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Spring 2003

## Nebraska Blueprint - Spring 2003

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## A sense of place:

Omaha students engage in project to help others

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### Featured Stories



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by Adam Holmberg



#### Reaching Them (While They're Young)

by Roxane Gay



#### A Sense of Place

by Roxane Gay



#### Keeping You Between the Lines

by Tom Pryor



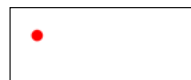
#### Othmer Toys

by Thomas Cudd



#### As Young As You Feel

by Thomas Cudd



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## From the Editor



A Fond  
Farewell



Reaching Them  
(While They're  
Young)



A Sense of  
Place



Keeping You  
Between the  
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Othmer Toys



As Young As  
You Feel

Another semester draws to a close and another issue of the Nebraska Blueprint is ready to hit the presses. After this semester, we no longer will claim Constance Walter as our advisor for the magazine. Fortunately we have been blessed with another energetic leader with plenty of fresh ideas. I would like to formally welcome Roxane Gay, the new Communications Specialist and advisor to our staff. She has been working closely with Ms. Walter and the staff already this semester, and the semesters to follow promise to yield exciting results.

And now is the time for me to do what I do every semester at this time: enter a call for my peers to get involved.

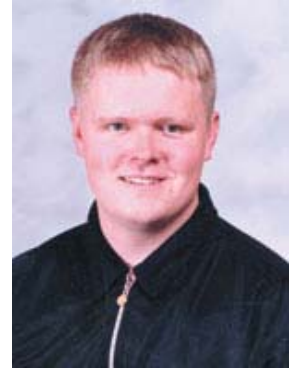
Let me make this quick. We need people and you need something unique to become involved in. We need people because it takes a fair amount of work to put this magazine together, and we're trying to make Nebraska Blueprint the best publication it can be. You should get involved because this is a chance to participate in something fun and interesting. You need to get involved because you know this would look great on your resume and you realize employers are looking for evidence of self-motivation and a diverse range of skills from potential employees.

Under the guidance of our incoming advisor our organization has once again become a part of the Engineering College Magazines Associated. This means our magazine will have exposure to some of the top engineering schools around the country.

Aside from the national exposure and the chance to interact with peers from other institutions, there is ample opportunity for excitement in our own community. Every piece we create gives the students occasion to interact with faculty, staff, students, or industry professionals he or she would never have had contact with otherwise. Give it some thought.

With the advertising out of the way, I'd like to comment on something of a more personal nature. In my few years here at the University, I have had the chance to work with many students. Most of the students I have encountered from the engineering college are dedicated young people who are here for a reason: to equip their capable minds with the means to engineer tomorrow's technology or proliferate knowledge itself. Unfortunately, there are some whose motivation fails them and instead, they choose to rely on the hard work of others. They may, or may not copy directly from their classmates, but they regularly rely on their peers to complete homework and projects.

Don't get me wrong. Speaking with others is an invaluable way to learn about a common subject. But if you're not quite sure how you did that last homework assignment you handed in after working with your friends, I'm talking to you. Make sure that you're making a focused effort to learn the things you have been taught. Don't just slide through bumping around for help from one assignment to another. One of my biggest worries is finding myself in the workplace alongside a person who made his/her way through higher education by gleaning others' solutions. I would rather work with the person who scored slightly lower, but took matters into his own hands and succeeded by gaining a more precise understanding of the matter as a result of the struggle. Please keep this in mind the next time you're tempted to give



up in favor of copying a few problems from Johnny Smart in the morning. You're here because you want to become something better.

*Abner Robinson*

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# Integrate Engineering Into Life

I have been an engineer for nearly 30 years and in that time have seen tremendous changes in the engineering field. I've also discovered the enormous impact engineering has on every aspect of life, from food to transportation to technology. Engineers drive technology, and technology drives the world in which we live. Everything we touch is a feat of engineering. Engineers conceive, design, invent, create, enhance and improve products, machinery, technologies and processes. And through those efforts, we improve the quality of life around the globe.



But it doesn't happen by magic. And it doesn't just involve inventing things. Students gain the vast amount of experience and knowledge at the College level – through classes, student involvement and cultural activities – and how they interact with the world around them. At the College of Engineering & Technology, our students get involved on a number of levels:

- Research
- Outreach
- Mentoring
- Study Abroad
- Industry Internships
- Cooperative Education

Through their involvement in such activities, students develop not only a greater understanding of engineering concepts, they also see the impact we engineers have on the world and the people in it. This allows us to improve current products and design better technologies and, in the process, become better citizens in a global environment.

