Third Annual Triathlon Results

by John Abbott

I'll bet that you didn't hear about the airplanes that crashed at IIT last week. There were dozens of them, and some of the planes crashed more than once.

If this seems very normal to you, then you're probably familiar with IIT's Triathlon. Last Thursday, IIT held its third annual Triathlon in the HUB ballroom. Rolling Dix of the CS department is credited with doing most of the organizing.

The IIT Triathlon consists of three parts: the airplane toss, the spreadsheet competition, and ping-pong trials. Contestants were given forms to bring from one section to the next, in order to earn points.

In the first competition, contestants had built a rubber-band powered airplane and were required to toss it in the air in the hopes that it would fly. The flights were timed, with the most time getting the most points. Planes that were properly constructed would not only fly through the air, but circle the contestant until it touched ground. Other planes were not aerodynamic. "Crash and burn," is the term I believe I'm looking for.

In the second part of the competition, students used a spreadsheet to solve a problem. The less time that you took to solve the problem, the more points you earned.

In the final section of the competition, the contestants played ping-pong against each other.

An incredible amount of prizes were donated by businesses this year. Tandy donated a personal computer, the Tandy 1000 XZ Zenith data systems donated copies of their Microsoft Word software, Gandalf data contributed a pair of Hayes compatible modems, and Apple contributed more than three dozen T-shirts.

The winner of the grand prize, a remote control airplane, was Dong-Ha (Don) Hwang. In second place, John Gossage; and in third place John Jacob.

The team of combined players winning the computer, was a group of students from the East Hall of the Residence Hall.

New Relations Director

Mark A. Angelini has been named the director of institutional relations at Illinois Institute of Technology in Chicago. In his new position, Angelini's primary responsibilities will be as the university's liaison with federal, state, and local government agencies, as well as to assist in developing working relationships with the Chicago and executive director for economic development in the senator's Chicago office. Prior to that, he was administrative assistant to Chicago Alderman Gerald M. McLaughlin.

A member of the Chicago High Tech Association, National Council on Urban Economic Development, and American Management Association, Angelini also serves on the boards of the Advanced Transit Association (Washington, D.C.), the Inventors' Council of Chicago, the State of Illinois Advanced Ceramics Advisory Board, the Chicago Capital Fund, and Youth Communications, Inc.

Angelini received his undergraduate degree in metallurgical engineering and materials science from the University of Notre Dame (B.S., cum laude, 1980) and a master's degree in materials science from Northwestern University (1982).

Angelini, 30, is married to Kathy Kelly, and they reside in Oak Park, Ill.

1 Million To Pritzker

Dr. Robert Arasbeeche, director of the Pritzker Institute of Medical Engineering at IIT, has been awarded one million dollars from the National Institutes of Health (NIH) to continue his work on the automatic identification of heartbeat irregularities (arrhythmias) by means of an implanted computer microprocessor that monitors the patient's heart rhythm.

This is the second largest grant to Arasbeeche from the NIH for continuation of his heart implant studies. An award of $1.25 million was announced last November for his development of an implantable pump for automatic release of heart drugs.

Medical engineers have already produced implantable cardiac pacemakers to solve the problem of irregular heartbeat. The remaining challenge, however, is to make it possible for the pacemaker to distinguish automatically between heart irregularities that pose no danger to the patient and may signal a serious problem and cause, and to determine what form of intervention, if any, is called for.

Dr. Arasbeeche and his team of researchers are working on development of a microcomputer program that would make that distinction and then initiate and direct the appropriated treatment.

"This new NIH grant," according to Dr. Arasbeeche, "allows... Continued on page 3

IEEE Mentor Program Benefits

The IEEE Institute Electrical and Electronic Engineers (IEEE) is offering their own views on why they have chosen their particular career paths, whether or not they are happy with them, how they have confronted various issues either at school or on the job, their future aspirations and the steps they feel are necessary towards achieving them. In addition, the students will be able share with the mentor personal experiences from the classroon or on CO-Oriented assignments. Mentor sessions will meet twice a semester and a particular topic will be appointed for discussion.

