Banks of the Boneyard

the journal of the association for computing machinery university of illinois student chapter

NOV '94

Volume 13, Issue 2

INSIDE

ACM General Meeting

Pete DeLisle will speak about University of Illinois computer folklore!

Thursday, November 3, 1994 5:30pm, 1320 DCL

At your service: The Committees of DCS

by Amy Ryan

Have you ever felt unjustly graded on an exam? Are you aggravated that sparc0a has lost its NFS mounts for the fourteenth time in two days? I've heard comments and complaints like these echoing through the halls of DCL over the last few months. Students faced with these problems often feel that the Department of Computer Science is doing nothing to resolve them. The truth is that the Department has several committees in place to address these situations and many more.

The committees are comprised of both faculty and students who want to make the CS department at the University of Illinois the best possible learning environment for students. In a department of its size, it is difficult for the entire faculty to keep on top of the issues that affect our education. But someone has to!

Who, for example, decides what classes are necessary to graduate from the U of I in computer science? The Courses and Curricula Committee (CCC) is in charge of making recommendations about what courses and material students should learn to leave the department with a bachelor's, master's, or a PhD. This committee meet regularly to review class requirements and to decide what material is appropriate for CS courses. It determines appropriate material for students pursuing careers in both academia and industry. For students who don't follow the typical CS curriculum, the Undergraduate and Graduate Study committee reviews exceptions to degree programs.

So how does the Department keep up with changes in the industry? The Illinois Computer Affiliates Program (ICAP) takes care of these matters. ICAP is a collaborative effort with companies throughout the industry. They serve as an intermediary between business and academia.

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CSIL Upgrade: what goes up must come down

by Jay Kreibich

"Without a hitch" is one of the few ways the Computer Science Instructional Laboratory (CSIL) upgrade from SunOS to Solaris was *not* described. "Inexcusable" is instead how Associate Department Head and CSIL director Professor William Kubitz summed it up. "The Department is doing all it can to apologize for this catastrophe," he said, "but that doesn't change the fact that it should never have happened. I can give you a list of excuses if you would like, but this just should never have happened."

The upgrade of the machines from the SunOS to the Solaris operating systems was in the works all summer long. According to Kubitz, the original plan was that once summer session classes were done, the upgrade was to take place, leaving two weeks for the staff to debug problems with the new configurations. Unfortunately, things did not quite go as planned, and returning students found the lab in disarray. Problems grew worse as classes started and students were faced with the problem of completing MPs on the flaky machines. "Solaris in itself is not the problem," Kubitz reported. It seems the upgrade was rather the culmination of many much more subtle problems.

Historically the Department of Computer Science has administered its own set of computer labs separately from the College of Engineering. A budget for this process was never formulated, however, leaving administration of the labs over the years up to various graduate students. As administration duties have switched from one graduate student to the next, the labs have evolved through a series of administration styles and techniques.

Because of the mission-critical nature of the labs, downtime is generally unacceptable, so when a problem arose and the administration staff was faced with the choice between a quick and easy fix, or a longer and more formal solution, the prior was usually taken. This "greedy algorithm" approach to administration combined with the increased lab usage caused a slow breakdown in the manageability of the systems.

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From the Editor

by Doug Beeferman

"I will not be responsible for correcting incongruities arising in class." So reads a recent and alarming post to the CS323 (Operating Systems) class newsgroup attributed to the course professor, Roy Campbell. "I simply do not have the time or energy to prepare for classes in a way that you, as students, feel you deserve," it continued. Campbell also admitted, seemingly, that he hadn't read the course textbook and that he knowingly gives erroneous explanations in class when he's not confident of his own knowledge.

NO ROLLERBLADES
NO ROLLER SKATES
NO SKATEBOARDS
NO BICYCLES

Allowed in this Building

*We feel obligated to inform our readers of this curious new DCL mantra, just in case they should roll into the building without noticing the **four signs at each entrance** that are in place.*

In case you hadn't guessed, the message was a forgery, maybe from a student upset by his performance on the midterm that was administered the day before. While the forger doesn't rival H. G. Wells in creativity, he crafted a scenario which is just as scary as "War of the Worlds" to some, in which professors confess incompetency, freely admitting that they care little about teaching and that they don't understand the very material they present in lecture. It's telling that several people believed the bogus news article at first.

The fact that someone *could* forge such a message isn't nearly as interesting as the fact that someone *would*. Maybe the forger was simply venting pent-up feelings of frustration exacerbated by a bad exam. Maybe the class is really as badly taught and as badly organized as he suggests in his pardody. Maybe both are true. Wherever the blame lies, it's clear that he had a problem or two with the class and its professor. But his means of resolving these were less than admirable.

Voicing complaints anonymously is spineless; voicing them in someone else's name can be downright illegal. If you feel cheated in a class, a better approach would involve a couple of passes. The first pass should be insinctive: one-on-one contact with the person you feel is responsible for the problem.