Sincerely,

David H. Allen  
Dean

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## And they said engineers couldn't write...

The Nebraska Blueprint staff recently attended the annual conference for Engineering College Magazines Associated (ECMA), held in Minneapolis, Minn., this year. The two-day conference included workshops on craft, magazine and website critiques, and the opportunity for engineer-journalists to collaborate with their peers. The conference ended with an awards banquet to recognize the achievements of ECMA students over the past year.



Nebraska Blueprint, the student magazine for the UNL College of Engineering & Technology, won second place for Creative Feature.

The winning entry, “Battle of the Brains: Engineers vs. Lawyers” was written by Blueprint editor Adam Holmberg for the Fall 2002 issue. The story details the feud between engineering and law students at the University of Nebraska during the late 1920s—a feud that included elaborate pranks, intrigue and, eventually, the intervention of law enforcement. “It was very interesting to read, written with a lively style and a surprise ending,” said one of the contest judges.

The College of Engineering & Technology congratulates both Adam and the Blueprint staff for their hard work on the magazine and for writing such wonderful articles.

For more information:  
<http://www.ecmaweb.org>

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# Good News from Construction Management

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The Department of Construction Management has had good-news-a-plenty during the past few months. An email indirectly received by our group heralded accomplishments of some of our student peers.



- The Mechanical Electrical Specialty Contractors team competed recently in the ‘final four’ of the Mechanical Contractors Association of America’s student competition in Palm Springs, Cal. Team members Donnie Arant, Chris Triptow, Dan Kopecky, Joe Bracken, Miranda Mueller and Anne Barry took home second place.
- A student team placed fifth in a field of 29 teams at the National Association of Home Builders (NAHB) student competition in Las Vegas. This was the first time a UNL team had attended the event. The team also received the “Rookie of the Year” award. Team members Jason Studt, Deanna Eliker, Nick Dolphens, Jason Cobb, Brett Harsh, and Mike Poulton were led by faculty advisor Chuck Berryman.
- Two UNL Construction Management students took the top prizes in the James L. Allhands essay competition. Amy Stevens, who graduated last December, received first place and Zac Gemar took second place. There were twenty entries in this national Associated General Contractors contest. The subject of the winning essay was “The Company’s Role in Improving Construction Safety.”

Amy Stevens always liked to get outside opinions from friends and family, but “it was not until I took it to Professor Bruce Anderson that I received extremely insightful critiquing,” Stevens said in an email interview.

Bruce Anderson is a lecturer from the department who was involved in the essay’s preparation.

“Her ‘coachable’ attitude is one of Amy’s major assets,” he said, “Amy is very accepting of advice, and never appears defensive.”

Awards and recognition received by these students obviously reflect positively on the individual and the institution.

“These types of awards give our whole department a great lift,” said Anderson. “We know prospective employers react very affirmatively to such honors in student applicants’ resumes.”



The Blueprint extends our congratulations to the students and faculty of the Construction Management department. Keep up the great work!

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The University of Nebraska–Lincoln student chapter of the American Society of Mechanical Engineers has found new life this past year, and their efforts were rewarded recently, at the ASME Region 7 Regional Student Conference, held in Minneapolis, Minn. Six Mechanical Engineering students attended, including Tony Kander, president, Joel Masters, Dave Ebbers, Andy Malone, Cecil Lawrence, and Brandon Lehman. Vice-president, Angela McMullen-Gunn sent along a technical poster presentation for the Old Guard Poster Competition.

The three-day conference, attended by 23 colleges and universities and more than 100 students included training seminars, competitions for students and a tour of the Northwest Airlines maintenance department. The conference concluded at an awards banquet where all students were recognized for their work.

“The most valuable experience of attending the conference was getting the students to compete as well as showing the new officers the bigger picture,” Kander said. “We also asked as many questions as possible, since UNL will be hosting next year.”

The most coveted prize each year at the regional conference, is bestowed in the Ingersoll-Rand competition, which is sponsored jointly by ASME. The fundamental purpose of the contest is to encourage engineering students to become professionals by participating in technical events that expand on their academic pursuits. It recognizes those student sections that show outstanding achievement in the manner by which they conduct their affairs.