The expectations that employers have of recent graduates is very ambiguous and presents a situation that is intimidating and full of misconceptions. However, within these discussion groups, stress will be placed upon what students can presently do to better themselves in achieving their career goals, while also attempting to make a smoother transition from academia to fulfilling the demands of their future employers.

You may not presently be concerned with any of the topics mentioned above, however, if you are dedicated to attaining a career within electrical engineering, these issues will inevitably become reality. If you would like to take advantage of the benefits the Mentor Program has to offer, please contact Beth Doolittle (581-3085) or Carl Steen (586).
Untapped Resource Awaits You

By John Abbott

"Where is the Counseling Center?"

Considering that I was in the student government office, I figured that someone would know. But I didn’t. Of course, considering that I was planning on doing a story on the Counseling Center, I should have known it was there. Of course, I didn’t. And it didn’t seem like anyone at the office could tell me where it was either.

"It’s in Perrin Hall?," one person suggested.

"No. I think it’s in Farr Hall," said another.

The sad truth is, I don’t think that the majority of students at IIT could tell you where the Counseling Center is. Which probably qualifies it as the most underutilized resource at the University.

I met with Terry Shapiro, the Director of the Counseling Center, for an interview at Farr Hall. Farr Hall by the way, at 33rd and Michigan, is where the center is located.

"The main purpose of the Counseling Center is to help people with any difficulties that they encounter at school...", explained Terry.

Terry Shapiro is not kid-ding when he says “any difficulties”. Anyone who is familiar with him will tell you that the man is not only a true professional, but he is always willing to lend a hand when needed. Which makes him the perfect person to head up the Counseling Center.

The Center’s purpose is to assist students with any problems that they might have, but they specialize in three areas: Academics, Vocational or Career, or Personal and Psychological. The Center is specially equipped to deal with problem in any of those three areas.

If a person is having problems studying (Academic), for instance, the counseling center can help. “We teach people how to study”, Shapiro noted. “We teach people how to take tests, time management...how to fight procrastination...”

As with any problem, the center starts by helping the person understand the problem. Often, in the case of studying, the solution is simply teaching the student how to take more effective notes. Videos are also available at the ETC.

Furthermore, the center can teach someone how to relax during a test so that they won’t be overwhelmed during a test. A biofeedback machine, new to the Counseling office, will help students even more in their efforts.

Now let’s say that you’re not sure about what you want to do with your degree once you graduate. Or maybe you are sure that it’s not what you once thought you wanted to be. This is a Vocational or Career Program. Career counseling begins with a series of tests geared to help locate a person’s interests.

Terry stresses “It’s not just about interests, but what kind of personality you have”. This is important, because the tests that are given to you, will help you find a career that you will enjoy.

Finally, there’s the personal or psychological problem. This is where problem with your girlfriend, a problem with your roommate, or a problem with your parents comes in. The Counseling Center is filled with people who are qualified to help you find some answers to your problems or help you deal with the kind of problems that don’t go away immediately.

Terry points out that there is a big problem with isolation that occurs at IIT. “They’re really wired up here, they don’t know how to relax”, he says. Still, he’s managed to stay relaxed at IIT despite how long he’s been here, which will be 10 years this fall. When I asked him what it’s like to deal with other peoples’ problems constantly, Terry responded “I like helping people, so if they didn’t have any problems, I wouldn’t do it”.

He also pointed out that at IIT, a number of students are reluctant to come in, because they say it’s like the “John Wayne attitude”. “It’s not a macho thing to do.”

If you would like to make an appointment at the Counseling Center, the extension is a 3003. However, if there is a pressing emergency, Terry stresses, “just visit them as soon as you can.”

LSAT To Undergo Changes

After the February 11, 1989 opening of the Critical Council (LSAC) the LSAT will undergo considerable change. The new LSAT will be taken for the first time in June 1989 by students enrolled in first year law school. An estimated 130,000 students will take the exam this year, of whom 40,000 will attend law school. “According to spokesmen for the Critical Council (LSAC) the LSAT is a better predictor of success in law school than is the grade point average,” observed a spokesperson for the law school.