If this first pass is not productive or not possible, there is a mechanism in place here at the University of Illinois for voicing grievances more formally. You'll find it spelled out in the *Code on Campus Affairs*, an intimidating document that we've probably all seen but never read. It explains what to do if you feel harassed or discriminated against, or if you have been accused of a violation of academic integrity.

The Department of Computer Science maintains committees that hear and investigate such grievances when they pertain to DCS. In her lead story, Amy Ryan briefs us on some of these committees and tells us where to go if we're unable to resolve a problem with the Department through conventional means. Jay Kreibich explains how one recent and rather notorious problem was resolved and what's being done to prevent it from happening again.

Leftovers from the ACM Fall Picnic

The next best thing to being there

Early arrivers at the ACM Fall picnic may have been surprised to see a Hyundai backed up to the grill in the middle of the grounds surrounding the north pavillion at Crystal Lake Park. Grillmaster **Brandon Long** explained that, owing to a lack of matches, a rather more awkward combustion device had to be summoned for the purpose of lighting the grill. But by the time the hamburgers, hot dogs, and polish sausages rolled off the grill and onto eagerly awaiting buns, no one was the wiser.

As the festivities got underway, card shark **Amy Ryan** taught the crowd to play an interesting card game based on pattern matching skills called *Set*, and then proceeded to beat everyone at it. Firestarter **Dave Jeske** mentioned that a computerized version of *Set* was in the works, but within twenty four hours a PC version written by SigGraph guru **Max Levchin** was up, running, and nearly bug-free on an ACM Lab 486. No word on whether it can beat Amy or not.

By the time the first few dozen picnickers arrived, ad hoc groups had formed. Ex-beatnik **Ed Burns** headed up a few games of hackey sack, and the four hackers involved soon discovered, to their dismay, that they couldn't keep the darned thing in the air for more than three consecutive hits. Ed rationalized that engineering majors don't get enough practice at it, and speculated that other colleges offer hackey sack for credit.

Nearby, Supreme Court nominee **Ben Gross** led something of an impromptu SigCAS meeting that slowly drifted from the duration of copyrights to the security of *ph*. Another group pondered explanations for the low response time of sleepless, ACM's beloved RS/6000, and wondered whether to blame it on the increased Web traffic handled by its httpd server.

Grillmaster Brandon "Lee" Long

At least ten feet away at the east grill, Bad Examples groupie **Alan Braverman** talked to the corn and described various food processing devices that he had dreamed up in his spare time.

Later, rock climber **Ryan Grant** threw around an Aerobie (billed as an "astonishing flying device") with Paul Erdös groupie **Castedo Ellerman**, who made some great catches but narrowly missed running into a tree.

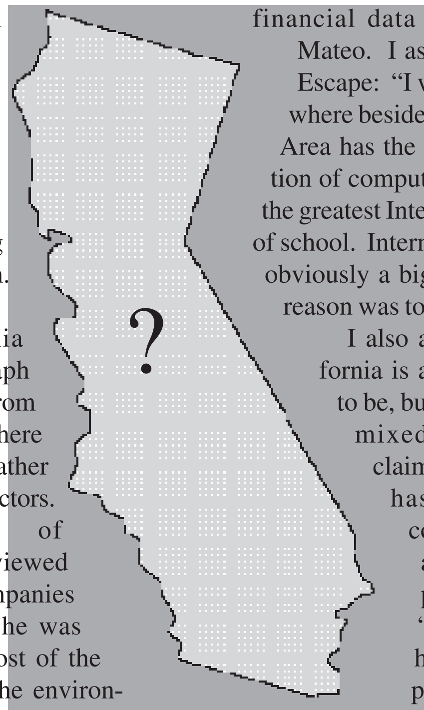
While juggler **Mike Blumenthal** entertained a few attendees, the folks who were playing *Set* put their cards down and broke into a spontaneous game of volleyball. The players soon discovered, to their dismay, that they couldn't keep the darned thing in the air for more than three consecutive hits.

Nevertheless, a good time was had by all. Even paintball fanatic **Jeff Thompson** (to whom we're indebted for organizing the event) enjoyed it, and he spent most of the picnic running around getting more food.

From the Chair
by Alan Braverman

Welcome to a From the Chair miniseries that I like to call Escape from Illinois. In this issue, we will examine the California dreams of many young computer scientists. Why do CS majors look west to Silicon Valley for salvation from Illinois' cornfields? Is it the sun and fun, or are we a bunch of money-hungry monsters?

In the movie Escape from New York, Kurt Russell plays an incarcerated hero named Snake Plissken. Needless to say, this has nothing to do with escaping to the Golden State computer industry; I just dig Snake Plissken. Next time I log in to a cool BBS, I'm going to use the handle Snake Plissken. Far out!



Back to the California question. Ryan Grant, SigGraph chair, says, "I want to get away from the corn, and get to a place where there's rocks and surf." The weather and environment are obviously factors.

Libor Michalek, of `uiuc.general` fame, interviewed with two California-based companies this week. I asked him why he was headed west: "That's where most of the computer companies are, and the environment is pretty cool. In San Jose and Silicon Valley, everyone is smart and knows what they're doing." What he meant by that, I'm not sure.