This year, the UNL student chapter of ASME was awarded first place for most active student organization, as well as most improved student section. Placing first in the Midwest Region automatically entered the UNL chapter in the national competition.

“To go from absolutely nothing to winning these awards shows that we actually accomplished something this year,” Kander said.

For more information:  
<http://www.asme.org>

**Students Attend NSBE Conference**

While most people travel to Anaheim, Calif, to visit Disneyland, nine students from the University of Nebraska–Lincoln headed to Anaheim over spring break to attend the National Society of Black Engineers (NSBE) annual convention.

While many people are not aware of their existence, NSBE is the largest student- managed organization in the country with more than 10,000 members. The UNL chapter has twelve members who meet every other week. In addition to organizing the annual trip to the convention and serving on national committees, the local NSBE members, mostly engineering

and science students, share the idea of engineering with the Lincoln community. In the past year, the local NSBE student chapter has hosted a Lighthouse Day where they offered a series of workshops to introduce young adults to engineering, rung bells for the Salvation Army, and taken a group to Cargill for a tour of their facilities.

“We welcome anyone to join,” said Tony Williams, president of the UNL chapter. “As long as they support the mission statement of NSBE—to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community.”

The five-day annual NSBE convention is an opportunity for black engineering and science students, graduates, and professionals to come together for a diverse program. This year’s activities included speeches by Dr. Freeman Hrabowski, president of the University of Maryland Baltimore County and Roslyn McCallister Brock, NAACP vice chairperson. The Anaheim convention also hosted a career fair; more than 60 personal and professional workshops; the Pre-College Initiative Conference for high school students interested in engineering; and the annual Golden Torch Awards ceremony, which has raised more than \$150,000 in scholarship money for deserving students of color in the engineering disciplines since 1998.

“It is empowering to attend the convention and see that many people of color gathering for a common purpose, without sports being involved,” said Williams.

Students from the UNL NSBE chapter try to attend the conference every year, and raise money to defray the costs of attending through fundraisers and corporate sponsorship. Next year’s conference will be held in Dallas, Texas and the UNL chapter of NSBE intends to be there, front and center.

For more information:  
<http://www.nsbe.org>

**Your organization’s success story featured here.  
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# A Fond Farewell

by Adam Holmberg

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This semester marks a bittersweet transition for the student staff members of Nebraska Blueprint. Our current advisor, Constance Walter, is moving on. In addition to being Communications Coordinator for the College, she has assumed the role of editor for Contacts, the alumni magazine for our college, thus passing the duty of Blueprint advisor to Roxane Gay, the new Communications Specialist.

The first time I had the pleasure of meeting Ms. Walter, I was responding to a Blueprint Weekly advertisement soliciting help for the magazine. I walked into her office thinking I was going to help distribute the newsletter and left some minutes later, a writer with a new assignment. A few stories later, in what seemed like the blink of an eye, she somehow talked me into serving as the editor for the Nebraska Blueprint magazine. She has always been exceptionally convincing with such matters, and always encouraging. As we struggled to produce good articles she was fast to focus on the strong points of our writing and guide us in the weak. In the time since, our staff has grown into a tightly collected—albeit small—group of contributors. With her help Nebraska Blueprint has evolved into a publication that we can be proud of.

To keep this from sounding like an obituary I would like to end with a little bit of ribbing—something commonly enjoyed in our group meetings. Certain unnamed members of the staff asked me to mention that, after all this time, we are still convinced that we could be more productive on a PC than a Mac. Ms. Walter was quite passionate in our argument that the Mac is better. It is also an argument that we will all fondly remember but perhaps never put to rest.

On behalf of the Blueprint staff, I would like to thank Ms. Walter for the all the time and guidance she has given us.



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On the morning of Tuesday March 4th, the storied Cook Pavilion was silent—almost empty. As the championship banners flapped softly, several student volunteers from the College of Engineering and Technology busied themselves with preparations for Discover Engineering, making jokes about the unseasonably cold temperatures, and pausing every now and then to read the day's copy of the Daily Nebraskan. And then, quite suddenly, that near silence was broken by the boisterous banter of more than 150 fifth through eighth graders spilling onto the turf of the Husker practice field and clustering themselves into small groups. It was obvious that these were children weaned on the legends of the Nebraska Cornhuskers, as several of them openly admired the turf, the yard lines, the abandoned practice equipment, and other trappings of football success. Soon, though, their attentions would be captivated by the order of the day—that of discovering engineering.