Terry Shapiro, dean of the law school, and chief executive officer of the Stanley H. Kaplan Educational Center, the nation’s largest test preparation organization.

The new test, which will be given for the first time on June 11, 1989, is divided into three sections, 1) Logical Reasoning 2) Analytical Reasoning 3) Reading Comprehension. The sections are of 60 minute duration. The exam test had a second experimental section and a section called Facts and Issues, which were dropped.

“One person still interested in joining the club should contact Sue Haley at x3296.”

Fountain Opening

The 1989 season of Buckingham Fountain displays will start at 10 a.m. Monday, May 1 and run through Sunday, October 1. Buckingham Fountain is one of the largest and most beautiful fountains in the world. It was a gift to the people of the United States by the people of France. At Lake Buckingham in 1913. Dedicated on September 20, 1914, the fountain was built at a cost of $750,000 and since has become one of the most photographed fountains in the United States.

Fountain displays will be presented daily from May 1 through October 1. Including weeknights and weekends. Hours of operation are from 10 a.m. to 11 p.m. Water displays are presented from 11 a.m. to 6 p.m. every two hours on the half hour (20-minute displays every five minutes) and a major color display, 9:11 p.m. every hour. The computer automatic, a computer controls the flow of water to jets in conjunction with pneumatic valve actives the fountain. At predetermined times, the computer turns on the fountain every morning to make certain that all systems are functioning properly.

Terry Shapiro, dean of the law school, and chief executive officer of the Stanley H. Kaplan Educational Center, the nation’s largest test preparation organization.

Wanted: Zoo Volunteers

The zoo is also seeking clerical and library assistants as well as volunteers available only on a limited basis who can help with special programs and events.

For more information, call 294-4647.

Perseverance Pays Off

A “pinker” disrupted a human sexuality class at the University of Washington by throwing five live roosters in the classroom balcony and shouting “Suck my cock.”

The rooster was killed when it hit the glass. UW campus police are investigating the incident, Psychology 210 lecturer Lois McCraw confirmed.

McCraw said similar incidents have happened every term she’s taught the class, but that the rooster typically is released in a way that lands safely. This is the first time there’s been a fatality.

“We time this to look out of the window and not be too busy,” a student said. McCraw added that two others were arranged to look like male genitalia, announcing “I just wanted to give you this” before tumbling and leaving the classroom.

Yes, There Is A Women’s Softball Club

Yes, there is truth to the voice of one, as in your own Women’s Softball club! Not only do we have a club, we have a winning club.

No. 8, the defending Trinity College 10-8 in their home opener on Tuesday. Members of the club are Linda Parson, Sherry McGraft, Tracy Leonardo, Margaret Purcell, Kim Smith, Monica Bader, Sharon Pritchett, Liz Cleetbou, Lisa Kappel and Becky Stevenson.

Some highlights of the game were the “furry debris” on the field, stolen bases, headfirst sprints and home runs. Megan Ryan’s double off of Trinity’s seveng. Anyone interested in witnessing these events and many more should come to Stuart Field at 3:00 on Tuesday, April 16, Thursday, April 20, and Tuesday, April 25.

Terry Shapiro, dean of the law school, and chief executive officer of the Stanley H. Kaplan Educational Center, the nation’s largest test preparation organization.

The exam test had a second experimental section and a section called Facts and Issues, which were dropped.

Facts and Issues was always the easiest section to coach because it is not your normal test-taking rather than critical thinking. I believe the new LSAT will be a better predictor because of the Critical Council (LSAC), the LSAT is a better predictor of success in law school than is the grade point average, “observed a spokesperson for the law school.”
Coping With Suicide

People who are left behind after a person commits suicide often find that it is a very difficult thing to deal with. Understanding the emotions that follow can help to ease the grief of those who survive, why would anyone willingly hasten or cause his or her own death? Mental Health professionals have been searching for years for the answer to this question. Often there are no apparent causes. No matter how long and how hard a person searches for a reason the answer to the question "Why?" can be very elusive. Each suicide is individual, regardless of the generalizations about the "Why's" and there may be no way to completely understand the suicide victim's thought process. As you look for answers and understanding, you also need to deal with your feelings of shock, anger, and guilt. The intensity of your feelings will depend on how close you were to the deceased and the degree of involvement you had with this or her life.