Frank Beier was ACM's 1993 SigSoft chair. He now lives in San Mateo and works for Oracle, a leading provider of database software. When I asked him about California, he said, "California is totally rad dude. It's killer, man." I asked him if he could elaborate. Beier pointed out that the number of science and technology companies in the Bay area added both to the atmosphere and to his personal security; he could find another job if he needed to. Regarding working in Illinios, Frank said, "Silicon Prairie is pretty dull, and *The Simpsons* is coming on soon, so I have to go."

Eric Johnson was SigSoft's leading programmer during the 1992-93 school year. He now works for FactSet Data Systems, a financial data provider, in San Mateo. I asked him about the Escape: "I wanted to be somewhere besides Illinois. The Bay Area has the highest concentration of computer companies, and the greatest Internet access outside of school. Internet withdrawal was obviously a big issue. The main reason was to be out of Illinois."

I also asked Eric if California is all it is cracked up to be, but he told me he has mixed feelings. He claims that the Bay area has cool summers compared to Illinois and is an expensive place to live. "Taxes are high and housing overall is pretty crappy." On the other hand, he also feels it is a good idea for a CS student to leave Illinois, not because there is anything wrong with the state; rather, it is a good idea to move on, and not to get stuck in college. "California is a good place to do that," he says.

Next month... so how the [heck] do I land a job in California, anyway?

ACM Social News
by Jeff Thompson

Hi! As ACM social chair, I'm happy to say that this semester's social outings have been a great success. The most notable of these was a paintball outing in early October: Several of us squared off at the Sudden Impact facility in Bloomington, IL, and shot quite a bit of paint at one another. The Fall Picnic (see page 2) was also a lot of fun. Both of these events will be repeated in the spring semester, so stay tuned!

On tap for this month is the next ACM Movie Night on Thursday, November 10 in 1320 DCL. We will be viewing *The Simpsons*, followed by *Buckaroo Bonzai*! I hope to see you all there.

In other news, I'm organizing a Department of Computer Science intramural ice hockey team for next semester for CS students and faculty. We will be having about 12 practices throughout the semester as well as a few games in the IM league. If you're interested in joining the team, or for other questions about ACM social events, email `jwthomp@uiuc.edu`.

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Ed Burns is pleased to announce the results of the 1994 ACM

Full Student Membership Raffle

UIUC ACM members who are also members of the National ACM were chosen at random by a cheesy Perl script.

First Prize: **Dave Young**
(Free meal at House of Gourmet)

Second Prize: **Amy Ryan**
(Free karaoke at Mabel's)

Also selected was this month's member of the month,

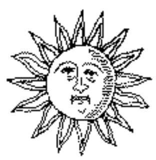
Jeremiah Johnson:

Congratulations to all!

◄1— The CSIL Upgrade... Continued

Trouble arose when these quirks converged with the upgrade to Solaris. Because Solaris is based off of System V UNIX instead of BSD UNIX, as SunOS was, there were some very drastic changes in the functionality of the systems. This combined with the somewhat nonstandard setup of the CSIL lab resulted in major problems that needed to be resolved before the machines could be be brought back up. Unfortunately, that took time.

Presently the machines are running again, and are generally usable. There is great concern over the stability of the labs, however: Although they are working, one might think the lab was being held together by bubble gum and string. This perception, combined with the increasing usage of the CSIL SPARC lab, is causing the administrative staff to think of a long-term solution. Plans are being formulated to prevent a repeat of the events of this year.



To begin with, starting last spring, part of the engineering fee paid by all engineering students is being budgeted for administration of the CSIL labs. With the added resources the lab can be more efficiently and consistently regulated and administered. One of the new administration techniques will be to integrate more closely the resources and staff of the CSIL and CRL systems. This will allow the Department to pool the knowledge of all the staff and improve the reliability of the 400-plus machines under the CS domain.

Additional money from the College of Engineering will be put into purchasing commercial development environments such as Center Line's Object Center. Kubitz expressed concern over the fact that students were not being properly exposed to an industry-like environment, and he said that a move in this direction would be a key change in the use of the labs as an educational tool.

As far as the computers themselves, the staff is working on a plan to revamp the entire CSIL system. Presently, the plan is to take the lab down for an extended period of time over semester break so that both the servers and the client computers can be completely and methodically reconfigured from the ground up. Kubitz said this plan is being worked out to the smallest detail. "The last thing we need is to start next semester the same way we started this one," he said.

Some additional good news is that while revising the lab, there is the possibility of revising policy. Currently CSIL accounts are only given to those undergraduates taking a CS class requiring access, or in a limited number of other circumstances. The Department is now considering giving all CS students permanent accounts, an action that Kubitz said would cut down on administrative hassle.

Faculty policy may also change. Presently, if a faculty member has a special need for slight reconfiguration of the system, he or she is usually accommodated. This has at times caused problems with system configurations, however. Although standardizing configurations will reduce administration problems, it may reduce the flexibility the lab can offer the students and faculty.

