegiate and national records in every single event, earning him the honor of being named 1995 NCAA Swimmer of the Year.

"This is a great feat for me, but I can always get better," Dolan said. "The great thing about swimming is that you can always cut time off the clock, you can always improve." Senior captain and Olympic silver medalist Borges ended an amazing career at Michigan by also winning all three individual events in which he competed, bringing the number of his personal NCAA titles to 19. Before the team took the championship, Borges said, "I think our ultimate goal is to win the NCAA title for the team. I would give up all my individual titles in this meet to get a title for the team." As it turned out, he had his cake and ate it, too.

Diving Coach Dick Kimball, who has both the male and female diving teams, has marked his 36th year at the helm since graduating in the class of 1959, singed out All-American Abel Sanchez ’95 of Ann Arbor and honorable-All-American Alex Bogaerts ’96 of Troy, Michigan, from the men’s squad.

Top female diver Carrie Zarzecki ’96 of Rockford, Illinois, was at the Pan American Games during the NCAA’s. "She won a bronze there, and later won the US nationals," Kimball said.

The swimming and diving program at Michigan is often overlooked by fans of the more high-profile "revenue" sports like football, basketball and hockey; yet, the men’s swimming and diving team has won more NCAA titles than any other varsity sport at Michigan.

The women’s team coached by Jim Richardson almost made it a double-championship for the Wolverines, finishing a close second in their NCAA tournament while setting 11 Big Ten and 13 school records.

For high academic performance, the swimming and diving program attracts academically talented athletes from across the globe—in addition to Borges, there are stars Derya Buyukuncu from Turkey and Marcel Woods from the Netherlands, as well as several Canadians.

The top two swimming schools are Stanford and Michigan, and both are great academically," said Urbanchek. "The only thing against us is climate. We’ve got the only swim team in the Snow Belt to win the championship in the past 22 years, or Indiana took the title in 1973. All the other championship teams have been from the Sun Belt. But when you’re dealing with some really smart kids, the geographical climate is not as important as the academic climate and the swimming climate.”

By Brett Forrest

"If you had never seen a hockey game before, the voice boomed over the Providence Civic Center after Michigan’s triple-overtime victory over Maine in the 1995 NCAA Hockey Championships, “this was a heck of an introduction.”

And so it was. The game—the longest in NCAA tournament history—fell just 1.51 shy of topping college hockey’s all-time longest list of longest contests. The two goaltenders combined for 19 saves, holding the teams scoreless for a span of 45:37. Many in attendance called it the finest hockey game they had ever witnessed.

But the exceptional quality of the marathon matchup was little solace for a Wolverine squad that has ventured to the Final Four of the last quarter of a century, only to be sent packing in the semifinals three times.

"We didn’t score maybe when we should have against Maine,” Wolverine coach Gordon A. (Red) Berenson ’62 said. “But I feel really good about Michigan being one of the top programs in the country.”

When Berenson, a former Wolverine and professional star, took over Michigan’s hockey program in 1984, the team was a ship without a compass. Now, after 11 seasons behind the bench, Berenson has steered his team steadily closer to a national title, and surprised Turbo just 28 seconds into the third extra period.

Although he knows championships are rare (10 different teams have won the national title in the last 12 years), Berenson says it’s only a matter of time until his club wins it all.

"I played 17 years in the National Hockey League and won one Stanley Cup—and I felt good about it," he says. Whether or not Michigan wins an NCAA crown with him behind the bench, Berenson knows how to train a team to always give its best shot. "It’s like eating," he says. “Some days you eat better than others. But you never stop eating.”

Kovach, Griffin lead softballers

The Big Ten Champion Wolverine softball team coached by Carol Hutchison made its second appearance in the eight-team College World Series after sweeping three straight in the regional in Ann Arbor. U-M finished third in the nation in 1982, but bowed out quickly this year after losing its first two games. Like the hockey team, the softballers participated in a disappointing record-length game. Their 9-7, tournament-ending loss to Iowa went 14 innings.

Led by two All American pitcher sluggers, senior Kevin Sullivan of Plymouth and sophomore Sara Griffin of White Lake, Michigan, the team posted a 59.10 mark heading into the World Series in Oklahoma City. For the season, Kovach batted .347, and posted an 18-3, 1.43 e.r.a. on the mound. Griffin hit .444, and had a 1.39 e.r.a. while going 21-6 as a pitcher. This month was supplied by shortstop Kathryn Gleason ’96 of Country Club Hill, Illinois, third- sacker Tracy Carr ’96 of Columbus, Michigan, and centerfielder Cheryl Percy (337) of Semi Valley, California, the team posted a 60-10 mark heading into the World Series in Oklahoma City.

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HOWARD RETURNS FOR DEGREE

Former Wolverine center Juwan Howard '95 became the first college athlete to leave school early for professional basketball and still graduate on time with the rest of his class. Howard, now of the Washington Bullets, joined fellow Fab Five stars Jimmy King of Plano, Texas, and Ray Jackson of Houston in cap and gown on Commencement Day. Howard majored in TV communications and minored in business. The crowd joined his fellow graduates in cheering when speaker Marian Wright Edelman cited his achievement at the beginning of her address. Howard left after his junior year to sign a $36.7 million 11-year contract. He took summer school, correspondence and extension courses and independent study to earn his final 32 credits. Howard said he had promised his ailing grandmother, Jannie Mae Howard, that he would earn a college degree, but Mrs. Howard, who raised him, died in Chicago in 1990, the day he announced he would attend Michigan.