Shock is a first reaction to death. You may feel numb for a while, perhaps unable to follow a normal daily routine. This shock can be healthy, protecting you from the initial pain of the loss, and it may help you get through funeral arrangements and services. It may last a few days or go on for several weeks.

After the initial shock you may feel guilty, out of control, sad. These feelings may overwhelm you immediately, or they may surface a few weeks, months, and years after. Try to understand and accept the things you feel. It’s OKAY, it’s healthy, and it is a part of the healing and coping process.

Anger with the deceased is normal when the manner of death is suicide. People often ask the question, "How could he or sheديد ذاته؟ People may look to those in authority and ask, "Why didn’t they prevent it?" You may feel yourself angry with God for "allowing this to happen." The anger may be self-directed—"What could I have done?" or "Why wasn’t I there?" Don't try to deny or hide this anger. It is a natural consequence of the hurt and rejection you feel. You need to find someone you can talk to about this feeling—a close friend, a counselor, or your clergyman. You may need to release your anger physically—take long walks or exercise. Don’t deny your anger. Talk about it, think about it, and deal with it in a constructive fashion.

Guilt is another emotion often linked with suicide. "But I should’ve talked with him or her." "Why didn’t I listen?" "If only...I should have..." etc. As you try to cope with your guilt feelings, try not to criticize yourself too harshly for your behavior toward the victim while he or she was alive. Of course, we all like to think we can help our troubled friends.

Memorial Service

The IIT community experienced the loss of one of its students last week. Tiffany Good, an 18-year-old freshman in Architecture, committed suicide on Monday, April 10, 1989. Tiffany is survived by her parents and sister who live in Minnesota. A memorial service was held for Tiffany on Thursday, April 13. It was attended by her parents, her sister, other members of her family, and many of her friends at IIT.

Was Virus Author Just a "Dedicated Hacker"?

(CPS) — Cornell University said April 5 that the virus creators created by grad student Robert Morris and sent out to stall an estimated 6,000 computers nationwide last November was the act of a dedicated hacker, not a vandal.

"It may simply have been the unfocused intellec-
tual meanderings of a hacker completely unacquainted with his creation," Cornell commissioned probing the incident in its own report.

Moral: "Since the affair brought attention to the problems of computer "viruses"—which actually are self-reproducing programs, communicated by disks and phone modems, that can destroy data or slow computer operations—many campuses have installed anti-virus procedures like screening students' program disks before they can be used in campus systems. Viruses have continued to plague some schools, however."

The Lanthorn, the student paper at Grand Valley State College in Michigan, was a day late getting to press in mid-March when a virus, apparently implanted in new disk drives the paper had just bought, stalled out the paper's four Macintoshes. (Ditto for Tech News a few months back.)

Since the November virus, computer systems at Youngstown State and Baylor universities as well as the universities of Oklahoma, Vermont, and Houston, among others, have suffered through virus-caused data losses and delays.

Creating the November virus—in fact a computer "worm," as opposed to a virus—was a "selfish act," said M. Stuart Lynn, a Cornell vice president, at a press conference explaining the results of the probe.

"The investigation found Morris, now on a "voluntary leave of absence," had acted alone, and determined he had violated-campus rules against "computer abuse."

Cornell Provost Robert Barker said the university, if and when it disciplined Morris, would follow "usual disciplinary procedures" that, because of privacy laws, would not be revealed.

"Mom says the house just isn't the same without me, even though it's a lot cleaner."

Liz Corsini—BOSTON UNIVERSITY—CLASS OF 1990

AT&T
The right choice.
**Announcements**

**GENERAL ANNOUNCEMENTS**

**TECH NEWS DEADLINE**

The deadline for any information to be put into Tech News is **Tuesday, May 19**, at 12:00 noon. Any information received after this time will not be entered in the next issue. It will be held for the following week.