Another serious problem the CSIL labs face is over-utilization. As any student who has tried to get a machine at five in the afternoon knows, the SPARC labs just keep getting more and more crowded. Kubitz pointed out that more and more classes have started to choose the SPARC labs, leaving the other labs quite empty. "We have a perfectly good lab of HPs that are all running the latest systems, but almost nobody is using it," said Kubitz. There is growing concern that the SPARC labs are becoming the de facto choice of all the classes, even though the HPs are usually suitable to the task.

The graphics lab, stocked with IBM workstations, is another story. The machines there are becoming obsolete, and the Department is ready to replace them. The good news is that among the platforms being seriously considered are workstations from Silicon Graphics, Inc. "The faculty want to do multimedia," Kubitz said, "The faculty want SGIs." Overall, it seems that SGIs are a very appropriate choice for the graphics lab.

Along with the labs, the Department is also upgrading the 1310 and 1320 lecture halls. If things go well, the old Barco projectors will be replaced with a large screen Hughes system like the one tested last year. Video interlinks between the lecture halls and a satellite TV hub in Engineering Hall will also be put in place, allowing us both to receive and to send video anywhere in the world. There are also many projects further in the future being considered, including installation of an gigabit ATM networking cloud within the Department for the development of networked video applications.

This year's problems with the CSIL labs caused an interruption at the beginning of the semester that could have grown had action not been taken as quickly as it was. Most classes' first MPs were delayed a few weeks as a result of the problems, but the faculty was in general very sympathetic to student grievances. Hopefully these setbacks will be a small price to pay for the changes that have been brought about by them: The Department has learned a valuable lesson in administrative techniques, a lesson it is not likely to forget soon.

The Banks of the Boneyard

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<blink> Netscape enhanced! </blink>

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`http://www.acm.uiuc.edu/`

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SigUNIX

by Luke Nosek

This month the SigUnix Illinet-Web Interface project moved several leaps ahead. For the unfamiliar, IWI is a graphical, forms-based World Wide Web interface to Illinet Online, the currently text-based Illinois online library catalog. If this interface is good enough, it may be adopted state-wide as a replacement for the text-based version!

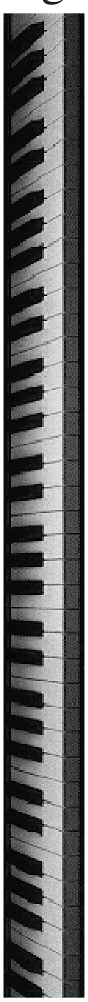
So far, we have settled on the process to be used: A Common Gateway Interface (CGI) script, likely written in *perl*, will be started for every access; if it's a new session, it will spawn off a program (possibly written in *C*) that will stay alive for the duration of that user's session and interact only with him. Routines written in the *expect* scripting language will interface with the current online system. The variety of languages and systems involved make this an interesting and challenging programming task.

We have begun redesigning the IWI Web pages and are currently dividing up the programming tasks. There is much work to be done, so those interested in making HTML forms or in programming CGI scripts using *perl*, *expect*, or *C*, are encouraged to let us know.

We also sponsored a workshop to introduce HTML-fluent people to forms and the interactive WWW programming involved in making them. A second part to this workshop is currently being planned. For those interested, the material from the first part is on our home page: `http://www.acm.uiuc.edu/sigunix/`. Other workshop topics are now being considered; if you have any preferences, let us know.

Anyone who can contribute to our projects or workshops should come to a meeting or mail `sigunix@uiuc.edu`; enthusiastic new members are always welcome!

SigMusic *by Ed Burns*



If you survived this latest round of midterms, you have several things to be thankful for, not the least of which is SigMusic. In the past six weeks we have been pretty active. Here is a brief rundown of our activity this year.

Thomas Lawrence of the Center for Supercomputing Research and Development gave an interesting and informative talk about various methods of sound synthesis, covering additive, subtractive, wave-table, FM, and PCM methods. Thomas used his public domain program for Macintosh, *Out of Phase*, to demonstrate the various methods of producing cool sounds. We are very interested in porting this program to our Dec Alpha, which has sound capability, but we need to build a speaker box for it first. Any volunteers?

Dan Wellman has authored an initial SigMusic home page at `http://www.acm.uiuc.edu/sigmusic/`. Please check it out and give him some feedback at `wellman@uiuc.edu`. We are looking for good links related to the SigMusic mission, which is to increase the production, discussion and performance of computer music on campus.

The Computer Music Project (CMP), at the School of Music's Experimental Music Studio, is a funded project with several resident faculty, including Sever Tepei and Sal Martinaro, both innovators in the field.We have visited the CMP on two occasions, and are currently looking for people who want to fill out applications to get access to this wondrous facility. CMP has lots of fine NeXT machines and a brand new RS/6000 (begging to have httpd installed on it!). CMP applications are available on paper in 1225 DCL; or you can fill out the form off the SigMusic home page at the above URL.