A sharp whistle interrupted the energetic chatter of the young students, and they were patiently instructed to gather around a television set for a brief video about the day's events—activities designed to open the minds of middle school students to the possibility of engineering as a future career. Once the video finished, the children, divided into four separate groups, dispersed to the four corners of Cook Pavilion where they would have the opportunity for a hands-on discovery of engineering. "This is an excellent opportunity to expose kids to engineering and show them that fun can be applied to theory and vice-versa," said student volunteer, Angela McMullen-Dunn.



Discover Engineering has been hosted by the College of Engineering and Technology since 2001. Amy Lehman, a senior in Mechanical Engineering, coordinated this year's event, which was planned, organized and hosted entirely by student volunteers and funded by private support. "This was part of my senior project," Lehman said. "But it's also fun to work with little kids."

Balloon Races were held in the southwest corner of Cook Pavilion. The children were able to design and build their own racers using balloons, straws, construction paper, and masking tape. The student who built the racer that completed the course in the fastest time won a Slinky donated by the local chapter of the American Society of Mechanical Engineers. The children were also given an informative brochure on Mechanical Engineering. "This exercise was designed to introduce

the kids to some of the forces that work on an airplane,” Dunn said.

In the northwest corner, students experimented with Engineering Mechanics as they designed and built catapults that would consistently launch a Ping Pong ball into the air. The designs the young people managed to come up with were quite innovative, particularly in light of the materials they were given to work with—plastic spoons, cardboard, rubber bands, paperclips, straws, popsicle sticks, aluminum foil, and masking tape. Two clever students designed a catapult that worked much like a slingshot, stretching the rubber bands back, up to ten feet, before launching their catapult. When their Ping Pong ball only flew a few inches, they rubbed their foreheads in frustration. Then these budding engineers brushed the temporary defeat aside and returned to working on a more productive design.



Civil Engineering and Construction Management were the focus of the flurry of activity in the southeast corner of Cook Pavilion. Using brightly colored clay and toothpicks, the participants built toothpick towers that had to be able to support a golf ball. Some of the towers soared elegantly towards the ceiling, while others toothpick designs were less flamboyant, sturdier, and lower to the ground.



The final activity involved a few basic principles of Electrical Engineering. Each of the students was given two batteries, one piece of wire, one piece of insulated wire, and one LED. The student volunteer taught the participants how to build a simple series circuit, and once they were lined up alongside two long tables, the students got to work.

Afterwards, lunch was served in Love Library and all those who came to discover what engineering is all about were given informative brochures and door prizes to mark the occasion.

For more information:

<http://www.discoverengineering.org>

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## A Sense of Place

by Roxane Gay

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For most people, a roof over their heads and the comforts found between four walls are taken for granted. But then there are others who are desperately in need of a simple place they can call home. Akong Deng Ring, and her six children, ages two through seventeen are a long way from the place they used to call home. With the help of Habitat for Humanity and students from the University of Nebraska-Lincoln's College of Engineering and Technology, she and her family, immigrants from the Sudan, will soon have a new place to call home.



This journey of creating a sense of place for a family in need began in perhaps the strangest and most appropriate of places—the classroom. During the spring semester of 2002, Dr. Amy Musser, an assistant professor in Architectural Engineering, helped develop the Architectural Engineering course Construction Graphing and Design where students designed four bedroom homes according to the design criteria of Habitat for Humanity. These criteria include designing homes with at least one entrance accessible to people who have difficulty with mobility, a porch and covered primary entrance, as well as designs that would allow families to affect the design of their homes as much as possible within their predetermined budget.



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The project provided an innovative opportunity for students to collaborate on projects that could be potentially useful in the real world, and yet the students also experienced the difficulties of the real world when, with only two weeks left, they had to add a fifth bedroom to the design. “It was very time-consuming and frustrating,” said Milena Palahanska, the project manager of the winning design team, which also included Kaidas Gelumbauskas, Kris Arnold and Olga Moreno.