**ECE ADVISING**

ECE students are strongly urged to visit their academic advisor during the pre-registration for the Fall Semester 1989. (Fall is from April 17 to April 28, 1988.) Advisor advising times and sign-up hours will be posted outside the ECE Department Office (SC 124) on April 14.

Many ECE advisors will have block advising on Tuesday, April 18, from 1-2 p.m. in their individual offices. No appointments necessary - First come, first served. Alternatively, students may sign up for an appointment with their advisor.

**NOTE:** You CAN BE ADVISED BEFORE YOU RECEIVE YOUR REGISTRATION PACKETS! Advising consists of planning your Fall 1989 courses. Your registration form can be stamped at a later date.

The ECE Department advisors will continually advise the prerequisites needed to register for a course and will only approve a course plan satisfying the prerequisites listed in the ITT Bulletin.

**EXTENDED LIBRARY HOURS**

The library is now open until 11:00 p.m., Sunday through Thursday, every week until the end of the semester.

**SUMMER JOBS**

The university is making available to its students summer jobs in our Building and Grounds units. The jobs will pay $8.40 per hour for work scheduled of up to 40 hours. The work will involve clean-up assignments inside the buildings and on the campus.

If interested, please contact Paula Graves in the Office of Financial Aid, Room 212 in the Main Building.

**GOOD NEWS**

A recent poll by our Placement Office found that 91% of the 1988-89 graduates found jobs in their interest within 6 months after graduation.

National-wide colleges and universities are experiencing a decline in applications for the Fall semester. But we are proud to say that ITT’s number of undergraduate applications is up again this year. We have the Student Admission Team to thank for much of our success with recruitment.

**ETC INFO**

This semester, non-interactive quizzing is offered in Phys 103, Math 110, and Math 151. Interactive quizzing is offered for CS 05, Math and physics quiz tests are available during all open hours. CS tests are available on a limited basis.

ECC will be open M-Th 9:00-7:00, F 9:00-5:00, and Sat: 10:00-12:00. The non-interactive quizzes will be given 45 minutes before closing. There is no quizzing on Saturday.

**FREED TUTORING!!!**

Tau Beta Pi will be offering private tutoring for students having trouble with any of their courses. To get a copy of your own, write your name, phone number, and the course you need help on a piece of paper, and drop it off in the envelope hanging on the door of room 112 E1. You will soon be contacted by your tutor.

**CHICAGO ADVANCED SEMINAR ON RELIGION IN AN AGE OF SCIENCE**

The Chicago Advanced Seminar on Religion is an Age of Science will present a series of dialogues on recent work in the Life Sciences and its impact on society. Dr. Patricia Churchland will chair a panel addressing the theme "Neuroethology and Philosophy: Toward a Unified Science of the Mind-Brain." Discussions include Professors Rodney Holmes (Neuroethology, University of Chicago), Robert Glasmann (Neuroethics, Lake Forest College), and James Ashbrook (Psychology of Religion, Northwestern University).

The sessions will be held at the University of Chicago-Theological Library, The Lutheran School of Theology, 55th and University. For further information, call Art F. Amalio, student at ITT, 312-465-3089.

**MONDAY**

**VIDEO EXERCISE!!**

Every Monday, Wednesday, and Friday, different exercise videos will be shown in Krueger Sports Center. Bring your friends and get in shape for the swim season by watching our popular videos. Times are from 1:00 to 2:00 for more info call Coach Wozniak at 312-296.

**STUDENT GOVERNMENT (ATS) ELECTIONS**

Student Government (ATS) Elections will be held Monday and Tuesday, April 17 and 18. We need students for ATS offices and to serve on the election commission. The offices available will be President, Vice President, Treasurer, Assl. Treasurer, and Secretary. Nominations for these offices and petitioning dates are to be determined by the election commission.

The election commission is responsible for organizing the election and making sure that election rules are followed. If you are unable to attend the planning meeting, but are interested, contact Michelle in the Programming Office or attend the next ATS meeting.