FInally, I had the good fortune to run into former SigMusic chair and present World Wide Web deity Chris Wilson at the WWW conference in Chicago this month. Chris is working for Seattle-based Spry, Inc., and is developing a robust version of Mosaic called Air Mosaic. He sends his kind regards and points out that you too, can be a famous net.personality some day!

SigMusic meets on Tuesdays at 8:30pm in 1102 by default, but occasionally we meet at the CMP in 5045 Music Building. Mail `sigmusic@uiuc.edu` for more information.

S.I.G. Graph

by Ryan Grant

SigGraph, the special interest group for computer graphics, is soliciting small computer-rendered MPEG movies from all thematic areas. We'd like to link these into our WWW page for all the world to see.

On a larger scale, we have begun work on our Engineering Open House (EOH) animation project. We will be presenting *Robotech Shakespearean Theatre*: Massive metal killing machines will act out some of Western culture's theatrical masterpieces!

Datarace, our multiplayer cyberspace game, continues to develop. It is sticking close to *Neuromancer* in theme. Meetings have split off and a mailing list has been started.

Work on the Virtual Campus has received some help from mechanical engineering students who are planning to add landscape data to the model. The virtual campus project creates textured 3D models of buildings on campus and integrates them into a virtual world that may be displayed on Silicon Graphics computers using a product called *World Toolkit* from Sense8.

If you are interested in any of these projects or if you have an animation to contribute, stop by a meeting (every Friday at 5pm in 1102 DCL) or mail `siggraph@uiuc.edu`.

◄ 1— CS Committees . . . Continued

Oftentimes problems occur with the instructional lab and equipment needed for assignments and research. (Recently people have even toyed with the idea of getting "My files and I survived the CSIL Upgrade of '94" t-shirts.) The Computer Research Lab Advisory Committee (CRL) looks into the way lab problems are handled and recommends new equipment purchases for the department.

Have you ever walked up to the third floor of DCL wanting to check a book out of the library, only to discover the library is closed each evening and on weekends? An ad hoc committee has been set up to review the current status of the CS Library. This committee is deciding if the departmental library is still necessary, or whether the books can be moved to Grainger where they will be more accessible to students.

Student problems go beyond resources and equipment, though. Sometimes teaching and grading aren't up to par. This is where the Teaching Evaluation and Improvement Committee (TEI) comes into play. TEI reviews the ISO evaluation forms filled out at the end of each semester. (Yes, those bubble forms are useful for something.) TEI tries to ensure that, in addition to top-notch researchers, the Department retains quality educators.

But what happens when you receive a 3 out of 75 on an exam, you feel the grade is unjust, and your professor isn't willing to budge? Then you may submit your complaints to the Capricious Grading Committee. The guidelines for submitting appeals to the Capricious Grading Committee are outlined in the "Code on Campus Affairs..." booklet mailed to freshmen and available across campus.

Also in this booklet is an outline of how to submit complaints to another committee called the Grievance Committee. This committee addresses accusations of cheating, sexual harassment, and miscellany not covered by other committees. These committees give the student a way to address the Department, after his professor has dismissed his complaint.

Students keep the University alive. For this reason, the Department has set up channels through which students can communicate with the Department. The Graduate Student Advisory Committee (GSAC) and the Undergraduate Student Advisory Committee (USAC) were established to improve the communication between the students and the Department, coordinating their efforts with the various departmental committees.

And once you've graduated, don't think the CS Department has given up on you. The alumni relations committee and the Computer Science Alumni Association (CSAA) meet to keep the Department in close contact with former students who are now leaders in research and industry.

This briefly outlines a few of the departmental committees in Computer Science; others deal with areas such as promotions, recruiting, and awards. Next time you find yourself being brushed aside in a class, or you feel the material and resources are inadequate, talk to your professor or TA instead of venting your aggression in the class newsgroup. If this fails, you may wish to turn to the appropriate committee for help. If you aren't sure which committee to talk to, your advisor or an ACM member will gladly lend you a hand.

Make My Logo!

The ACM@UIUC is seeking a local chapter logo. If you have any artistic ability and would like your name to go down in ACM@UIUC history, submit a design for a logo that may be displayed in the *Banks of the Boneyard*, and on ACM coffee mugs, stationery, and t-shirts. Please submit designs to the ACM office, 1225 DCL, by 5pm on November 28, 1994. Let those creative juices flow!

SigNet

by Jay Kreibich

This month has been very productive for our group. Charley Kline's tour of the campus backbone and router systems enabled members to experience first-hand the complexity of a large internetwork such as UIUCnet. Plans in the works for this month include a presentation from Ameritech on ATM gigabit networking systems, and a possible demonstration of the delicate process of fiber optic splicing.

Progress on some of our projects had slowed with the onset of midterms, but things are now picking up again. Our present projects include MUMBLE, the DNS redirector, and the JHSI WWW server.