At the end of the semester, representatives from Habitat for Humanity came to the critique and presentation of the student designs, and were so taken with the design of Palahanska, Gelumbauskas, Arnold and Moreno, that they decided to build it. “It has been so wonderful to have a new floor plan,” said Habitat volunteer coordinator Jean Fischetti. “We love it.”

Foremost in the students' minds was the desire to create a unique home that would subtly stand apart from the houses around it. With a limited amount of space in which to work, the chosen design team managed to infuse its design with inspiration. “Were it not for the Habitat for Humanity design criteria, the house would have turned out differently,” Palahanska said. “But my favorite aspect of this project was the challenge of determining how to organize the rooms for a functional structure that optimized living spaces.”

There is at least one window in each room, to make good use of natural light. The bathroom and kitchen were aligned for more



efficient piping. Both the living room and dining room, where the Ring family will spend most of their time, are uniquely shaped like octagons. But most importantly, the walls will be constructed with Insulated Concrete Forms (ICF)—hollow foam blocks that crews stack into the shape of the exterior walls of the house, then fill with reinforced concrete, creating a structure that is strong, energy efficient, quiet and durable. The house also will utilize a heat pump, one of the most efficient methods of providing heating and cooling, because it transfers heat from natural heat sources in the surroundings, such as the air, ground or water, to a structure. These energy efficient technologies will enable the family to spend a fraction of what others will spend on their energy bills, leaving the family with more disposable income.



The journey continued during the fall semester of 2002 in the classroom of Dr. Avery Schwer. As part of his The World at Work course, students participated in the construction of the Habitat for Humanity house as part of a service-learning project, integrating theory with practice and community service with academic study. “This has been an opportunity for students to work on a project that directly impacts the community,” Schwer said. “And it is another example of how the Peter Kiewit Institute and the University of Nebraska are transforming the local community and making it a better place to live.”



The Omaha community readily embraced the project with generous financial support from Wells Fargo and donated or deeply discounted building materials from local contractors and suppliers. Students from the UNL College of Engineering and Technology and the University of Nebraska at Omaha College of Information, Science and Technology have been actively involved in the project, but other students from the University as well as several faculty members also volunteered at the construction site. “There were times when we almost had too many volunteers,” Musser said. As part of the Habitat program, the Ring family has worked alongside volunteers throughout the construction process.

Early this summer, Akong Deng Ring and her young family will cross the threshold into a house built by many hands. In time, that house will become a home and many engineering students at the University of Nebraska will know that their hearts, minds and hands contributed to creating a sense of place for a family, displaced.

For more information:  
Habitat For Humanity International:  
<http://www.habitat.org>

Insulated Concrete Forms:  
<http://www.icfweb.com/learningcenter/default.asp>



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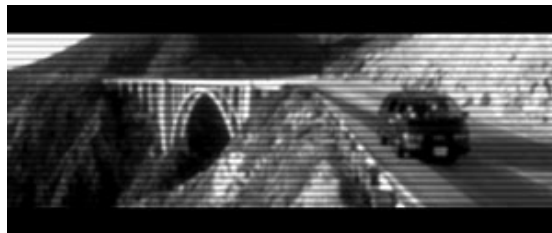
As Young As You Feel

## Keeping You Between The Lines

by Tom Pryor

As you drive down the road, you probably don't give much thought to the guardrail on the side of the bridge, or worry about how safe you would be if you were to collide with it.

Fortunately, there is a group of professors and students at the University of Nebraska-Lincoln who spend their time thinking about such things. This group makes up the Midwest Roadside Safety Facility (MwRSF).



The Midwest Roadside Safety Facility is an organization dedicated to making our public roadways as safe as they can be. Through the development and testing of roadside hardware, the group works to ensure that your next road trip will be a little bit safer. This testing involves both full-scale car crashes and computer simulation modeling of impacts, and provides valuable data on how to improve the safety of such fixtures.

The team consists of several graduate and undergraduate students in addition to a faculty research staff. There are currently four students from the University of Nebraska working with the facility. These students include mechanical engineering graduate students T.J. Paulsen and Dustin Boesch, and civil engineering senior Jordan Larsen and mechanical engineering senior Bryan Sharp.