**TUESDAY**

**ASIA SPRING LECTURE SERIES**

Tues. April 25 at 6:15 p.m.
in Crown Hall
G戗ade Professor
Slides/Lecture about ancient cultures and society

**Wednesday**

**VIDEO EXERCISE!!**

Every Monday, Wednesday, and Friday, different exercise videos will be shown in Krueger Sports Center. Bring your friends and get in shape for the swim season by watching our popular videos. Times are from 1:00 to 2:00 for more info call Coach Wozniak at 312-296.

**Thursday**

**GM PLANT TOUR**

The American Society of Mechanical Engineers is sponsoring a trip to General Motors' Electro-Motive Division in La Grange on Thursday, April 20. Sign-up sheet is located on the door of the ASME office (E118). We meet at noon in E118 and leave at 12:15. We arrive back at ITT at approx. 4:30. All are welcome. Any questions, contact ASME at 312-997.

**May Graduation**

A mailing pertaining to attendance at the May Commencement has been sent to all candidates. If you have not received this material, please contact us at 312-3133, Office of Student Records and Registration, Room 104 MB prior to April 20, 1989.

**ITT PHYSICS**

Professor Max Dresden of SUNY - Stony Brook will discuss "The Leningrad Effect of a Desperate Revolutionary" on Thursday, April 20, 1989 in Sigel Hall Room 206 at 4:00 PM. Refreshments at 3:30 PM in Room 202.

**Hermann Hall Events**

The U.B. Museum will be "Crowning America," Showtimes are Thursday at 5:15 p.m. and Sunday at 7:00 and 9:30 p.m. in the HUB Auditorium. Admission is $2.00. The U.B. Band in the BOC Thursday night is "ME." Admission is $5.00 or you can use your U.B. Pass.

Great America tickets are now available in the Hermann Hall Directors' office for $14.75.

**Coping with Suicide Workshop**

There will be a workshop on coping with suicide in the HUB on Thursday, April 20 from 12:30 - 1:30 p.m.

**NEXT WEEK**

**ATTENTION EE's**

The IEEE (Institute of Electrical and Electronics Engineers) is currently inviting all members to participate in the Morris Project. Refer to the article in this issue of Tech News for more information on the program. The first meeting will be held on Thursday April 27, from 12:00 to 3:00 in the HUB Mezzanine. Participating companies include Hewlett-Packard, GTE, Commonwealth Edison, Rockwell International and AT&T Bell Labs. These are limited spaces available, therefore participate in the program you most prefer with Carl Spero x5068 or Rich Dyson x5098 as soon as possible.

**Friday**

**VIDEO EXERCISE!!**

Every Monday, Wednesday, and Friday, different exercise videos will be shown in Krueger Sports Center. Bring your friends and get in shape for the swim season by watching our popular videos. Times are from 1:00 to 2:00 for more info call Coach Wozniak at 312-296.

**Vandercook College of Music**

The scheduled concert series for the Spring 1989 semester is as follows:

April 28
VanderCook Bass Choir, Robert Rocko, Conductor.
SATURDAY

HERMANN HALL EVENTS
The U.B. Movie this week will be "Coming to America". Showtimes are Thursday at 5:15 p.m. and Saturday at 7:00 and 9:30 p.m. in the HUB Auditorium. Admission is $2.00.
The U.B. Band in the BOG Thursday night is "ME". Admission is $2.00 or you can use your U.B. Pass.
Great America tickets are now available in the Hermann Hall Directors office for $14.75.

SUNDAY

HERMANN HALL EVENTS
Hermann Hall is now open on Sundays from 12:00 noon to 10:00 pm. The Rec Center is open from 5:00 - 10:00 pm.

**UNIQUE CAREER OPPORTUNITIES FOR C/UNIX APPLICATION PROGRAMMERS**

O'Connor & Associates is a leader in the options trading marketplace. We are recognized as a pioneer in the development and application of sophisticated analytical techniques and cutting-edge technology for valuing and trading derivative securities. A private partnership, O'Connor is able to move quickly into new products and markets world-wide, wherever we can apply our expertise to capture a trading edge.