MUMBLE is a text-based collaboration tool, not (I hate to admit it) unlike IRC. MUMBLE is not a server-based system, however, but instead uses IP multicast packets to distribute messages. Multicast technology is not a new concept, but until recently has been relatively unexplored by the networking community. The MUMBLE project has not only allowed members to further their knowledge of this new technology but with some luck it will have an impact on the networking community at large. Most of the design has been done, and the base code has been written. We are now at the point of having to write a command parser that will provide the user with a quick and easy way to establish and discontinue network services.

The DNS redirector project is a collaboration between ACM, SigNet, and CCSO. The project is to write a distributed DNS engine that will accept DNS requests and then fan them out to DNS servers that are known to be up and running. The goal of all this is to reduce the load on central DNS systems, and provide a faster timeout system should a DNS server go down. If things go well, the system will be integrated into UIUCnet in order to increase terminal server response. No more waiting 30 seconds to open a connection!

The JHSI WWW server has been an ongoing project to create a Hierarchical Subject Index to the World Wide Web. The basic idea is to create a series of organized pages with links to topical servers. For instance, if there exists a server all about squids, one would be able to find a link to it under the biology page. Currently the largest problem with JHSI is collecting references to WWW links. There are hopes of creating a series of scripts that would automatically scan mailing lists and net news for WWW URL references, and would collect them into a log so that the links could be quickly classified and entered into the Subject Index.

If any of these projects interest you, or you have some of your own ideas for a great network-related project, feel free to come out to our meetings, held Wednesdays at 7pm in 1102 DCL. You can also mail `signet@uiuc.edu` for more information.

SigVR

by Anand C. Patel

SigVR is busy completing of its very own virtual reality system. The work has shifted largely from the hardware work, which is pretty much done, to the software work. Currently, we have built a very basic color head-mounted display, which can be connected to two PCs with VGA NTSC converters attached. Also in the works is a lightweight, easier to use power glove.

The software we are currently writing will take input from a variety of input devices, ranging from keyboard to PowerGlove, and output 3D graphics through the head-mounted display. This involves designing and writing the following modules:

• Real-time 3D graphics generation: This part of the code will be written primarily in assembly language for the Intel 80486 processor. By using assembly code, weare hoping to eliminate the common problem in VR of jerky, slowly rendered graphics.

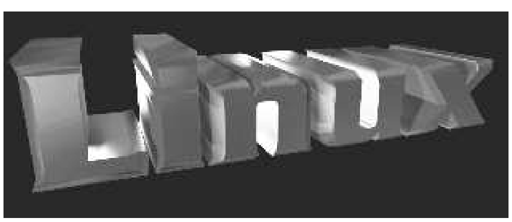
• Universe handler: This module, which will run on a P5-based server machine, will manage the database of object structures that comprises the virtual universe. It will also contain the code that allows the simulation to be given a viewpoint, and based on that point, generate coordinates and drawing commands for stereoscopic display.

• Surround sound generator: We will probably be using a Gravis UltraSound card for the PC to generate pseudo-3D sound using left-right channel display. This will be used for sound effects and music.

• Network / synchronization manager: This code will be used to handle TCP/IP networking between the two PCs driving the left and right eyes, ensuring that both eyes are shown the same frame at the same time. It will also handle information transfers between the host and the server.

All of the code will be written in C++, facilitating the modularity necessary for a group effort. Once completed, we will use the system to create some sort of virtual experience for EOH. Although programmers and hardware people are especially needed, anyone (even a biology major like myself) is welcome to join and learn about this exciting new field in computing. For more information, mail `sigvr@uiuc.edu`, or come to ours meetings on Thursdays at 8:30pm in 1225 DCL.

New!



Users' Group

by Mark Roth

The UIUC Linux Users' Group (LUG) is a new forum for Linux users at UIUC to get together and trade ideas and information. Linux is a free implementation of the UNIX operating system which currently runs on 386/486/Pentium or compatible PCs. The LUG is currently sponsored by SigUnix, the special interest group for the UNIX operating system. As a group, we may take on some projects or activities, but you don't need to be a CS major to check it out. If you run Linux at home, or are interested in Linux, get involved!

At our first meeting on October 26, we tossed around some ideas for projects and activities. We'll be putting together a mailing list and possibly writing some appications under Linux soon.

We will be meeting on a weekly basis, but a time has not yet been decided upon. Watch the `uiuc.sw.linux`, `uiuc.org.acm.sigunix`, and `uiuc.announce` newsgroups for news on future meetings. In the meantime, if you have any questions please feel free to email me at `roth@uiuc.edu`.

Hey! There are only 121 days left until ...

EOH

by Eric Adams

Amazingly enough, Engineering Open House 1995 is just around the corner. This year is the 75th anniversary of EOH, every year improving upon the year before. This year's theme, aptly chosen, is "75 Years of Innovation."

EOH is a chance for all of the students in the College of Engineering to show off their projects from the past year. Last year was one of the most successful in ACM history, with our chapter entering 12 projects for judging and winning 5 awards. Let me just say that ACM is turning more than a few heads in the College of Engineering. The projects that are done here are of superior quality *and* of impressive quantity.