These students have a wide range of duties to carry out, ranging from taking pictures of roadside signs or collecting information from state departments of transportation, to creating finite element models to use for crash simulations. Whatever the task, valuable experience is gained through the duties they perform.

"Working for the facility gives you a chance to learn and develop specific skills, and at the same time, gain experience by doing practical engineering work," said Paulsen.

The Facility recently gained recognition for its development of a new energy-absorbing wall. The barrier, which uses a steel skin formed over layers of foam, absorbs energy from a collision and helps to reduce the forces on the driver and prevent the car from bouncing off of the barrier. This new system has been adopted by the Indianapolis Speedway to help decrease the likelihood of injury to drivers in the event of a collision with the wall. Although the wall has been the most publicized accomplishment of the Facility lately, roadside barriers are not the only things on which tests are conducted. The Facility also tests highway signs, construction cones and light poles. "We work with just about anything you can run into on the highway," Larsen said.



Amid all the hard work and effort, there are some perks to being part of the organization. “It has been very exciting with all of the NASCAR and IRL (Indy Racing League) entities we have been working with,” Sharp said. “I had the chance to meet Bobby Labonte and had opportunities to go to NASCAR races as well as the Indy 500.”

Larsen also shared his liking for the job, focusing on his favorite aspect of the MwRSF experience. “We build stuff to run a car into. What isn’t fun about that?”

For more information:

<http://www.mwrsf.unl.edu>

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# Othmer Toys

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To most students on campus, Othmer Hall is just another addition to the Nebraska Hall and Walter Scott Engineering Center buildings—more space for the College of Engineering & Technology. Some students already have seen that Othmer 105, 106 and 110 are brimming with contemporary-looking displays and setups. The students who have attended classes in these rooms have probably only been able to see the projectors in action. Although Othmer 106 is used largely as a general-purpose room, Information Services Classroom Technology employees have worked with the College to give this classroom several noteworthy features.



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“We can do a lot with [Room 106],” said Steve Colonna, a Classroom Technology Specialist for Information Services at the University of Nebraska-Lincoln. “It has a lot of functionality.”

Currently, however, students may not experience the full effect of Othmer 106. The SMART Board is a digital whiteboard that allows instructors to write on a virtual notepad or over the projected computer screen. This technology has not yet been fully utilized due to some practicality issues that professors have experienced. However, another SMART Technologies product called the Sympodium has received very positive feedback.

“I would think in most situations, this would be a lot better,” Colonna said. With the Sympodium, professors can face the class while “writing” on a flat screen monitor. Those images are then projected overhead so students can take notes. With the SMART Boards, professors might have had trouble accurately seeing what they are projecting.



Being able to see clearly is not the only friendly feature of the Sympodium. Any application run on a PC can run using this technology. The professors can choose multiple colors and highlighters using the computer stylus. This allows them to create new notes, as well as write electronic notes over any program including web browsers and presentation software. These same notes can be saved and distributed to students electronically if the lecturer so desires.

In all of the technology-enhanced rooms of Othmer, there are AMX touch panels to control the audio and visual inputs and outputs. The main output is a powerful 3500 lm, insulation-type projector. Any input can be run on any output, thanks to a matrix switcher at the center of all the connections. The panel in Room 106 also can be used to control the audio from microphones dispersed throughout the rows of seating. The

main purpose for these microphones is to pick up student questions during distance learning classes. For this feature, the class would have a director in the room above the lecture hall to control camera movements and certain aspects of the audio features.

In the near future the distance learning capabilities of Othmer will be used actively as Rooms 105, 106, and 110 all are distance learning enabled. The cameras in the rooms can transmit data to other locations and the projectors and televisions can pull in sites from around the world to view. In Rooms 105 and 110, the multiple outputs allow views of multiple distance learning sites simultaneously.

“We’ve tried to eliminate the processing in this room,” Colonna said. Students and professors only see the inputs and outputs of these fully wired workspaces. All of the computing technology is located in a small, adjacent room that holds PCs, Macintoshes, DVD players, VCRs to record lectures for future reference, and the Polycom units for videoconferencing. Because there are no computer towers with disk drives in the classrooms, professors must be able to access their material electronically over the network. The AMX control panels also are wired so Information Technology staff members have access over the network for testing.