**Environment**
O'Connor's open UNIX-based environment consists of a heterogeneous, distributed network of workstations, super-mini and mini-super computers, with C and C++ as primary languages.

**Skills Required**
Working knowledge of C programming attained through academic projects or personal work experience.

O'Connor & Associates seeks exceptional individuals with proven problem-solving abilities and entrepreneurial spirit to join our team in Chicago.

Please send cover letter, resume and transcript to:

O'Connor & Associates
College Relations & Recruiting - Systems
141 W. Jackson Blvd., 7th Floor
Chicago, IL 60604

Equal Opportunity Employer

**O'CONNOR & ASSOCIATES**

**Northwestern University Summer Session '89**
Think or swim.

2005 Sheridan Road Evanston, Illinois 60201-2790

Here are the dates. Send me a Free copy of the Summer Session '89 catalog with financial aid and registration information (c/o Northwestern in Evanston). I've already paid my tuition and fees, I don't want any more financial aid. Please send the catalog to [ ] my home [ ] my school.

Name:
Address:
City:
State:
Zip Code:
An all-ages, $2.00 more fun than death show will take place Thursday at 9:00 pm in the dog.

ME plays to play: A perfect blend of music and energy, with a focus on new music "highly danceable," with exciting visual elements, providing entertainment for all!

Hang on to Yourself
Sharp Dressed Man
Radio Free Europe
Back to Square One
Matter of Trust
Another Step
Subject to Change
And She Was
Something, Someone
Do You Know What I Mean
And We Danced
No Matter What
Dancin' With Myself

Driven to Tears
All You Zombies
Tonight
New Year's Eve
Cinema Mania
Vive Le Rock
Maybe I'm Amazed
In Your Eyes
Heartbreak Beat
Ticket to Ride
Limelight
Birthday
De Do Do Do

Heaven
Baby Blue
Getting There
Jacob's Ladder
Gloria
Turn It On
Melt with On
Maggie May
Pride
Money Changes
Friday Night
I'm a Believer
She Loves
THE FILM:

EDDIE MURPHY

COMING TO AMERICA

All films are displayed for your viewing pleasure in the HUB Auditorium every Thursday at 5:15 pm and Saturday at 7:00 and 9:30 pm. Admission is $2.00 or use your UB pass.
Wind Tunnel Construction Marches On

By John Abbott

Steve Kuske had on one of the biggest smiles that I had ever seen on a student's face. At first, I wondered what he was hiding. Then I suddenly realized that the reason he was smiling so much was because of the large orange metal piece that was hanging from the crane.

"It's a rush to see something you put together that you've designed," he said.

That's something that he was speaking of, was the corner piece of the wind tunnel currently under construction on the second floor of the Engineering building. Although it took several people to pull together the entire project, the design was primarily Steve's design. The corner piece that was being installed, however, was particularly proud of. It was a unique piece, and required special attention due to its intricate nature.

The wind tunnel is being billed as the largest state-of-the-art University tunnel for basic aerodynamic research. Started in early 1986, pieces of the tunnel have been arriving as quickly as new sections can be designed and built. Because of the size and nature of the project, each piece that is added must be measured before a new piece is constructed, since each new section must be checked to tolerance.

The latest section to arrive, a turn for the oval shaped wind tunnel, was of particular importance because of a coolant that runs through the fins of the turn. In the finished design, two of the four turns of the oval will include fins that will have water pumped through them, from an ice storage system in the basement. Why is it so important to have the turns temperature controlled? According to Steve, they've estimated that the friction of the air could raise the temperature up to 9 degrees, in one turn, when the tunnel is at its maximum operating speed.

At first, this might sound like a high estimate, until you consider that the fan will pump up to 12 million cubic feet of air per minute. That works out to an air speed of 550 feet per second at the test site. In order to pump all of that air through the tunnel, a whole series of special circumstances had to be accounted for, starting with the 3000 h.p. constant speed A.C. synchronous electric motor.