As an ACM member you can do many things to help out. First, if you are in a SIG, get involved in their projects. All this initially takes is for you to show up and ask "What can I do?" But to prepare for EOH there is much more required than simply completing a project. A major part of the judging is weighted toward presentation. Public speaking skills and clear documentation must be produced in order to secure an award. If you do not posess the specific technical skills required, but would like to learn, participating in a SIG project will allow you to learn as well as become a cruicial member of the team.

As EOH chair I would also like to have a few people who will be here next year to work closely with me so that at least one of them can take over next year as ACM EOH chair. By doing this you will learn the ins and outs of running ACM's EOH event. If you would like more information on helping out with EOH, email Eric Adams at `yesfan@uiuc.edu`.

SigBio

SigBio is working hard on a program which tests for homology between a small segment of amino acids and a long segment of protein. We have a basic program written and working, and are currently attempting to make an easy-to-read file format from which to read the sequences. Join us at our next meeting on November 10 at 7pm in 1102 DCL. Questions should be directed to Joseph Lasky (`jlasky@uiuc.edu`) or Arwin Levinson (`alevinso@uiuc.edu`).

Scenes from a Fall Picnic

Left: Grillmaster Brandon Long and Amy Ryan.

Right: The fast-paced game of shapes and strategy, *Set*.

ACM Up All Night Crew

(partial listing)

Chair	Alan Braverman	acm@uiuc.edu
Vice-Chair	Ed Burns	e-burns@uiuc.edu
Secretary	Amy Ryan	eighmi@uiuc.edu
Treasurer	Norbert Burger	nburger@uiuc.edu
Membership	Jeremiah Johnson	jjohnso4@uiuc.edu
Social Chair	Jeff Thompson	jwthomp@uiuc.edu
Corporate Liaison	Brandon Long	blong@uiuc.edu
Engineering Council	Greg Brauer	gbrauer@uiuc.edu
EOH Chair	Eric Adams	yesfan@uiuc.edu

SigArch

by Jonathan Stark

"Education is what remains after you've forgotten everything you learned in school," said Albert Einstein. When you leave this university, you can either walk away with your degree and "what remains after you've forgotten everything you learned in school," or you can be a SigArch member, and leave with the experience of working in a group designing and building unique electronic devices, with a powerful résumé stacked with current technology that you've worked with.

SigArch is working on several projects, and we need your help. Want to add assembly language programming skills to your repertoire? Work on the Medusa project or the LED Name Tag project. Both of these projects will be centered around microcontrollers and will involve a good deal of assembly language programming. Medusa will be a scrolling light board in 5 flexible clear plastic tubes (looking like 5 snakes coming out the end of Medusa's head). Work assembling this device has begun, and we need all the help we can get!

The LED Name Tag (AKA the "Geek Badge") is a 20 by 28 LED badge that will be worn during presentation at Engineering Open House. Want to help one or more of our members look like a geek? Come work on this project!

The new wave in electronics prototyping and development is Field Programmable Gate Arrays. Having "Experience using FPGAs" on your résumé is a powerful way to distinguish yourself from the crowd. The Cylindrical Display project will use an FPGA to draw 512 color images on the outside of a spinning cylinder. Come help us work out the details!

We also need help with our other projects: The Ultimate Do-Everything Telephone Device, The FPGA Sound Generator, The SigArch All Purpose Digital Multi-Meter Analysis Device, an LCD Driver Device, The Computer Aided Telescope Tracking Device, and, coming soon, the Dim All the Lights on Campus Project!*

If Einstein were around today, he'd come to SigArch meetings every Tuesday at 6pm in 1102 DCL.

* Jonathan's just kidding about this. I think. - *Ed.*

The Boneyard Currents! By Amy Ryan, Dave Jeske, and Paul Swanson

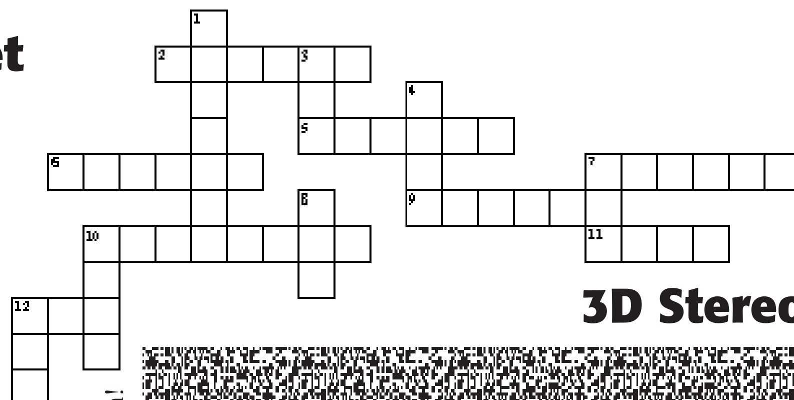
ACM Social Word Search

The clues at the right suggest words about ACM social activities that appear in the word search below. Complete the word search, and use the letters that remain to form a hidden phrase.

```
b p a s g n i t e e m
n a t e s c i s u m u
p i c n i c f k m o r
g n i m m a r g o r p
n t s m p n i s o t h
i b e o s o s o d s y
t a d v o e b k f l s
a l a i n i e t n e h
e l l e s n e e b a o
n e b s y g a r d m b
```