IT staff members provide complete support, training, maintenance and upgrades , and are on call from 7 a.m. to 8 p.m. every weekday to answer questions or train users. Student workers inspect the classrooms a few times a week to ensure functionality. Before every semester, IT provides an open house for professors to learn about the equipment and become more comfortable with the new technology.

All of the equipment in these high-tech classrooms is scalable and interchangeable. One future addition to the video conferencing aspect of the system will be a component that allows streaming distance learning over the Internet via a web site. The current equipment installed will probably be used for about three years before any upgrades are made. One change that already has taken place is the phasing out of SMART Boards in favor of the Sympodiums. Another project in the works is the improvement of the AMX panels to make them more user-friendly. Currently, the panels are not entirely intuitive. The goal is to require pressing no more than two or three buttons to access any function.



Henzlik Hall Room 124 and Morill Hall Room 141 both have some of the newer technology in place so nonengineering students also can enjoy the benefits of a technology-rich classroom. Making improvements is an ongoing process, but that does not stop the classroom technology professionals from continuing to supply the University with high-tech equipment. In the classrooms of Othmer Hall, the future is now.

For more information:

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## As young as you feel

by Thomas Cudd

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A Fond Farewell



Reaching Them (While They're Young)



A Sense of Place



Keeping You Between the Lines



Othmer Toys



As Young As You Feel

Clarence Brehm has always been a very active person. He works out religiously every day, boasting that his stair machine gets quite a bit of use. Brehm also is a great fan of dance music and always has been. When he was not dancing to the beat, he was keeping the beat with his saxophone in a dance band. This Chappel, Neb., native also was a member of Delta Tau Delta and the American Institute of Electrical Engineers. In fact, it is this “keep-active” attitude that helped him create a low-vision support group in Mesa, Ariz., where he now lives.



While attending the University of Nebraska-Lincoln, Brehm and a few other students did a groundbreaking E-Week project involving microwaves. What sets Clarence Brehm apart from other students, however, is that Brehm was an Electrical Engineering major at the University of Nebraska between 1929 and 1933. The E-Week project involved using microwaves to heat up water molecules at a time when applications for this type of radiation were just being discovered. This research was a precursor to the modern microwave—an almost ubiquitous appliance in homes today.

These days, he keeps busy with dancing and his support group for macular degeneration. But Clarence Brehm still recalls his days at the University during the depression era when most of his time was spent surviving.

“It was tough enough trying to eat and sleep while trying to go to school,” Brehm said. He worked a variety of odd jobs just to earn enough money to make ends meet. During spare moments, which were few and far between, he would often run suits over to the cleaners for fifty cents. Other times, he would play his saxophone in restaurants during the lunch hour for cash. On a good day, he would also get a free lunch out of the deal.

Originally from Nebraska, Brehm chose to go to UNL because it was so close to home, and yet, not everyone in his family supported his decision to attend college.

“My father wanted me to work in a machine shop, but I wanted to go to school. He didn’t give me a dime,” Brehm explained. “I had to find more ways than most others just to get the money I needed to get by.” Sometimes, he would hunt and fish for that extra something. But playing in a dance band probably one of the most stable work experiences he had, even though it could be terribly time-consuming.

“There were times when we would get to a place to play at 6 p.m. and stay there until 4 a.m. Many times, we would have to go to class at seven in the morning, only three hours after getting back.”

This same work ethic and enthusiasm for keeping active has allowed him to stay healthy for the past ninety-six years of his life and, hopefully, many more.

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# Construction Systems holds successful internship fair

On February 27th, the Department of Construction Systems, located in the Peter Kiewit Institute on the Omaha campus, held its first Construction Internship Fair. The event offered students an opportunity to build relationships with industry representative and talk about career opportunities.



The fair was attended by 10 vendors and 170 students from the University of Nebraska-Lincoln, the University of Nebraska at Omaha and Iowa Western. Vendors included general and specialty contractors, architects and the Nebraska Department of Roads. Representatives said they were very impressed with the number and quality of students who stopped by to talk about opportunities and drop off resumes. A number of interviews were set up for both full- and part-time positions the next day.

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Professor Stuart Bernstein, who organized this year's event, said the fair was a real success — for students and industry representatives. He believes the fair will grow and improve over the years as well as attract more vendors representing a variety of construction fields from across the country.

Photos: College of Engineering & Technology students attend the first Construction Internship Fair at the Peter Kiewit Institute.