The motor drives a 9 ft. diameter fan, and needed a special transformer and feed from Commonwealth Edison. This is because it draws 4169 volts at around 236 amperes at cruising speed. Or, start-up, these figures increase.

From the outside, a new section of the wind tunnel is hoisted into the air.

Photo by Andy Lohs

The draw on amperage can reach as high as 6600 amperes, which was enough to make the manufacturer of the motor recommend a maximum of two turns per day.

The power from the motor, lends into an electric clutch which controls the speed of the fan. The electric clutch becomes warm enough that it warrants it's own cooling system.

From the clutch, a 1 ft. diameter shaft transfers the power to the blades of the fan. Although the fan in 8 ft. in diameter, the actual blades are only 2 ft. long, and are installed at the outer edge of the fan. Also connected to the shaft is a fiberglass window shaped piece, which helps the air merge into a stream without creating a vacuum. This is what it takes just to get the air moving.

From there, the air takes a sharp right with the help of Steve's famous fins. If things go according to plan, the fins will not only help to reduce turbulence, but they will reduce air temperature as well. They are constructed of Aluminum which allows great heat dissipation, and have cavities running through them to allow for the flow of coolant.

The second turn, which is still being debated, may turn out to be designed for sound abatement (a sound trap). In one proposed design, the fins will contain foam, and will be covered with a screen to keep the foam inside. The trouble with the second turn, is that the screen may cause minutes to minutes turbulence which would disrupt testing.

Past the second turn is the settling chamber and a block, designed to reduce turbulence and accelerate the flow of air. Then comes the test section, a 4 ft. x 2 ft. x 40 ft. section.

After the test section are diffusers, which slow down the velocity of the air to increase efficiency; another coolant turn; another diffuser; and the unstaged flow generator.

Possibly the biggest re-structuring of the building came about from the design of the unstaged flow generator. The generator consists of a dozen 10" x 10" inch chord airfoil which move up and down to create an "unstaged flow" of air. It is designed to increase and decrease the wind velocity of the tunnel, to make the flow of air "more natural".

An unfortunate by-product of the movement of the airfoils, however, is the lift and drag that the airfoils put on the structure. If left alone, the airfoils would try to move the structure up and down due to the flow of air.

Considerable structural stiffening was added to the design, to support the enormous amount of weight of the tunnel and keep the tunnel where it belonged, instead of the building.

Steve Kuske noted that without the additions that they've made to the structure the building might "vibrate a lot" while the wind tunnel was operating.

Now, after giving me a tour of the area, Steve stood in front of the computer that they had used to design the tunnel with the assistance of CAD programs. With the smile of a proud father, it seemed as though he would start the fan going if I had only asked him to. The department of defense, in funding the project, had given him something that he could call his own.

From the inside, workers struggle to pull in the latest section of the wind tunnel into position.

Photo by Andy Lohs

To the people standing on the street, it was just an orange box. But to Steve Kuske, that was his corner section, his turn, his fins. It was his design.

COMPUTING IS... YOUR Career! OUR Business!

SEI is a leading national EDP consulting firm headquartered in Chicago. SEI works in the development of large-scale, sophisticated mainframe systems and microcomputer products.

At SEI, data processing is our business, not just a department. SEI's Professional Development Program builds first rate professionals from bright, ambitious computer science graduates.

SEI's own internal Software area is now seeking top-notch entry level people.

Internal Software:
- Develops, enhances and runs our internal applications
- Supports staff members and clients who use our data center
- Maintains and troubleshoots operating system software (VM/CMS, Script, PROFS, 500, etc.)
- VM/VTAM/NCP
- Supports PC users and PC/mainframe interaction

We're looking for bright, hardworking, get-the-job-done programmers with or soon to have a BS in Computer Science. We want people who are eager to learn, serious about getting their career started right, and interested in the challenge and variety of a career in consulting.

For prompt confidential consideration, send resume to:
SEI Information Technology
Attn: Charles Parker
DEPT. VT
450 East Ohio Street
Chicago, Illinois 60611