1. Green St. eating establishment.
2. cruising on roller ______.
3. kind of like kayaking.
4. ____sday.
5. what ACMers do at (1).
6. ultimate _______.
7. Mac networked game; whirlpool.
8. held first Thursday of every month.
9. 9 out of 10 ACMers read it.
10. *Pulp Fiction* is one of these.
11. the Bad Examples produce bad _____.
12. the sport in which you can legally. shoot other people (see page 3).
13. ___________ contests.
14. a card game (see page 2).
15. a cartoon TV family.
16. where (14) was played (see page 2).

Unix / Internet Crossword Puzzle

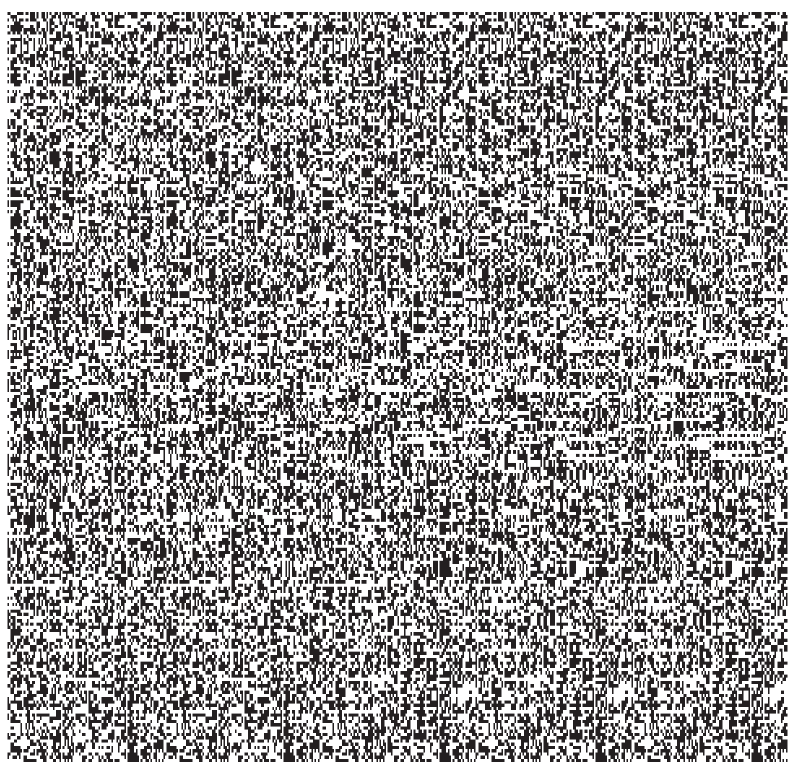


Across
2. RFC 854.
5. Tiled drawing.
6. Star Spangled ____.
7. Anne Bolyn had an 11th ____.
9. Jim Henson's furry green creation.
10. Late '80s TV gameshow.
11. A tree.
12. Politically incorrect help facility.

Down
1. USENET.
3. See 11 Across.
4. Blabber.
7. 0x46, 0x54, 0x50.
8. Easiest way to flunk out of college.
10. ____ Pong.
12. Wet Dirt.

3D Stereogram

Thanks to Scott Pakin for the pgmtostereogram program!



Stare deeply into the above stereogram until a magic symbol appears

acm

student chapter
university of
illinois urbana-
champaign

membership form

Return or mail this form to:
1225 Digital Computer Lab, MC-258
1304 W. Springfield Ave.
Urbana, IL 61801

name:

campus address:

campus phone:

home address:

home phone:

electronic mail:

curriculum:

UNIVERSITY STATUS

- ☐ freshman
- ☐ sophomore
- ☐ junior
- ☐ senior
- ☐ m.a. / m.s.
- ☐ ph.D.
- ☐ faculty / staff
- ☐ postdoc
- ☐ alumni
- ☐ other

special interest groups

acm's special interest groups (SIGs) focus on particular aspects of using computers and the computing community.

(circle some that you're interested in!)

sigarch	architecture
sigart	artificial intelligence
sigbio	biocomputing
sigcas	computers and society
siggraph	graphics
sigmicro	microcomputers
sigmusic	music
signet	networking
sigsoft	software development
sigunix	unix programming
sigvr	virtual reality

MEMBERSHIP TYPES

return form with check or money order payable to the ACM at UIUC

- ☐ $40 for eight semesters
  membership begins and ends sept 1
- ☐ $22 for four semesters
  membership begins and ends sept 1
- ☐ $12 for two semesters
  membership begins and ends sept 1 or jan 1
- ☐ $14 for two semesters
  off campus newsletter subscription mailing begins and ends sept 1

ACM NATIONAL MEMBER

- ☐ yes — #
- ☐ no
- ☐ currently applying